Higher Secondary Course

COMPUTER APPLICATIONS

(Humanities)

CLASS - XII

Government of Kerala

DEPARTMENT OF EDUCATION

State Council of Educational Research and Training (SCERT), Kerala

2015

1 Introduction to Publishing

Significant Learning Outcomes

After the completion of this chapter, the learner

- explains the process of publishing.
- identifies the different types of publishing.
- identifies the stages in publishing.
- uses the elements of design while designing a page.
- applies principles of design while designing a page.
- identifies the need for creating a proof.
- explains the need of plates for printing.
- explains the different types of printing processes.
- explains electronic publishing.
- identifies the different types of electronic publishing.

Any new idea, story, poem, news, etc. has to be distributed for it to be useful for the society. Information like those discussed above can be distributed in the society only by publishing it. Previously, publishing was done only by printing and distributing it. Today, the popularity of Internet and devices like e-book readers which are built for reading electronic books increased the need of publishing a work electronically. Books, newspapers, magazines, etc. whether it is in print or through electronic media should be presented in an attractive manner so that it invites the attention of the reader. The page design principles, page setting, placement of images, etc. improves the readability of a document. This chapter discusses the ways in which content can be presented attractively. The different press related processes and post press activities in printing are also discussed. The recent developments in electronic publishing like blogs, websites, etc. have changed the world of publishing.

1.1 Publishing

Publishing comprises of the creation, compilation and mass reproduction of graphic and text images thereby making information

available to the public. Books, newspapers, notices, etc. are published to provide information to the society.

The process of publishing dates back to 30000 BC when ancient humans drew pictures on the walls of the caves. Humans continued publishing as a way of expressing themselves on various media like stones, barks of trees, leaves, etc. Later Egyptians and Chinese contributed to the invention of paper and this led to a major change in publishing history. In 1455, Johannes Gutenberg, developed a printing machine. This printing machine was in use till the 20th century. With the advent of computers and advanced printing technologies, publishing of books, magazines, newspapers, etc. was made easy. Today publishing has transformed from print media to Internet and digital formats.

Johannes Gutenberg was a German inventor who developed a method of printing from a movable type. In those times, the types (characters or letters) for printing were carved from wood. Gutenberg developed a metal type instead of wooden types for his press. Gutenberg's innovation of developing metal types using special alloys made production easier. He printed the first book, 'The Bible', which had only forty two lines, using his printing press.

Johannes Gutenberg
1398 - 1468

Publishing can be classified as publishing through print media and publishing through electronic media (electronic publishing). Publishing though print media involves designing the document, printing and preparing it for distribution. The quality of document design, paper quality, paper size, type of press used for printing, type of binding, etc. determines the quality of publishing through print media. The publication of books, periodicals, etc. in digital format, usually on CD, DVD or as downloadable from Internet, for subscribers or public is called publishing through electronic media or electronic publishing. Today, electronic publishing has gained popularity and has reached a stage where some magazines are having electronic editions only. The acceptance of devices like electronic book readers and facilities in mobile phones to read books, prompted publishers to publish electronic versions of their print editions.

1.2 Publishing through print media

Publishing a work in print can be in the form of advertisement, poster, brochure, books, packaging, newspaper, magazine, etc. Publishing process starts when the editor edits content for publishing. Once the content is ready, it is considered to be

in production stage. The activities in production stage are classified as prepress jobs, printing and post press jobs. Prepress is the process of making the document ready for printing. Printing is the stage where the actual printing happens inside a press. Post press jobs include binding, cutting, etc. after which the document is in the finished stage. Fig. 1.1 shows the stages in publishing through print media. We will now discuss the different stages in publishing through print media.

Prepress *Printing* *Post press*

Fig. 1.1 : Stages in publishing through print media

1.2.1 Prepress

Prepress is the stage of work that happens between the designing of the page layout up to sending the book for printing in the press. Prepress is an important stage where the visual impact of the presentation is decided. While deciding the layout of a page, the size of book or magazine is an important factor to be considered. After finalising the layout of a page, the text and image content in the publication is added to the page layout.

Today, there are several Desktop Publishing (DTP) softwares available that make this process easy. Desktop Publishing is the creation of page layouts for documents using DTP software. Some of the popular DTP software are Scribus, Adobe InDesign, QuarkXPress, etc.

A. Designing

You might have noticed while browsing through books in a library or a book shop, some books catch our eye. They prompt us to read through some pages of the book. This is mostly due to the design of the book. The design of a book has an impact on the readability and success of the published material. Therefore, more attention is given by DTP operators while designing a page. Page layout design deals with the arrangement of visual elements in a page. It involves the specific communication objectives of the book. Some of the elements and principles of design that creates an impact on the reader of the publication are given below:

Elements of design

i. Line : Lines are useful for dividing space and drawing the eye to a specific location. Artists use lines to create edges, outlines of objects, etc. A line is created by the movement of the artist's pen.

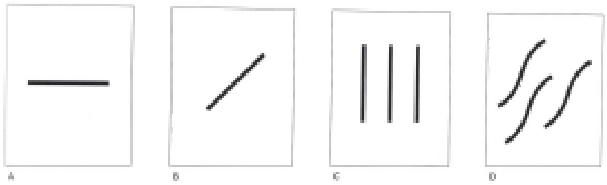

Fig. 1.2 : Design using line

The direction of a line can convey mood. Horizontal lines are calm and quiet, vertical lines suggest movement, while diagonal lines strongly suggest movement and give more of a feeling of energy to a picture. The lines in Figure 1.2 show the moods reflected by the lines.

ii. Shape : Shapes, geometric or organic, add interest. Shapes are defined by boundaries, such as lines or colour. They are often used to emphasize a portion of the page. Shapes have two dimensions, length and width. They can also be geometric or free-form. A good designer must think in terms of how the various elements of a design are creating shapes, and how those shapes are interacting. Figure 1.3 shows the different shapes and their effect.

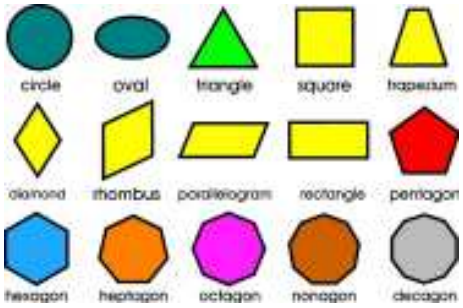

Fig. 1.3 : Different shapes

iii. Colours : Colour is one of the most noticeable elements of a design. It can stand alone, as a background, or can be applied to other elements, like lines, shapes, textures or typography. Colour creates a mood. Every colour says something different, and combinations can alter that impression further. Figure 1.4 shows the different colours.

Fig. 1.4 : Colours

iv. Space : White space is the area in a document where there is no text or graphics. When used effectively, white space can be used to guide the reader's eyes exactly where you want them to go. Space is also a three dimensional volume that can be empty or filled with objects. It has width, height and depth. Space that appears in a two dimensional painting creates an illusion of three dimension and a feeling of actual depth. Various techniques can be used to show such visual depth or space. Figure 1.5 shows a feeling of three dimension and depth.

Fig. 1.5 : Space creates depth

v. Typography : One of the most important parts of design is typography. Typography is the art and technique of arranging type (letters) to make written language readable and beautiful. The arrangement of type involves selecting typefaces, point size, line length, line-spacing, letter-spacing and adjusting the space within letters pairs. The fonts used tell the readers about the seriousness of the publication. Words are important, but the style of the words is equally essential. Generally fonts are classified into two styles: Sans Serif and Serif. Sans Serif is a style of fonts 'without feet'. Common Sans Serif typefaces include Arial, Tahoma and Verdana. Serif style of fonts have a 'little feet.' Common Serif fonts include Times Roman, Garamond and Palatino. The visual difference between the two styles is shown in Figure 1.6.

Fig. 1.6 : The different font styles

Principles of design

Principles are concepts used to organise or arrange the elements of design. The way in which these principles are applied affects the expressive content, or the message of the work. The principles of design are balance, proportion, rhythm, emphasis and unity.

i. Balance : Balance is the distribution of the visual weight of objects, colours, texture and space. In visual images, balance is formal when both sides are symmetrically arranged. Balance is informal when sides are not exactly symmetrical, but the resulting image is still balanced. Informal balance is more dynamic than formal balance and normally keeps the learner's attention focused on the visual message. Figure 1.7a shows formal balance and Figure 1.7b shows informal balance.

Fig. 1.7a : Formal balance

Fig. 1.7b : Informal balance

ii. Repetition : Repetitive works with a pattern makes the artwork look active. The repetition of elements of design creates unity within the artwork. Repetition with variation is interesting, without variation repetition can become monotonous. If

you wish to create interest towards the document, the repeating element should include a degree of variation. Repetition can also give a work a sense of motion. Figure 1.8a shows a repetitive work without variation and Figure 1.8b displays a repetitive work with variation.

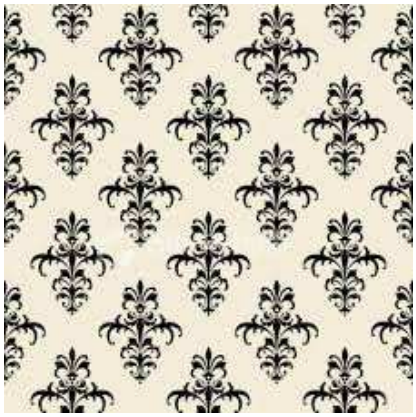

Fig. 1.8a : Repetition without variation

Fig. 1.8b : Repetition with variation

iii. Contrast : Contrast is the association of opposing elements like opposite colours, tone, direction, etc. It can be contrast in the colour wheel where opposites like red and green, blue and orange, etc. are used (Shown in Figure 1.9a). Contrast in tone can be light and dark (Shown in Figure 1.9b). Contrast in direction can be horizontal and vertical. The major contrast in a painting should be located at the center of interest. Too much contrast scattered throughout a painting can destroy unity and make a work difficult to look at. Contrast allows us to highlight key elements in our design. Contrast focuses on making items stand out by emphasizing differences in size, colour, direction and other characteristics.

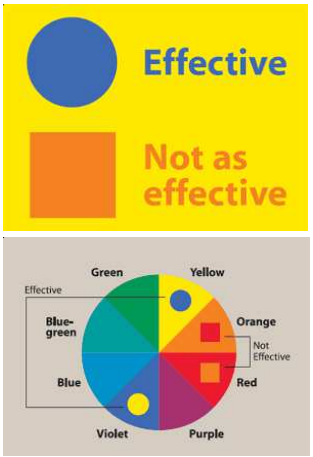

Fig. 1.9a : Colour contrast

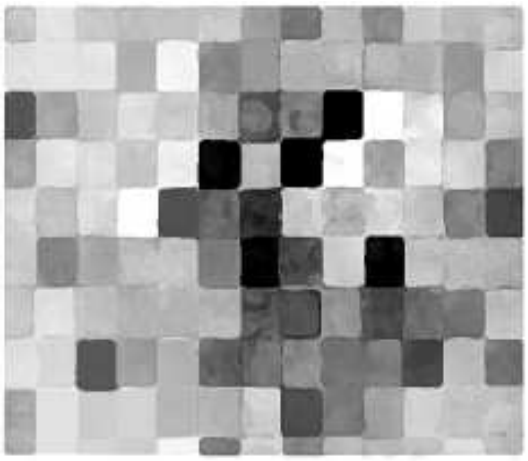

Fig. 1.9b : Tone contrast

iv. Harmony : Harmony is the visually satisfying effect of combining similar, related elements. The combination of adjacent colours on the colour wheel, similar shapes, related textures, etc. Harmony in visual design means all parts of the visual image relate to and complement each other. Harmony of colours and shapes are displayed in Figure 1.10a and 1.10b respectively.

