

**Publishing-** Creation, compilation and mass reproduction of text and graphics. Publishing can be done in two ways :**print publishing** and **electronic publishing**

Stages in publishing(Pre press, Printing,Post press)

1. **Pre press-** stages before printing. From designing to printing. DTP is used in this stage.

**DTP:-** Desktop publishing. Creation of page layouts for documents using DTP software. Popular DTP software are **Scribus, Adobe InDesign, QuarkXPress** etc.

**Pre press** includes:-

**A) Designing-** the layout preparation. It is the arrangement of visual elements in a page.

**Elements of design:-**

line- to divide space and to draw the attention. Direction of a line conveys moods

shape- Used to emphasize a portion of a page. They add interests.

colors- create mood. It is applied to elements or background.

space- Three dimensional volume. Creates the feeling of actual depth.

Typography- art of arranging letters

Two types of typography-

sans serif -without feet(eg: Arial, Thahoma and Verdana)

serief- with a little feet(eg: Times Roman, Garamond and Platino)

**Principles of design**

balance- distribution of visual weight of objects. Balance is **formal** when both sides are equal and **informal** when both sides are not equal .

repetition- a pattern to make the artworks look active .Repetition can be **with variation** and **without variation**. variation can give a sense of motion

contrast- association of opposite elements like colors, direction etc. to highlight key elements

harmony- all parts of visual elements relates and compliment each other

unity - It is the relation of design elements with the idea. It also refers visual linking of various elements

Dominance- give emphasis. It raises interest , reduce confusion.

**Electtronic publishing**

digital publication of e-books, magazines and the development of digital libraries and catalogues.

Two types:

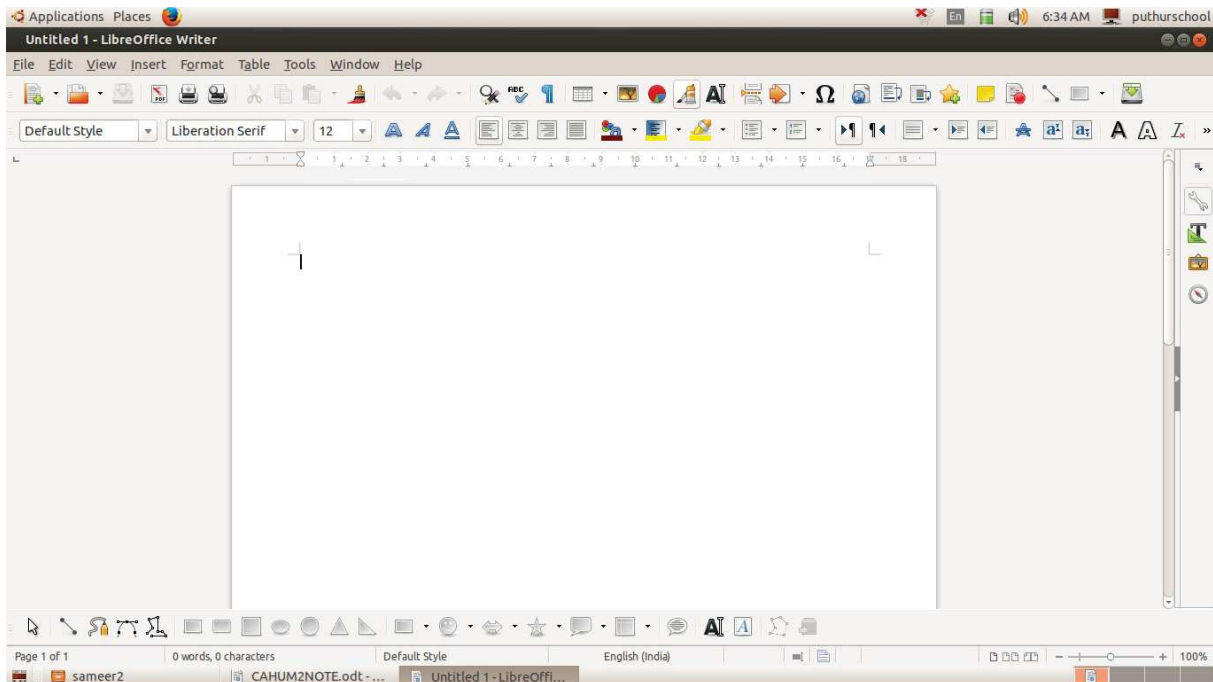
- 1 **web based** - publishing the content on the internet . User can brows and read.  
Eg: wikipedia, online newspapers, blog etc.  
**Advantages:** no need of paper and ink, low cost, any one can publish with basic knowledge of internet, vast audience .
- 2 **digital distribution**- Published documents are downloadable and can be read using e-reading devices. Eg: e-books, e-journals etc.