Fig. 1.10a : Harmony of colours

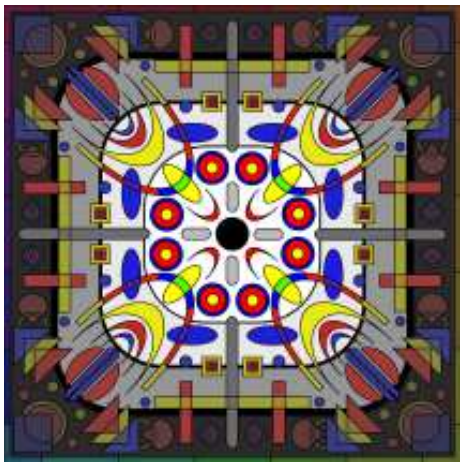

Fig. 1.10b : Harmony of shapes

v. Unity : Relating the design elements to the idea being expressed strengthens unity. A design on active aggressive subject would work better with diagonal direction, course, rough texture, angular lines, etc. as shown in Figure 1.11. A design on quiet passive subject would be better if horizontal lines, soft texture and less tonal contrast are used. Unity in a painting also refers to the visual linking of various elements of the work.

Fig. 1.11 : Unity

vi. Dominance : Dominance raises interest, reducing confusion and monotony. Dominance can be applied to one or more of the elements to give emphasis. A dominant element in the center (horizontally or vertically) creates symmetry, producing a formal, static design. A dominant element close to the edge creates an out of balance tension as shown in Figure 1.12. The position of the dominant element (colour, shape, line, etc.) should be used to the advantage of the topic.

Fig. 1.12 : Dominance

Everyone involved in the creation of visual content, whether knowingly or unknowingly, uses this collection of tools known as the elements and principles of

design. An understanding of this simple set of tools opens infinite choices to them. The designers can make use of these tools to make their designs look right.

Once the page layout and design is set, the entire material is reviewed for modifications. The correction cycle includes processes such as proof reading and image retouching. This is continued until no further modifications are required.

Design a poster in a chart paper for saving trees. Apply the design principles and use the elements of design effectively to convey the message.

Know your progress

1. What is publishing?
2. The different classifications of printing are _____ and _____.
3. What are the three activities in the production stage of publishing through print media?
4. State whether true or false.
   a. Prepress is the process of making the document ready for printing.
   b. Page designing is done during the post press stage.
5. Choose the odd one out.
   a. line b. typography c. balance d. colours
6. Expansion of DTP is _____.
7. What do you mean by unity in design?

B. Pre-flighting

Once the graphics file has been created by the designer, it undergoes the next pre-press stage called pre-flight. In this stage, the file is checked to make sure it contains all the elements necessary for a successful printing.

The file is checked to make sure the images have the proper format and resolution, all the fonts are included and CMYK colours are set up appropriately. We have discussed the use of CMYK in Chapter 7 of Class XI.

You might have noticed the mark shown in Figure 1.13a in the corners of books. This is called crop marks. Crop marks (trim marks) are lines printed in the corners of the page to show the printer where to trim the paper. The layout elements such as margins, crop marks and bleeds are also checked to make sure that it is set up correctly. Bleed refers to printing that goes beyond the edge of the sheet before

trimming. It is the bleed area that is to be trimmed off. A margin is the area between the main content of a page and the page edges. The margin helps to define where a line of text begins and ends. Crop marks, bleed and margin are displayed in Figure 1.13b.

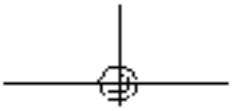

Fig. 1.13a : Crop mark

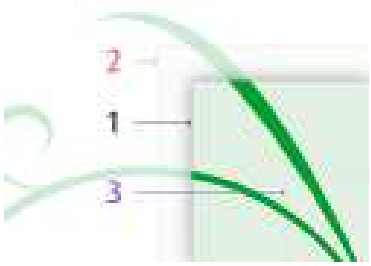

Fig. 1.13b : 1-Crop marks, 2-Bleed, 3-Margin

Depending on the software used to create the graphics file, sometimes the entire file needs to be converted to a format better suited for commercial printing. The most popular format that is supported by most printers is Adobe PDF (Portable Document Format).

C. Creating a proof

In this stage, a proof is prepared, which will be a representation of how the finished piece will appear when it is printed.

In the case of business cards or postcards, a proof is often created as a PDF. Since a PDF is an electronic file, it can be e-mailed to the client for approval. But, if the process involves finishing operations such as binding or folding, like that of a book or brochure, it is recommended that a physical proof be created. A physical proof will demonstrate how the piece will be constructed, where it will be folded, the order of the pages, etc.

In addition to avoiding any unforeseen errors, the purpose of the proof stage is to ensure that the printed material is of the quality required.

D. Printing plates

After the proof has been approved, the project is ready to be produced on a printing press. If the project is to be produced on a digital printing press, printing of plates is not required. This is because the graphics file can be electronically transferred directly to the digital press for output.

Fig. 1.14 : Plate prepared for offset press

However, if the project is to be produced on an offset press, it will need printing

plates. In this case, the final stage of the pre-press process is the creation of printing plates. Printing plates are made for each job and they provide the method for transferring the inked images to the proper place on the paper. The size of a plate depends on the press. Each plate can be used to print a number of pages, depending on the size of the page to be printed. The plates fixed on an offset press are shown in Figure 1.14.

In the case of colour printing, separate plates are to be prepared for the four colour components cyan, magenta, yellow and black, known as CMYK. For this, colour separation of the project has to be done. Colour separation is the process by which original artwork is separated into individual colour components for printing. By combining CMYK colours, a wide spectrum of colours can be produced on the printed page. When the colours are combined on paper, the human eye combines these colours to see the final image.

1.2.2 Printing

Once the prepress jobs are over, the project is ready for the next stage - printing. Here the finished file/plate is given to the press for printing. The printing process can be lithography, digital, gravure, flexography and screen printing. We will discuss the different printing processes in detail below.

A. Lithographic printing

Lithography is an offset printing technique using plates. In offset printing, ink is applied to the printing plate to form an image to be printed. It is then transferred or offset to a rubber blanket. The image on the blanket is then transferred to the paper to produce the printed product. The lithographic process for printing is based on the repulsion of oil and water. Lithographic printing is popular for commercial printing of newspapers, books, forms, etc. An offset press is shown in Figure 1.15.

Fig. 1.15 : Offset press

B. Digital printing

Digital printing refers to methods of printing from a digital image directly to a variety of media. In this type of printing plates are not used. Digital printing can be done using large format, high volume laser or inkjet printers. Digital printing has a higher cost per page than more traditional offset printing methods. But this price is usually offset by avoiding the cost of all the technical steps required to make printing plates. It also supports the modification of the image (pages to be printed) anytime,

which is not possible in offset printing once the plates are made. It also allows on-demand printing, where a book is printed only when an order is received. A digital press is shown in Figure 1.16.

Fig. 1.16 : Digital press

C. Gravure printing

Gravure or rotogravure printing is used in flexible packaging printing process. It can be used to print on materials including polyester, nylon, polyethylene, aluminium foils and paper. The cylinder of the gravure printer is engraved with the image to be printed. The cylinder is immersed in ink and its engraved cells store the ink which is transferred to the material to be printed. Its features are good quality image reproduction and low cost per unit on high volume production. Rotogravure printing is a suitable choice to print on laminated packaging for different ingredients. Figure 1.17a shows a rotogravure press and Figure 1.17b shows printing samples.

Fig. 1.17a : Rotogravure press

Fig. 1.17b : Gravure printing samples

D. Flexography

Flexographic presses are capable of producing good quality printing on many different materials. It is considered as the least expensive and simplest of the printing processes used for printing on packing material. Flexography has a relatively simple operation, similar to the use of a rubber seal and ink stamp pad. The image to be printed is prepared on flexographic plates made of a flexible material, such as plastic, rubber, etc. This plate is then inked and then it is transferred to printing material. Compared

Fig. 1.18 : Flexographic press

to offset and gravure, its ink dries faster which results in faster production, thereby lowering costs. Due to this the use of flexographic printing presses is on the rise. Flexography is used for the production of shopping bags, flexible plastics for milk and other food packets, self-adhesive labels, disposable cups and containers, envelopes and wallpaper.

E. Screen printing

Screen printing is a simple process for printing. It is a printing technique that uses a woven mesh to support an ink blocking stencil to receive a desired image. A rubber blade is moved across the screen stencil which forces the ink through the mesh openings on to the print surface. Screen printing has to be done on a flat surface and the area being printed should not be under pressure. It can be used to print on a wide variety of materials, including paper, plastics, glass, metals, fabrics and others. A screen printing process is displayed in Figure 1.19.

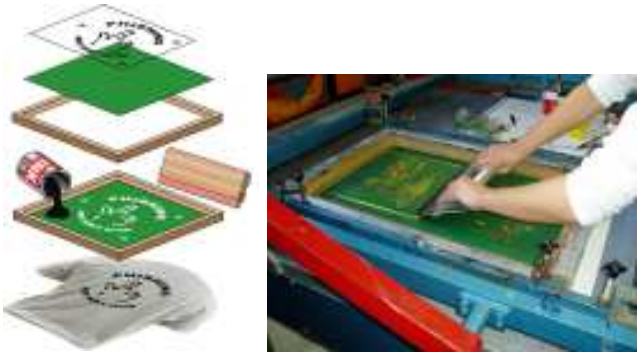

Fig. 1.19 : Screen printing

1.2.3 Post press

Post press is the final stage in the printing process. It involves all the cosmetic or functional changes that are done on the final print. The four major operations in post press are folding, assembling, binding and cutting. There are many additional post press finishing processes such as varnishing, laminating, embossing, perforating, drilling, etc. that improves the appearance or functionality of the printed material.

A. Folding

Usually in a printing press, several pages are printed on both sides of a large paper and then they are folded according to an imposition scheme. Imposition scheme is the arrangement of pages for printing in such a way that when the sheet is folded, the pages will be in the correct order. The folding process can be according to various imposition schemes. A sample layout of the pages after printing is given in Figure 1.20. Page numbers are specified in the figure. This sheet has to be folded

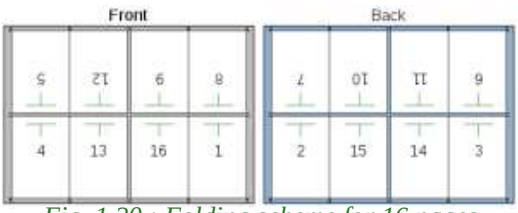

Fig. 1.20 : Folding scheme for 16 pages

according to a scheme so that the pages are in serial order. A folding machine can automatically fold any type of paper according to the imposition scheme for notebooks, textbooks, magazines, brochures, etc.

B. Assembling

The assembling/gathering is the process that brings all the printed pages of the final product together in the required order according to the binding style. Assembly processes can be manual, semiautomatic or fully automatic. Manual and semiautomatic assembling requires the attention of a worker. Fully automatic assemblers are kept in line with the binding machines in order to improve efficiency.

C. Binding

Fig. 1.21 : Different types of binding

Book binding is the process of physically assembling a book from a number of folded or unfolded sheets of paper or other material. The type of binding is usually selected based on the function of the document, the number of pages it contains and the printing budget. Some of the popular binding techniques are hard cover binding, punch and binding (spiral binding), thermally activated binding, stitched binding, etc. Some of the types of binding are given in Figure 1.21.

D. Cutting

Cutting is done according to the crop marks printed on the paper. Cutting can be either done manually or using a machine. A cutting machine cuts the stacked printed pages. The cutting blade is powered electrically. Though cutting is generally considered a postpress operation, most lithographic and gravure presses have integrated cutters as well as

Fig. 1.22 : Cutting machine

equipment to perform related operations like perforating. Perforation is a small hole or a row of small holes punched in a sheet of paper so that paper can be easily torn through this. Figure 1.22 displays a cutting machine.

Calico is an all-cotton plain woven fabric printed with simple designs in one or more colours. Calico originated in Calicut, India, by the 11th century. Calico cloth was used for binding books. This style of binding was popular as calico binding. This process involved stiching, gluing and then coving the area to be binded using calico cloth. In the 17th and 18th centuries calicoes were an important commodity traded between India and Europe.

Job Definition Format (JDF) is a printing industry standard designed to simplify information exchange between different programs and printing systems. It is managed by the industry association CIP4 (International Cooperation for the Integration of Processes in Prepress, Press and Postpress Organization). It manages the print, packaging and label work (job) flows. JDF starts a job ticket with an 'intent' for the job. More JDF details are added later in various steps of the production workflow. A JDF ticket contains information that enables each node to determine what files it needs as input, where they are found and what processes it should perform. After executing a task, it modifies the JDF job ticket to describe what it has done and examines the JDF ticket to determine where accompanying files and instructions should be sent next.

Know your progress

1. What is pre-flighting?
2. The expansion of pdf is _____.
3. What is the purpose of creating a proof?
4. State whether true or false.
   a. The lines printed in the corners of the page to show the printer where to trim the paper is called margin.
   b. Bleed refers to printing that goes beyond the edge of the sheet before trimming.
5. Name the printing technology that can be used to print on nylon.
   a. Gravure b. Digital c. Offset d. Screen
6. List the different types of binding.
7. What is lithography?

1.3 Electronic publishing

You might have noticed people watching movies, enjoying songs, reading books, etc. in their mobile devices like mobile phones, tablets, laptops, etc. while travelling. Today more and more people are forced to spend time for travel regularly due to many reasons like work, visiting relatives, etc. They wish to utilise their time fruitfully by reading books, listening to music, etc. This has compelled the publishing companies to release electronic versions of their publications. These publications can be bought online and people can read them using their mobile devices.

Electronic publishing is the digital publication of e-books, digital magazines and the development of digital libraries and catalogues. Electronic publishing takes the format of works published online, on a compact disk, e-mailed or provided in a file format compatible with handheld electronic readers. It is also called e-publishing or digital publishing.

Electronic publishing can be either web based publishing or as digital distribution of content. In web based publishing, information is published in websites. We can browse and use the website to read the material. Websites like www.wikipedia.org publish content over their websites. In the case of digital distribution publishing, the material can be downloaded from a website and can be read using an electronic reading device like mobile phone or e-book reader. Many publishers now publish their books electronically in downloadable format.

The effective use of elements of design improves the appearance of content in elctronic publishing. Principles of design can also be used to enhance the design of pages.

1.3.1 Web based publishing

Web publishing or online publishing is the process of publishing content on the Internet. It includes creating and uploading websites, updating webpages, and posting blogs online. The published content may include text, images, videos, and other types of media. Websites like Wikipedia, online newspapers, blogs, etc. are examples of web based publishing.

Fig. 1.23 : Web based publishing

Web based publishing requires an Internet connection to read the material. This material is available on any device that has an Internet connection. Web based publishing are mostly freely available on Internet.

To develop a website for publishing content, we require a web development tool like, HTML (Hypertext Markup Language), CSS (Cascading Style Sheet), JavaScript, PHP, etc. The site thus developed has to be uploaded to a web server, called web hosting. We will discuss HTML, CSS and the technologies for uploading web sites to a web server in detail in the forthcoming chapters. Publishing through blogs does not require much knowledge about the web based technologies. This can be done easily using the user friendly features provided by the popular blogging services like blogger.com, wordpress.com, etc.

Since web publishing does not require physical materials such as paper and ink, the cost of publishing content on the web is almost nothing. Therefore, anyone with basic knowledge of Internet can be a web publisher. It has a vast audience since content posted on the web can be viewed by anyone in the world with an Internet connection. These advantages of web publishing have led to a new era of publishing that was not possible before. Figure 1.23 displays websites and blogs in various devices.

1.3.2 Digital distribution

The electronically published materials like e-books, e-journals, etc. can be downloaded from various websites. This type of publishing is called digital distribution. Book publishing companies sell the e-book versions of their hard bound publications through the various e-commerce websites. Users can download any number of these e-books from these websites to their mobile devices and can read them when required.

Amazon - Kindle *Barnes & Noble - Nook* *Apple- iPad*

Fig. 1.24 : Popular e-book readers

An e-book reader is a mobile electronic device that is designed for reading e-books and digital periodicals. An e-book reader is similar in form, but more limited in purpose than a tablet. In e-book readers, the light in the screen is from above, whereas in the case of mobile phones, tablets and laptops the light from the screen

is backlit. The backlit screen causes fatigue, if used for reading for long hours. The front lit screens in the e-book readers provide a better reading experience. In comparison to tablets, many e-book readers are better than tablets for reading because they are more portable, have better readability in sunlight and have longer battery life. The popular e-book readers are Amazon Kindle, Barnes & Noble Nook, Apple iPad, etc. Some of the popular e-book readers are displayed in Figure 1.24.

Electronically published materials can be developed using the same DTP software used for print based publishing. The process of publishing the material in the prepress stage of print based publishing is the same here too. The material to be published is then converted to a format readable by the e-book readers. The popular e-book formats are PDF, iBook, Kindle, etc.

PDF (Portable Document Format) was developed by Adobe Systems and first released in 1993. This format was developed to provide a platform independent means of exchanging documents. PDF documents can be read using a wide variety of readers freely available like Adobe Reader, Open Office.org, Nitro PDF, etc. PDF files are supported by almost all modern e-book readers, tablets and smartphones. iBook is the native file format for Apple iPad and Kindle is the file format for Amazon's Kindle book reader.

Know your progress

1. What is electronic publishing?
2. Name any two web based publishing technologies.
3. Write an example of a popular blog for publishing.
4. What is the use of an e-book reader?
5. PDF was developed by _____.
6. List two examples for PDF readers.

Let us conclude

Any creative work has to be published for distributing to the society. The success of a published work depends on its appearance. Publishing can now be divided into print based and digital publishing. Print based publishing dates back to the years of Johannes Gutenberg, the person who developed the first printing machine. Today the different stages of print based publishing like prepress, printing and post press has been automated. Prepress work includes designing the document to be printed. Softwares are used to design the layout of a page. This is done based on the principles of design and also by giving importance to the various design elements.

The well designed material is checked for errors by creating a proof and then transferred to plates. Once the plates or the material is ready for printing, it can be printed using the press suitable for the material. Once printing is over, the pages need to be cut, folded, assembled and bound to form a book. Electronic publishing has gained importance due to the popularity of Internet. The different types of electronic publishing are web based and downloadable format. Web based publishing can be done through websites or through blogs. They are mostly cheap. Downloadable e-books requires specific softwares to read. Portable e-book readers can be used to buy and read e-book versions of popular hard bound books online.

Let us assess

1. Explain the three different stages in publishing.
2. Arun plans to design a brochure for his restaurant. Name two softwares that can be used to design the brochure.
3. Explain the elements of design.
4. In a paper advertisement, a designer has space to draw lines. Suggest a line style that can give a feel of energy to the brochure.
5. Classify the following fonts into serif and sans serif categories.

   Arial, Times New Roman, Garamaond, Verdana, Palatino
6. Write short notes on contrast and balance in design principles.
7. Why are plates not used in a digital press?
8. What is the use of plates in an offset press?
9. What is colour separation?
10. Harilal is planning to publish a book. Suggest a printing process that can be used for this purpose. Justify your suggestion.
11. Why is flexography used in mass production when compared to other printing processes?
12. Explain how screen printing is done.
13. What do you mean by post press? List and explain the four major operations that are done during this stage.
14. What is electronic publishing? What are the different types of electronic publishing?
15. You have written a story in English and you wish to publish it electronically. Which type of publishing would you prefer? Why?
16. Vimala has an e-book reader and a mobile phone with a large screen. Which device will be better for reading while travelling? Why?

2 Introduction to Word Processors

Significant Learning Outcomes

After the completion of this chapter, the learner

- recognises the use of word processing software and its features.
- differentiates various components of the IDE of the word processor.
- creates documents using word processor.
- copies or moves text from one place to another in a document.
- searches a particular text in the document and replaces it with another text.
- changes the appearance and style of text by applying the features like bold, italic, underline, font face, font size, etc.
- configures a paragraph of text by changing alignment, indent, line space, etc.
- creates lists using bullets or numbers.
- alters the page size, orientation and page margins.
- inserts header and footer in pages.
- takes the hard copy of a document.

We discussed various aspects of publishing in the last chapter. It is identified that pre-press activities play an important role in print-media publishing. This chapter introduces a type of software called word processor that helps to perform prepress activities when the text material is ready. Word processor is an application software tool or package that processes textual matter and creates organised and flawless documents. Document is a file that contains text or images which was earlier prepared using pen and paper, and typewriting machines. Bio data, reports, write-ups, publications, etc are examples of documents. Word processor not only removes all the limitations of conventional typewriting machines but also offers various useful and attractive features. Many software companies offer word processor packages. A large community of users like scholars, teachers, lawyers, doctors, publishers, students, etc. enjoy the features of word processors. Some of the popular examples are LibreOffice Writer, Microsoft Word, AbiWord, etc.

2.1 Features of a word processor

The word processing software is developed in such a way that it helps the creation of a document with ease. It provides menus and tools to perform various operations like creating documents, editing and formatting text, inserting tables and images, etc. Let us see some of the important characteristics of word processors.

Quickness: Word processors help easy creation of a new document and manipulation of the content. Tools are available for speedy typing, editing and formatting in the form of menus, icons and short-cut keys. Document files can be saved, retrieved and printed quickly and easily.

Word wrapping: As we type the text matter towards the end of a line, a word may not fit completely in the line. In that case, the word going past the right margin is placed in the next line automatically. This feature is called word wrapping.

Editing features: Editing is the process of correction like insertion or deletion of text, copying or moving of text, etc. We can perform these with ease using word processors.

Drawings and graphics: Word processor provides tools for drawing various shapes and figures. It also allows pictures or images to be inserted in documents.

Tables: Tables are provided in documents to present text or data in rows and columns.