## 2 INTRODUCTION TO WORD PROCESSOR

### *Features of word processor*

- Quickness-** helps easy creation ,manipulation of new documents .speedy typing and editing are possible.
- Word wrapping-** the automatical placement of not fit word in a line to next line.
- Editing features-** easy correction and editing like insertion, deletion, copy etc.
- Drawing and graphics-**tools for drawing shapes and figures. Pictures can be inserted.
- Formatting** various formatting like character, paragraph and page formatting.
- Header, footer and page number-** provide features to set header, footer and pagenumber.
- OLE-** objects created by other softwares like images, charts can be linked and embedded with a document linking and embedding
- Spell check and grammar checking-** keeps a standard built-in dictionary to correct spelling and grammar
- Mail merging-** to print many documents with same content and different address
- Index and table of content-** index is important words and its page number. Table of content is the headings ,subheadings and its pagenumbers. both can be easily created using word processor.
- Templates-** predefined document formats.

## Libre Office writer IDE



<i>Title bar-</i>	Topmost part. It contains name of document and software, control
<i>Menu bar-</i>	all the important menus file, edit, insert, view etc.
<i>Tool bar-</i>	buttons for commands (standard, formatting, drawing)
<i>scroll bar-</i>	to move the document up and down, left and right
<i>Ruler-</i>	to change left and right margins
<i>Status bar-</i>	It is at the bottom .Displays information like page numbers, cursor position, selected language . It also display zoom area.

### Short-cut keys

<b><i>To create new document-</i></b>	<b>Ctrl+N</b>
<b><i>Saving a document-</i></b>	<b>Ctrl+S</b>
<b><i>Opening</i></b>	<b>Ctrl+O</b>
<b><i>Cut</i></b>	<b>Ctrl+X</b>
<b><i>Copy</i></b>	<b>Ctrl+C</b>
<b><i>Paste</i></b>	<b>Ctrl+V</b>
<b><i>Undu</i></b>	<b>Ctrl+z</b>
<b><i>Print</i></b>	<b>Ctrl+P</b>

### navigation keys-

moving one point to another	
<i>arrow keys-</i>	move to very next character
<i>home-</i>	to beginning of the current line
<i>End-</i>	to the end of the current line
<i>page up-</i>	cursor one page up
<i>page down-</i>	cursor one page down
<i>Ctrl+-&gt;</i>	to beginning of the next word
<i>Ctrl+&lt;-</i>	to beginning of the previous word

Ctrl+home            to beginning of document  
Ctrl+End             to the end of the document

### ***Cut-Paste***

*Doesn't Duplicate text*  
*Present only at destination*  
*Move text*

### ***Copy- paste***

*Duplicate text-align*  
*present at both source and destination*  
*Copy text*

**Indentation-** distance between text boundaries and page margin  
(format->paragraph-> indentation& spacing)

left indent-	indent before text
right indent-	indent after text
first line indent-	first line is placed little inward
hanging indent-	text other than the first line to move inward
positive indent-	text is placed little inward from the margin
negative indent-	text is placed little outward from the margin

**Drop caps-** first letter or letters in height of two or more lines  
(format->paragraph->drop caps)

**page orientation-** width-wise or lengthwise appearance of text in printing. Two types  
1.portrait- lengthwise  
2.landscape- width-wise

## **3 CREATING PROFESSIONAL DOCUMENTS**

**Inserting tables-**3 ways

1. click standard toolbar table icon
2. **table->insert->table**
3. **ctrl+f12**



Insert table dialog box appears. Give table name , number of columns and rows.  
Click insert button

Autoformat- predefined table styles

**applying border to table-** table->table properties-> Table format dialog box  
set border,line style, width and colour.