Formatting features: Word processor offers various types of formatting like character formatting, paragraph formatting and page formatting. Formatting the content makes a document more legible and beautiful.

Header, Footer and Page number: Header is the text appearing at the top of all pages and footer is the text appearing at the bottom of all pages in a document. Page numbers are continuous numbers given to each page in the document. Word processors provide these features to manage multi pages document effectively.

Object Linking and Embedding (OLE): OLE is a program-integration technology used to share information between programs through objects. Objects are saved entities like images, charts, equations, files created using other software, etc. These objects can be linked and embedded with a document.

Spell check and Grammar check: Using this feature, a word processor scans documents to identify any spelling or grammatical error in the document. The comparison of the text in document is made with a standard built-in dictionary.

Mail merging: This facility helps to print many documents with same content and addressed to different people. This is mainly used for mailing invitation letters, notices, etc.

Index and Table of contents: Index is usually created at the end of a professional document like project report, survey report, government write-ups, etc. Index includes important terms or words appearing in the document. Table of Contents appears at the beginning of a professional document or textbook, after the title page. This contains the main headings and sub headings appearing in the document with the respective page numbers. Both the above pages can be easily created using the options available in word processors.

Templates: Templates are predefined document formats available with the software. They have predesigned layouts and formats. It is easy to create a new document from a template. We need only to enter the text at required positions.

This chapter introduces the basic formatting features of word processing software. The advanced features will be explained in the next chapter. Though there are several products for word processing, we use the LibreOffice Writer for further discussions. It is one of the components of LibreOffice integrated package, which is an open source software. It provides all features of a typical word processor. LibreOffice has separate versions for both Linux OS and Windows OS.

2.2 LibreOffice Writer IDE

In the Linux Operating System, we open LibreOffice Writer using the command sequence **Applications → Office → LibreOffice Writer**. The LibreOffice Writer window will be opened as shown in Figure 2.1. This window is known as LibreOffice Writer Integrated Development Environment (IDE) window. The main components of the IDE window are Title bar, Menu bar, Toolbars, Ruler, Scroll bars and Text area.

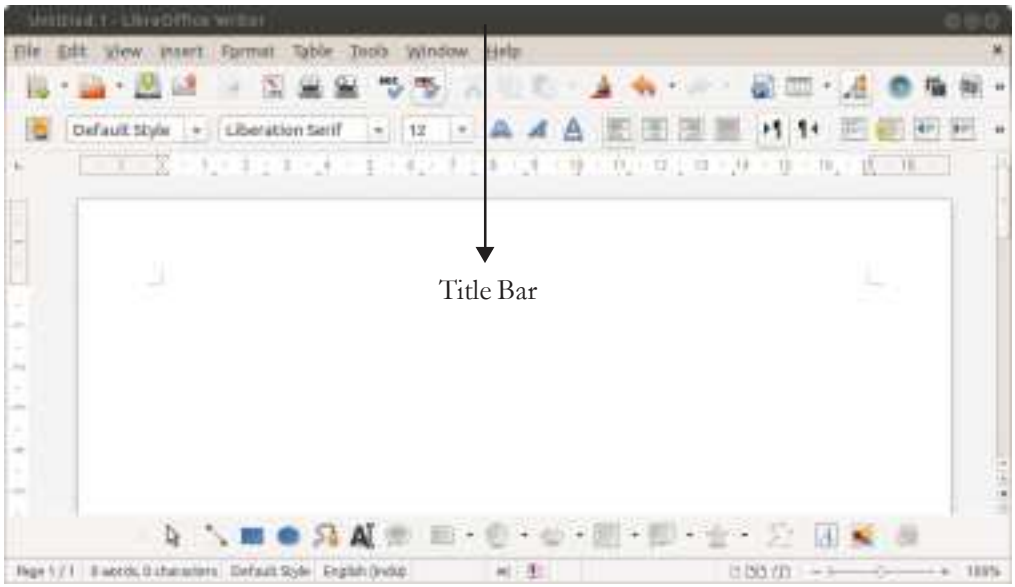

Fig.2.1: LibreOffice Writer IDE window

Let us do

In Figure 2.1, the Title bar is marked. Similarly, identify the other components that are detailed below and mark them in the figure. You may refer the opening window of LibreOffice Calc that you learned in Class XI or run the software in the computer.

These components are similar to those seen in the opening window of LibreOffice Calc. Let us have a look at these components.

Title bar: It is the topmost part of the IDE window. It shows the name of the document and the name of the software at the left, and the control buttons (Minimize, Maximize and Close) at the right. In Figure 2.1, we can see the text item Untitled1, the default name of the document which can be changed when we save the document with a user-supplied name. It is followed by the name of the software LibreOfficeWriter. We know that on clicking the Minimize button the document window (IDE) is minimised to a small icon and kept in the task bar, Maximise button is used for maximising the current document window to fit the whole screen area, and the Close button closes the software itself.

Menu bar: It contains all the important menus available with the software. They include File, Edit, View, Insert, Format, etc. When we click on a menu item, a pull-down menu appears with more commands associated with the menu item as options. There may be sub-menus under certain options in the pull-down menus.

Toolbar: It contains shortcut commands in the form of various buttons. Each button is characterised by the presence of an icon (small pictures or symbols). If we place the mouse pointer on a button, a short text will appear as its description called 'Tool Tip'. There are many toolbars like Standard toolbar, Formatting toolbar, Drawing toolbar, etc. Toolbars can be managed using the View menu. Additions and removal of toolbars are possible by selecting the required toolbar from the list. In Figure 2.1, we can see Standard toolbar and Formatting toolbar at the top and Drawing toolbar at the bottom.

Scroll bars: Scrolling is the process of moving up and down or left and right through the document window. There are two scrollbars namely Vertical and Horizontal scroll bars for scrolling the document vertically or horizontally. The Vertical scroll bar appears at the right most part of the IDE screen. The Horizontal scroll bar appears just above the Status bar which is at the bottom part of the IDE window. This scroll bar will be visible only when it is required, i.e.; when the document window resizes to small window. We can see vertical scroll bar in Figure 2.1.

Ruler: This allows changing the left and right margins of the document. There are two rulerbars. One is at the top and the other is at the left side. Figure 2.1 shows

these rulers. Margin is the distance between the text and an edge of the paper. The ruler in the IDE window displays the positions of margins.

Margins are mainly of four types:

1. Left Margin : The distance between the text and the left edge of the paper.
2. Right Margin : The distance between the text and the right edge of the paper.
3. Top Margin : The distance between the text and the top edge of the paper.
4. Bottom Margin: The distance between the text and the bottom edge of the paper.

Status bar: It is visible at the bottom of the IDE window. It displays information like page numbers, column and line number where the cursor (small vertical blinking character) is located, the selected language etc. as shown in Figure 2.1. The page number area usually shows the page number where the cursor waits and the total number of pages in the document. For example, Page 1/4 indicates that the current position of the cursor is at page number 1 and the total number of pages in the document is 4. Another important item on the Status bar is the zoom area which is placed at the right most end of the Status bar. The middle point button present in the area can be drawn to the right (**+**) or to the left (**-**). If we drag the button to the right (zoom out), the document window enlarges and when the button is moved left (zoom in), the document window shrinks. This is very useful for getting a closer view or distant view of the document. The Status bar also shows the Insert/ OverWrite status which will be discussed later.

Text area: It is the place where we type the text matter of the document to be created. It is also called the document area. The cursor will be present in the text area.

2.3 Creating a new document

We have seen that when we run the LibreOffice Writer in a computer we get a window as shown in Figure 2.1. Actually a new document is opened and we can input or type in the desired text in this document. If an existing document is visible in the IDE, a new document can be opened using the command sequence **File →New →Text Document** or by pressing the key combination **Ctrl+N** (the keys **Ctrl** and **N**). A new document can also be open by clicking New button  in the Standard toolbar. In such a case, the new document will be opened in a new IDE window. Let us prepare an article for the school magazine about voluntary blood donation. Assume that we are ready with enough material for the article. Let us type in the text matter in the new document. Assume that the first page looks like the one as shown in Figure 2.2.

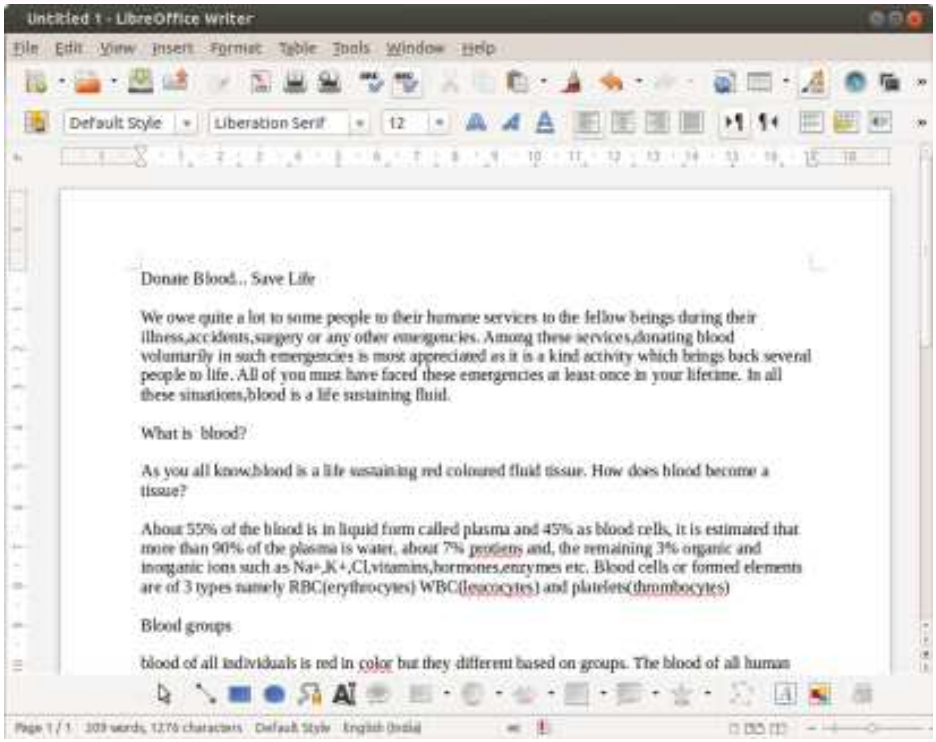

Fig.2.2: A document in Writer IDE window

While typing, the space bar key, tab key and Enter key, etc. may have to be used. We can see that the text matter is aligned to the left margin. The font characteristics of the text take the default values like Liberation Serif face, 12 point size, black colour, etc. These are visible in the Formatting toolbar (just above the horizontal ruler) in the window. We can see that some words are underlined in red colour. This indicates that the word is misspelt. We can correct them by adding some letters or deleting some other letters. There may be grammatical error also. Such corrections are part of editing process. We may also have to change the font characteristics of some text and set the margins and spacing to make the article more presentable and attractive. These are part of the formatting processes. We will discuss these details in the coming sections. Before doing these processes, it is better to save the document with a suitable file name.

2.4 Saving a document

As mentioned in the previous section, when we open a new document for storing a text matter, it is better to be saved frequently to avoid loss of material due to unexpected termination of the program. The document can be saved permanently in the computer by selecting the command sequence **File** → **Save** or by pressing the key combination **Ctrl+S** or by clicking the Save button on the Standard toolbar.

When we save the document for the first time using any of these methods, the Save window appears as shown in Figure 2.3. We can give a suitable name to the file in the text box against the label Name:. As seen in Figure 2.3, the default name Untitled1 will be highlighted initially, which will be replaced by the user-supplied name. The file will be saved with extension .odt in the current folder. We have the freedom to place the file in the desired folder. Let us save the file with the name **donation.odt**. The window shown in Figure 2.3 will not appear on further execution of Save command. But, if we select the command sequence **File → Save As...** or press **Ctrl+Shift+S** frequently, this window will appear each time and the same document has to be saved in another name in the current folder or with the same name in another folder. When we complete a session in the preparation of the document, it is to be closed.

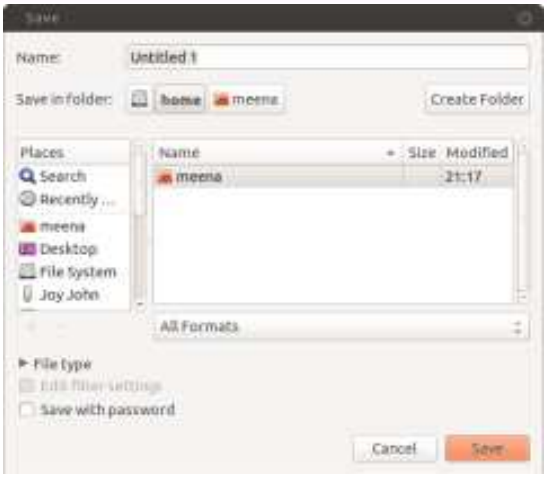

Fig. 2.3: Save window of Writer

Let us do

Create a document to prepare an assignment paper on "Influence of the Visual Media on Students". Initially you collect sufficient material and start typing into the document, and save it in a file. Don't bother about the format, layout, mistakes and such things for the time being.

2.5 Closing a document

At the end of a session we need to close the file in which we are preparing the document. A file can be closed by using the command sequence **File → Close** or by clicking the Close button in the Menu bar. Note that if we click the Close button in the Title bar, the software LibreOffice Writer will be closed along with the file(s) in use. Before closing a document, it is always better to save the latest changes in the file. In case if we have not saved the document with the latest version, the Writer will prompt us with a dialog box with three options namely, Close without saving, Cancel and Save as shown in Figure 2.4. One of those buttons can be selected. If we select the Save button, the Save dialog box will appear if it is the first time saving, otherwise the file will be saved with the latest

Fig. 2.4: Save document? window

changes in the current file name. If we click the Close without saving button, the file will be closed without saving the changes after the last save. On clicking the Cancel button the dialog box will disappear and the document will remain in the edit mode itself.

The final step of every Writer session is to come out of the software. It can be done with the command sequence **File → Exit LibreOffice** or using the keyboard shortcut **Ctrl+Q**. It is also possible with a click on the the Close button in the Title bar as mentioned earlier.

2.6 Opening a document

Suppose we want to see the content of a file or make some modifications in the form of adding more data, deleting some existing content or replacing some current portion with new material. Whatever be the intention, the file is to be opened first. This can be done with the command sequence **File → Open** or with the shortcut keys **Ctrl+O**. It is also possible with a click on the Open button in the Standard toolbar. Now a dialog box appears as shown in Figure 2.5. Choose the required file from those visible in the window. If the file is not found in the opened folder, find the folder first from the Places list box in the window. Once the file is selected, click the Open button in the window. Double click on the file will also do the same. The file will be displayed on the screen.

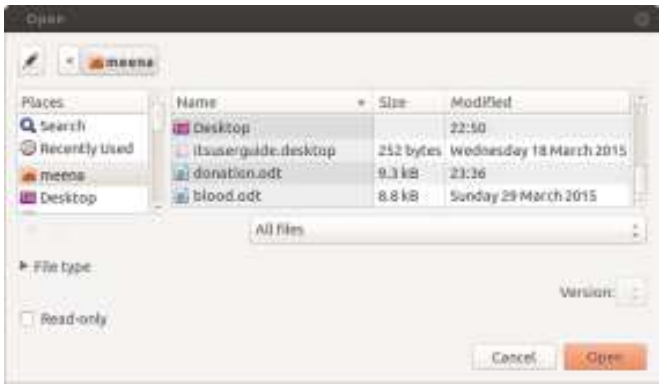

Fig. 2.5: Open dialog box

2.7 Editing a document

Editing is a process of bringing about changes in a document. It may include copying, moving, finding, replacing, deleting, and inserting text or graphics. This process may require navigation through the document. Let us see the common activities during document editing.

2.7.1 Prerequisites for editing

Before editing a document we may need to perform some operations like navigation, Insert/OverWrite mode setting, selection of text, etc. Let us familiarise ourselves with these operations.

A. Navigation

Moving froma point to another in a document is normally called navigation. While editing a document, to make changes at a particular location, the cursor is to be placed at that place. The following keys facilitate navigation:

Arrow keys: To move the cursor to the very next character (to the left or right, or at the previous or next line).

Home: To move the cursor to the beginning of the current line.

End: To move the cursor to the end of the current line.

Page Up: To place the cursor after moving one screen full of content upwards from the current position.

Page Down: To place the cursor after moving one screen full of content downwards from the current position.

Ctrl+→: To move the cursor to the beginning of the previous word.

Ctrl+←: To move the cursor to the beginning of the next word.

Ctrl+Home: To move the cursor to the beginning of the document.

Ctrl+End: To move the cursor to the end of the document.

Navigation can also be performed by scrolling the mouse. The document can be scrolled upwards or downwards by keeping the mouse pointer anywhere in the document and rolling the scroll wheel on the mouse. The same effect can also be achieved by dragging the scroll button on the scroll bars in the window or clicking on the up and down scroll arrows. In Figure 2.1, you might have identified a vertical scroll bar. Though it is not present in this figure, there is a horizontal toolbar at the bottom of window.

B. Insert/OverWrite mode setting

The Status bar at the bottom of the IDE window shows this setting. If we can see a blank box to the right of Language status display, we will say that the document is in Insert mode. This mode allows insertion of a new character in the document without losing the existing information. If we press the **Insert** key in the keyboard, the status will change to OverWrite mode which we can see in the Status bar. In this mode, a new character will replace the existing one. **Insert** key is a toggle type key. By default the mode is Insert mode. When we insert a new text in the Insert mode, the existing matter will be shifted to the right to accommodate the new text. Addition of new text in a document and replacing existing content by new information are all part of editing.

C. Undo and Redo actions

Writer provides two special buttons Undo and Redo . We can use Undo for undoing or cancelling the most recent actions. However, if we want to retrieve an action cancelled by Undo we can use Redo button. The Undo and Redo actions can also be performed by the keyboard shortcuts **Ctrl+Z** and **Ctrl+Y**, respectively.

D. Text selection

While working with a document, we may have to perform some operations on a block of text. A word, phrase, sentence, paragraph or even the entire document can be a block of text. The block of text is to be marked or selected prior to perform any edit operation. This is called text selection, which is mostly done in two ways as follows:

Using mouse: Place the cursor at the starting position of the text to be selected. Hold down the left mouse button and drag slowly till the end of the text is selected.

Using keyboard: Place the cursor at the starting position of the text to be selected. Hold down the **Shift** key and press the proper navigation keys until the required text matter is selected.

The selected text will appear in a shaded area with a slight colouration. If we want to select the whole document, it can easily be done with the keyboard shortcut **Ctrl+A**, or using the command sequence **Edit → Select All**. After selecting the text, if we click anywhere in the document area, the selection will be lost. Figure 2.6 shows a selection in the document we are creating.

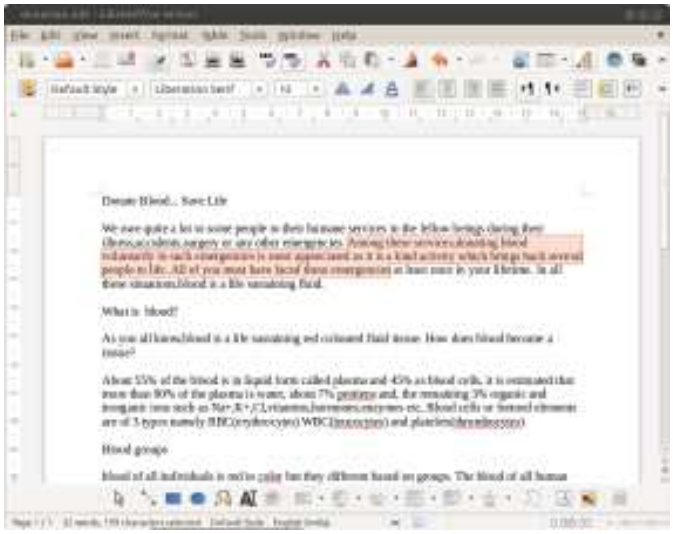

Fig. 2.6: Text selection

2.7.2 Cut, Copy, and Paste functions

These are the functions used frequently in editing. Commands, keyboard shortcuts and button are available to perform these functions. Figure 2.7 shows these buttons seen in the Standard toolbar.

Fig. 2.7: Cut, Copy, Paste buttons

While preparing the document or at a later stage we may find that some text is at an improper location in the document. We may think of deleting the content from its current place in the document and retyping it at the new location. But Writer helps us by providing the facility of Cut and Paste function, by which we can move a block of text or any other object from one position to another. It requires the following steps:

i. Select the text or object to be moved.

ii. Use any one of following actions for cutting:
   - Select the command **Cut** from **Edit** menu.
   - Right click the mouse at the selected text and select **Cut** from the context menu.
   - Press **Ctrl+X**.
   - Click Cut button (refer Figure 2.7) in the Standard toolbar.

iii. Place the cursor at the position where the text/object is to be moved.

iv. Use any one of the following actions for pasting:
   - Select the command **Paste** from **Edit** menu.
   - Right click the mouse at the selected text and select **Paste** from the context menu.
   - Press **Ctrl+V**.
   - Click Paste button (refer Figure 2.7) in the Standard toolbar.

Sometimes, a text may need to appear in different places in the document. In some cases, a portion of the content in one document may need to be present in another document. If the text is too large to type again and again, Writer gives the facility of copy and paste. The procedure is as follows:

i. Select the text or object to be copied.

ii. Use any one of following actions for cutting:
   - Select the command **Copy** from **Edit** menu.
   - Right click the mouse at the selected text and select **Copy** from the context menu.
   - Press **Ctrl+C**.
   - Click Copy button (refer Figure 2.7) in the Standard toolbar.

iii. Place the cursor at the position where the text/object is to be copied.

iv. Use any one of the following actions for pasting:
   - Select the command **Paste** from **Edit** menu.

- Right click the mouse at the selected text and select **Paste** from the context menu.
- Press **Ctrl+V**.
- Click Paste button (refer Figure 2.7) in the Standard toolbar.

Let us do

Let us distinguish between Cut - Paste and Copy - Paste functions. Table 2.1 contains some points. The cells left blank are intended for you. Fill in with suitable value points.

Cut - Paste	Copy - Paste
• Does not duplicate text	• .....
•	• Selected text will be present at both the source and destination location
• Moves the text from one place to another	• .....

Table. 2.1: Cut-Paste Vs Copy-Paste

2.7.3 Deleting text

Deleting is the act of removing a selected word or text matter permanently from the document. It can be performed by any method mentioned in the previous section for cutting the text. Alternatively, we can press the **Del** or **Delete** key in the keyboard after the selection.

As soon as we copy or cut a selected text, it will be placed in a temporary memory area called Clipboard. At any point of time, this matter can be pasted somewhere before exiting from the package.

2.7.5 Find and Replace facility

While editing a document, we may need to search for a particular word or text in the document. Sometimes, the searched text is to be replaced by some other word. Word processor provides Find and Replace facility for this purpose. Let us see how we can do this in Writer.

A. Finding a text

There may be one or more occurrences of the searched item. If we want to search for a text in the document select **Find** option from **Edit** menu or use the keyboard shortcut **Ctrl+F**. A floating toolbar as shown in Figure 2.8 will be opened. Here we have to type in the search text (see the word blood in the textbox) and then click on

the Next or Previous button. The very next occurrence of the search text after or before the cursor position will be highlighted as shown in Figure 2.8. All the occurrences of the search text will be highlighted if we click Find All button in the toolbar. Usually the case of the text will not be considered while searching. Case sensitivity can be enforced by clicking the check box visible at the left of Match Case in the Find toolbar.

Fig. 2.8: Find floating tool bar

B. Finding and Replacing a text

When we want to replace an existing text by a new one, we have to select **Find & Replace** option from **Edit** menu or press **Ctrl+H**. The Find & Replace dialog box will appear as shown in Figure 2.9. The dialog box provides all facilities to find the search text in the document and replace with the new text wherever it is needed. In the Search for box, enter the text to be searched. There are mainly two checkboxes. One is the Match case as mentioned earlier. The other is Whole words only, which on click will search for the text that appear as whole words only.

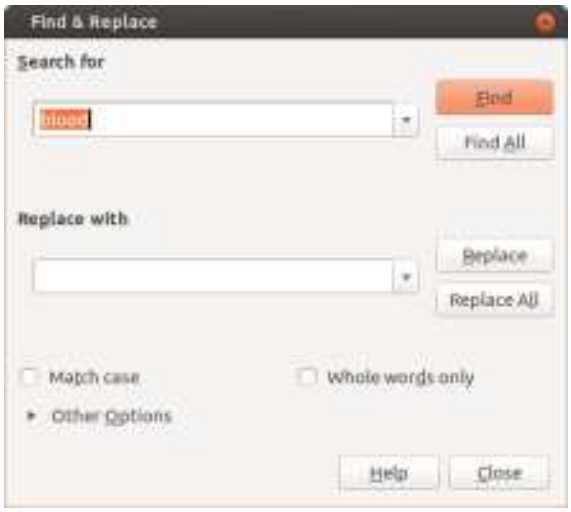

Fig. 2.9: Find & Replace dialog box

In the Replace with box, enter the replacement text. Then click the Replace or Replace All button as per our requirement. To cancel a search in progress, we need to press **Esc** key in the keyboard.

Let us do

Write down the procedure to search for the word "blood" and replace it by "Blood", whenever it appears at the beginning of a sentence.

2.8 Formatting the document

A document can be made attractive by applying certain formatting features. The general arrangement of text is known as formatting. Formatting makes our

document presentable. We can make some text bigger in size, stylish in font and beautiful in colour. Different types of emphasis can be given by underlining, italicising, etc. All these activities are included in the process of formatting the document. The whole content in the document will not be of the same importance or at the same level. There may be headings at different levels, listing of items, notable content, etc. While formatting a document, we need to keep in mind all these factors. Formatting provides documents a neater and more legible outlook. There are various aspects of text formatting like character formatting, paragraph formatting and page formatting.

2.8.1 Character formatting

Character formatting plays an important role in enhancing the appearance of a document. It decides how individual characters in the document should appear. Character formatting is concerned about making decisions regarding the font characteristics such as type of font, size and colour. The character formatting is also associated with the setting of text attributes like bold, italics, underline, etc. and text positioning like superscript, subscript, etc. Some of the important text attributes in character formatting and their effect are shown in Table 2.2. Word processor offers a variety of character formatting facilities at the same place. Let us see the steps for character formatting in Writer. Before applying the character formats, the text is to be selected. Using the command sequence **Format → Character...**, the Character dialog box as shown in Figure 2.10 can be opened where the formatting facilities are provided in different tabs.

Text attribute	Effect after applying the attribute
Bold	**Computer Applications**
Italic	*Computer Applications*
Strikethrough	~~Computer Applications~~
Overlining	$\overline{\text{Computer Applications}}$
Underlining	Computer Applications
Font color	Computer Applications
Superscript	A^2 (2 is superscripted)
Subscript	A_2 (2 is subscripted)

Table 2.2: Text attributes

i. **Font** tab provides Family (different font faces), Style (Regular, Bold, Italic, Bold Italic), and Size. (*In Ubuntu Linux based LibreOffice Writer, fonts for English and Malayalam languages will be visible as in Figure 2.10*).

ii. **Font Effects** tab gives options for Font color, Effects (Capitals, Lowercase, etc.) and Relief (Embossed and Engraved). It also provides Overlining, Strikethrough and Underlining with different types and colours of lines. Some checkboxes are given for Outline, Shadow, etc.

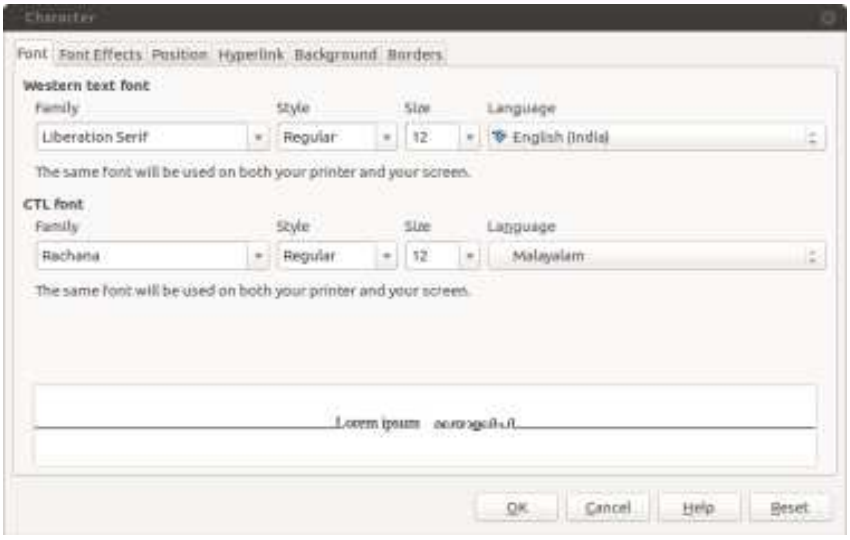

Fig. 2.10: Character formatting dialog box

iii. **Position** tab facilitates superscripting, subscripting, etc. It also gives options to rotate the selected text at an angle. Another facility available is that, the spacing between the characters in the text can be increased (expanded) or decreased (condensed).

iv. **Hyperlink**, **Background** and **Borders** are the other tabs in the dialog box.

The font style Bold, Italic and Underline can also be applied to a selected text by the keyboard shortcuts **Ctrl+B**, **Ctrl+I**, and **Ctrl+U**, respectively. The key combination **Ctrl+B+I+U** can make the three styles effective on the selected text.

Let us do

Figure 2.11 shows a portion of the document "donation.odt" in which we can see formatted text. Write down the procedure required for this and check whether you get the same format with your procedure. Note the position of the character + after Na and K in the last line of the window. Also identify the buttons in the Formatting toolbar seen in the figure, to apply Font Style (Bold, Italic, Underline) to the selected text.

2.8.2 Copying a format

The word processor provides an easy way to copy the character formats applied to a selected text and use the same for a particular text at another place in the document. Suppose we have formatted a heading text with some font characteristics and font style. The same can be easily copied and apply to another text in the same document using the Format Paintbrush button in the Standard toolbar. The procedure is as follows:

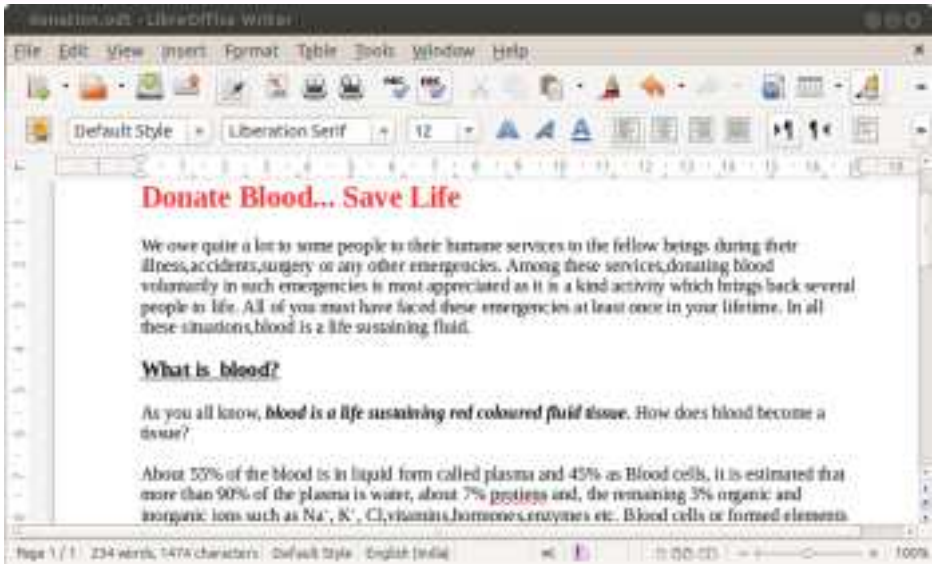

Fig. 2.11: The document after some character formatting

- Select the text from where the format is to be copied.
- Click the Format Paintbrush button.
- Click the text or paragraph where the format is to be applied.

Know your progress

1. State whether the following statements are True or False:
   a. Writer automatically wraps the text extending beyond the right margin to the next line.
   b. Ctrl+S is the short cut key combination to select a text in Writer.
   c. Copy/Cut/Paste buttons are present in the Standard toolbar.
   d. Writer does not offer a facility to cancel the most recent actions.
   e. A text entered in Writer can be rotated to 900.
2. Fill in the blanks
   a. The Bold button is present in _____ toolbar.
   b. Formats applied to one text can be copied using the _____ button.
   c. The text or graphics copied or cut from the document will be temporarily placed in the memory area called _____.
   d. To move a text or object from one place to another in a document, _____ and _____ operation is required. (Cut, Copy, Paste)
   e. The keyboard shortcut for opening an existing file in Writer is _____.

Let us do

Modify your assignment paper with necessary editing and apply suitable character formatting features.

2.8.3 Paragraph formatting

Paragraph formatting involves controlling the appearance of the entire text in a paragraph. The main contents of documents like articles, assignment papers, textbooks, reports, etc. appear in paragraphs. So it is very important to format paragraphs properly. Some of the formatting features are text alignment, tab stops, paragraph indentation, line spacing, etc. The text delimited by the Enter key is treated as a paragraph. In that sense, paragraph formatting is applicable to headings, list of items, etc.

The facilities provided by Writer to format paragraph is made available using the command sequence **Format → Paragraph...** A dialog box as shown in Figure 2.12 will be opened. Different tabs are available in this dialog box for paragraph formatting.

A. Paragraph alignment

Paragraph alignment refers to the text layout within a paragraph with respect to the document margins. The boundaries of text get affected by left and right margins and the indentation for the paragraph. There are two categories of text alignment - horizontal alignment and vertical alignment.

Fig. 2.12: Paragraph formatting dialog box

Horizontal alignment refers to the text alignment with respect to the left and right margins. There are four types of horizontal text alignment as specified below:

i. **Align Left:** This alignment aligns the selected text/paragraph aligned to the left margin. This is the default alignment.

ii. **Align Right:** This alignment aligns the selected text/paragraph aligned to the right margin.

iii. **Centered:** This alignment aligns the selected text/paragraph in the middle between the left and right margins.

iv. **Justified:** In this alignment, the text is flushed to both the left and right margins, thus the text/paragraph aligns evenly between left and right margins. The spacing between the text or words will be automatically adjusted.

Vertical alignment refers to the alignment of the selected text or object relative to the current line or top and bottom margins of cells in a table. There are four types of vertical text alignments. These alignments have no effect on normal text appearing in a document. It is applicable when the text is placed in a table cell. We will discuss this in the next chapter. The various types of vertical alignments are given below:

i. **Top:** The text in the cell is aligned at the top.

ii. **Bottom:** The text in the cell is aligned at the bottom.

iii. **Middle:** The text in the cell is aligned at the centre with respect to upper and lower margins of the cell in a table.

B. Paragraph indentation and line spacing

The indent refers to the distance between text boundaries and page margin. When we start a new paragraph, we usually start typing by leaving some space from the left margin. This space is indentation. There are mainly four types of indents as shown in Figure 2.13.

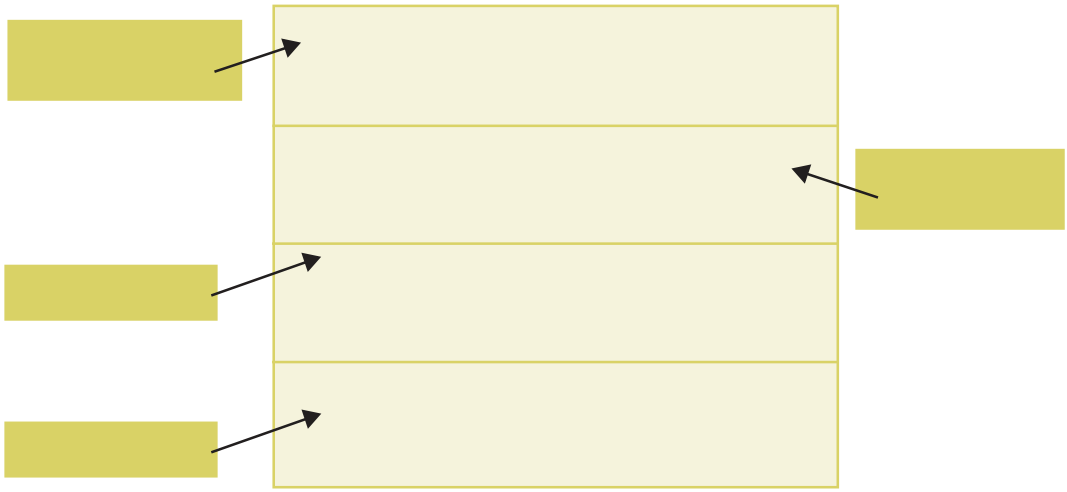

Fig. 2.13: Four types of indents

Figure 2.14 shows the Indents & Spacing tab of Paragraph dialog box where we can specify values for the indents shown in Figure 2.13.

On the basis of the values given, indentation can also be classified as follows:

i. **Positive Indent:** Here the text is placed a little inward from the margins.

ii. **Negative Indent:** This type of indent allows the text to extend outward from the margins.

iii. **First line Indent:** Here the very first line of the selected paragraph is placed a little inward with respect to the rest of the text.

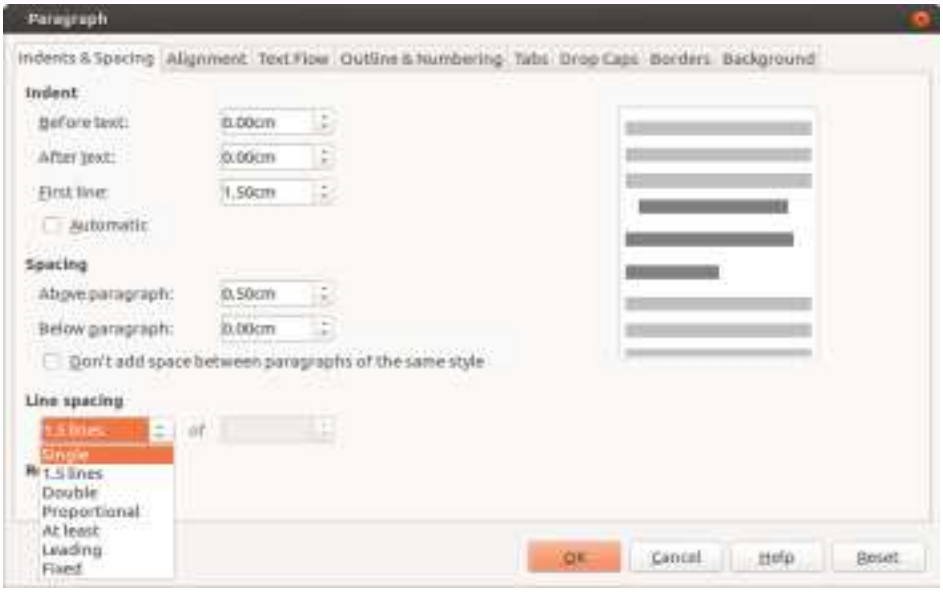

Fig. 2.14: Indents & Spacing tab of Paragraph dialog box

iv. **Hanging Indent:** It makes the text other than the first line to move little inward from the left margin.

When the indent applied is applicable to the left side of the page, it is called Before text indent and the indent for the right side of the page is called After text indent.

Sufficient spacing can be given before and after a paragraph. Similarly, line spacing within a paragraph can also be specified in the Indent & Spacing tab of Paragraph dialog box. Line spacing refers to the space between two lines of text in a paragraph. Another way of interpretation is the total height of a line of text. The standard line spacing are Single, 1.5 lines and Double. Refer to Figure 2.14 to see more options for line spacing. The desired spacing in all these cases are specified in centimetres.

C. Drop Caps feature

In some documents, the first letter in a paragraph, usually the first paragraph, may take the height of two or more line. This is called Drop Caps feature. We can see this feature in all chapters of this textbook. Have a look at the first page of any chapter. To incorporate drop caps in a paragraph, proceed as follows:

- Place the cursor anywhere in the paragraph in which we utilise this facility.
- Open the Paragraph dialog box and select Drop Caps tab.
- Specify the number of characters to be dropped from the first and number of lines it should span.
- Click **OK** button.

Several formatting facilities are available for paragraph formatting. Considering the scope of the syllabus we confine our discussion only on these features.

Let us do

Look at Figure 2.15. Our document is now formatted according to the settings as shown in Figure 2.14. Write down the procedure adopted to make the document as shown in Figure 2.15.

Fig. 2.15: Document after applying character and paragraph formatting

2.8.4 Bullets and Numbering

Documents may contain list of items. Two types of lists are common - bulleted lists and numbered lists. Bulleted lists are used when the list does not rquire any order for the presentation of its items. Bullet is a small graphic symbol, as shown in Figure 2.16, that appears in front of each item in the list. For example, one's hobbies can be presented as a bulleted list. But some items may need to be presented in an order. In such a case we use numbered list. For example, the districts in Kerala may be presented with numbers 1 through 14 for Thiruvanathapuram to Kasaragode.

The procedure for making a list is as follows:

- Click the **Edit** menu and choose **Bullets and Numbering...** option.

  A window as shown in Figure 2.16 will be opened. We can select the Bullets or Numbering type tab and choose the style of bulleting or numbering. Figure 2.16 and 2.17 shows different types of bulleting and numbering.
- Select the desired bullet/number and click **OK** button.
- Go on with typing of each item.

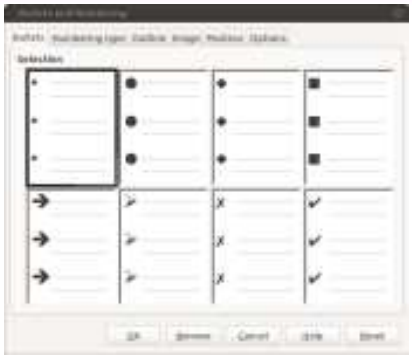

Fig. 2.16: Bullets tab of Bullets and Numbering window

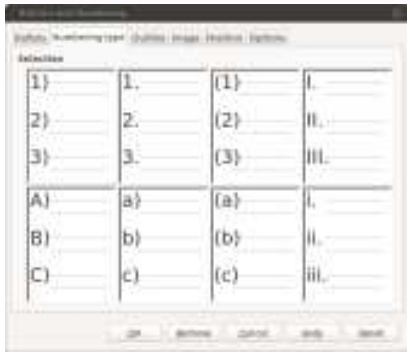

Fig. 2.17: Numbering type tab of Bullets and Numbering window

Whenever **Enter** key is pressed after presenting an item, a new bullet for the next item will appear automatically. The window provides more tags for colourful bullets, alignments, nesting (a list in which some or all items may have another sub list), etc. Figure 2.18 and 2.19 shows a bulleted list and a numbered list respectively. These lists belong to our article, which is now under formatting process.

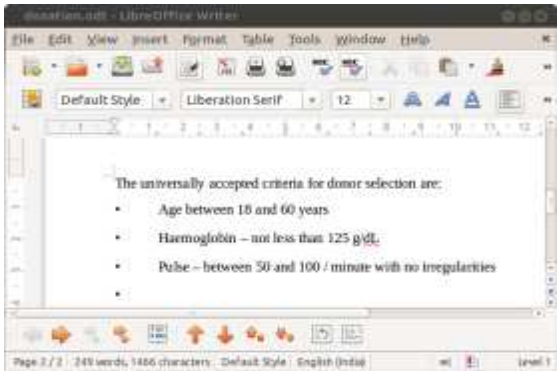

Fig. 2.18: Bulleted list in the document

Note that a tool bar appears at the bottom of the IDE window (just above the Status bar) which facilitates moving of items upwards or downwards within the list, renumbering, navigation through sublevels, etc.

2.8.5 Page formatting

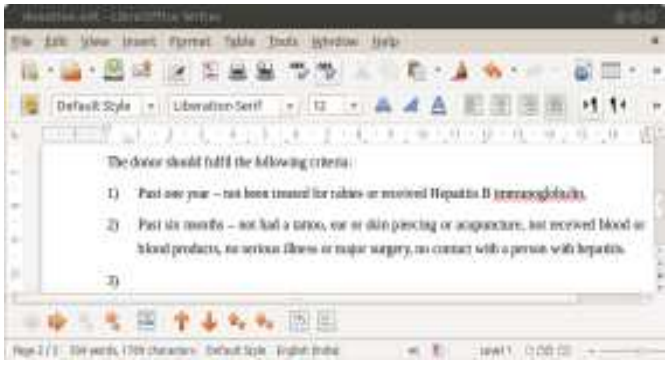

Fig. 2.19: Numbered list in the document

Page formatting involves the setting of page layout and design. That is we have to specify the page size, orientation, margins etc. In Writer, page formatting is controlled through Page Style dialog box which is obtained by selecting the **Page** option from the **Format** menu. Figure 2.20 shows Page Style dialog box.

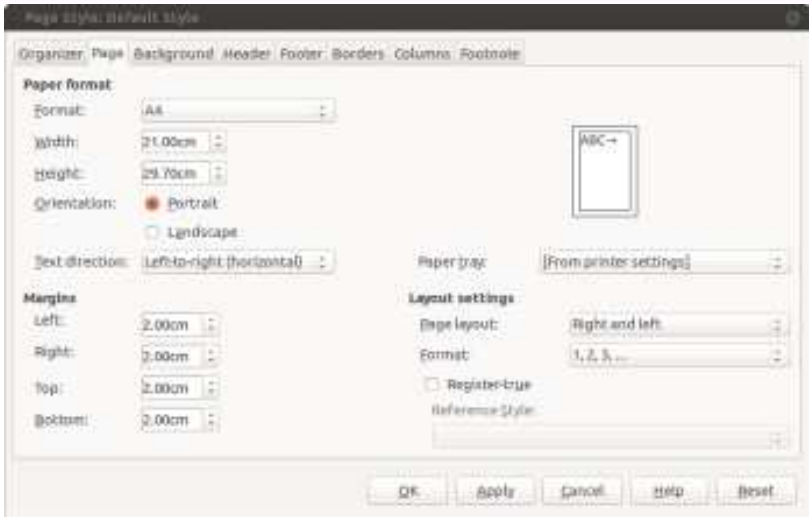

Fig. 2.20: Page tab of Page Style dialog box

A. Page Size (Paper Size) and Orientation

Writer offers standard page sizes for the documents like A3, A4, Letter, Legal etc. To set the page size, click the Page tab of Page Style dialog box which shows the page formatting facilities as in Figure 2.20. Here we specify any of the predefined paper sizes available in the Format: box of Paper format section. We can also select the desired page-orientation by clicking on one of the desired Orientation buttons - Portrait or Landscape.

Orientation refers to whether the text is to be printed length-wise or width-wise. When the text is printed or typed length-wise, it is called Portrait Page Orientation and when the text is printed or typed width-wise, it is called Landscape Page Orientation. Figures 2.21(a) and 2.21(b) show the two types of orientation.

In the Page tab, we can specify the margins (left, right, top and bottom) and layout settings. Margins can be set in two ways - using Ruler bars and using Page Style dialog box

a. Portrait *b. Landscape*

Fig. 2.21: Page orientations

Using Ruler bars: Move the mouse over the area where the white ruler changes to gray. When the cursor becomes a double-ended arrow, click with the mouse and drag the margin indicator to the desired location. Release the mouse when the margin is set.

Using Page Style dialog box: In the Page tab on the Page Style dialog box, either directly specify the desired measurement for the margins in the corresponding boxes

or increment/decrement the default measurements using increment/decrement buttons till we get the desired result (refer to Figure 2.20).

B. Header and Footer

Look at the top of the pages of our text book. We can see in print the words "Computer Applications (Humanities) - XII" on every left pages. Similarly page numbers can be seen at the bottom with a design. These text items are called header and footer, respectively. These are commonly used in publications, books, project reports etc. The common text appearing on the top of every page is the header and at the bottom is the footer. Thus header or footer may be the page number, system date, or a company logo. A header is printed in the top margin, and footer in bottom margin. We can insert either header or footer or both in a document. Once it is inserted in any page, it will be available in all pages of the document.

To add a header to a page, choose **Header** option from **Insert** menu and type the text in the Header box. Similarly, to add footer to a page, choose **Footer** option from the **Insert** menu. Usually we put page numbers in the footer. When the cursor is in the footer section, the command sequence **Insert** →**Field**→ **Page Number** can be used to get page number in the footer. Some other information like Total pages, Author, Date, etc. can also made avaiable in the footer.

Alternatively, we can select Header or Footer tab in the Page Style dialog box (refer to Figure 2.20). Here we have to select the Header on or Footer on textbox. Clicking the **Apply** button followed by **OK** button brings the cursor at the header or footer area.

2.9 Printing the document

When we complete the preparation of a document after editing and formatting, its hard copy (print out) may be required. Usually the documents are to be submitted to the concerned in the form of hard copy. Now we can see how to take a print out.

We can use the command sequence **File** →**Print**, or the keyboard shortcut **Ctrl+P**, or the Print button  in the Standard toolbar. The Print dialog box will be opened as shown in Figure 2.22. We can see the print preview of a page in the left pane of the window. Any page of the document can be previewed by clicking the next or previous button seen below the preview. Page numbers, number of copies, layout setting, etc. can be given in this window. On clicking the **OK** button, the document will be printed, if the printer is ready.

Print preview of more than one page can be obtained using the the command sequence **File** → **Print Preview**, or the keyboard shortcut **Ctrl+Shift+O**, or the Print Preview button  in the Standard toolbar. The Print Preview window is shown in Figure 2.23.

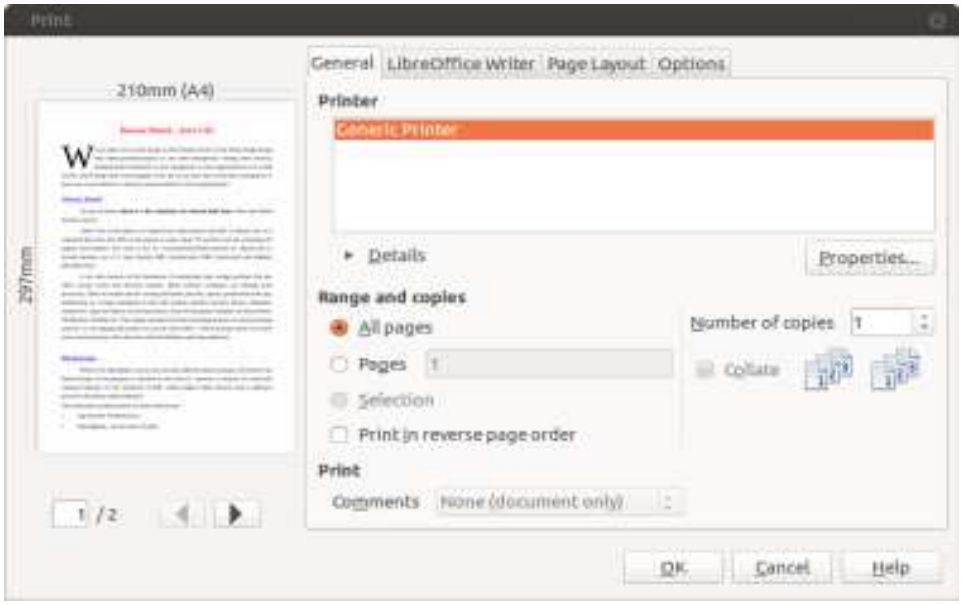

Fig. 2.22: Print dialog box

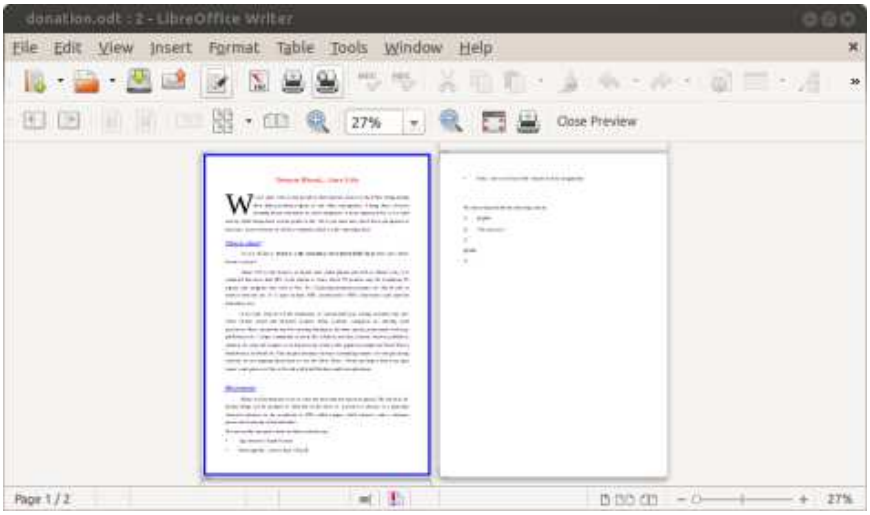

Fig. 2.23: Print Preview window

Know your progress

1. Name the four types of text/paragraph alignments.
2. Which type of indent shows the text present in the paragraph little inward from the first line of text?
3. Common text appearing on top of all pages is _____.
4. Print Preview option is available in _____ menu.
5. Line spacing option is available in _____ menu.

Let us conclude

A word processor is a package that helps to create attractive documents. It provides editing and various kinds of formatting facilities. It also provides features like word wrapping, copy/cut and paste features, finding and replacing, etc. Character formatting features include font setting, bold facing, italicizing, underlining, etc. Different types of alignments, indentations, line spacing, etc. are covered in paragraph formatting. Towards the end, page formatting features and print setting are discussed.

Let us practice

1. Open a new Writer document and prepare the following letter to a parent regarding PTA general body meeting.

From

Principal,

Your school name,

School address.

To

Parent's Name,

Home address.

Dear parent,

Sub: PTA General body meeting

It is decided to conduct the PTA general body meeting of this year in our school auditorium next Monday. You are requested to attend the meeting without fail.

Thanking you

Yours faithfully

Principal

Place

Date

a. Save the document as pta.odt

b. Make the From and To addresses bold and italic

c. Change the font face to Arial and size 12.

d. Under the text 'Sub: PTA General body meeting' .

e. Copy your name from the 'From' address to the bottom of the document.
f. Align the text 'Thanking You' at the centre.
g. Right align 'Yours faithfully' and 'Principal' at the bottom.
h. Double space the matter of the letter.
i. Save the letter again.

2. Prepare your own bio data. Apply the formatting features of the word processor to beautify it.
3. Prepare an application to the principal requesting for TC and Conduct certificate.

Let us assess

1. What is meant by 'word wrapping'?
2. How is a Writer document saved?
3. What is meant by indenting?
4. Differentiate between 'Undo' and 'Redo' features.
5. Write down the effect of using the key combinations Ctrl+N and Ctrl+Q.
6. Differentiate between 'Save' and 'Save As' options.
7. Distinguish between Copy-Paste and Cut-Paste functions.
8. Differentiate between Print and Print Preview options.
9. Differentiate between Portrait and Landscape page orientation.
10. Write a few features of a Word processing software.
11. Explain the various types of text alignments in Writer.
12. Suppose you want to replace a particular text in the document with another text. Write the steps to do that.
13. Differentiate between Left indent, First line indent and Hanging indent.
14. How do you change the margins of a document?
15. Write the steps to take a print out of the document.
16. Briefly explain the IDE of the word processor, LebreOffice Writer.
17. Explain the various formatting features of Writer.