### **Managing Tables**

To change width of column and row- click and drag using mouse at boundary

**Autofit-** width or height can be set or makes equal width using (**table-> Autofit**)

### **inserting**

new row- table->insert->rows

new column- table->insert->columns

deleting- table->delete-rows

Merging rows/columns- combining the selected cells into single cell  
table->Merge cells or (right click in the cell, cell->Merge)

splitting rows/columns- table->Split cells or (right click in the cell, cell->Split)  
select vertically or horizontally in the split cells dialog box

Inserting graphics(three types)

1 **Adding an image-** (insert->image->from file. Select the image) or (**image icon**  
in the picture tool bar)

2 **Drawing tools-** view->toolbars->drawing

Drawing tools contains-

Line tool : to draw straight lines

Rectangle and Ellipse Tool : to draw rectangles and ellipses

Freeform Tool : to draw freehand figure

Text tool : to insert textbox

Basic shapes, Symbol shapes, Block arrows, flow charts, callouts, stars

Fontwork gallery tool : to create graphical text art objects

Extrusion on/off : 3d effect for an object

3 **Inserting charts**

steps- Select the table

insert->object->chart->chart wizard,

select the chart type, Data range, Data series and Chart elements.

Click finish button.

**inserting page border**

**format->page->Page Style dialog box ->border tab**

select border style, line style, width, colour and distance between  
border line and content.

**Exporting to pdf & inserting water marks**

file->export as PDF->type water mark->export

*(Water marks are lightly coloured text or graphics in the background of a document.)*

**converting text to table**

Select the text matter. **table->convert text to table.** Select the column separator. Click OK

**Splitting text into columns**

Select the matter. **format->columns.** Select No of columns, width of columns, spacing,  
separator lines etc. Click OK.

**Mail merge-** to create letters, mailing labels and envelopes by linking a main document to  
a set of data

- steps:-
- 1 Create a letter.
  - 2 Go to tools->Mail Merge wizard.
  - 3 select starting document
  - 4 select document type(letter or e-mail)
  - 5 insert address book
  - 6 create salutation
  - 7 adjust layout
  - 8 edit document
  - 9 personalise
  - 10 save, print or send

## 4 WEB TECHNOLOGY

*website is a collection of web pages*

### static web page

remain same all the time, no database

### dynamic web page

content and layout change during run time, database is used

<u>Static web page</u>	<u>v/s</u>	<u>Dynamic pages</u>
content and layout fixed		content and layout may change during run time
never use database		database is used
run on browser. no server side application		runs on the server side application
easy to develop		require programming skills

**script:-** program code inside HTML. Two types client side and server side.

<u>client side scripting</u>	<u>v/s</u>	<u>server side scripting</u>
script is copied to client browser		script remains at server
execution is in browser		execution in server and result is displayed in the client browser
used to validate data at client		used to connect to database
user can block scripting		cannot be blocked by user.
Type and version of the browser affect the working		browser doesnt affect
eg. Javascript		eg:PHP

### Basic concepts of HTML

HTML- contains tags and attributes. It is created by Tim Berners Lee

**tag-** tell browser how to format. Two types

**container tag-** having openig and closing tag. Eg: <BODY>..</BODY>

**empty tag-** without closing tag Eg: <BR>, <HR>

**attributes-** additional information in opening tag

### Basic structure of html

<HTML></HTML> -starting and ending

<HEAD></HEAD>- information about the document

<TITLE></TITLE> - title of the page

<BODY></BODY>- to define the contents

### Essential HTML tags

<HTML>- starting and ending of a web page.

Attributes- dir- direction of the text. values- ltr, rtr  
lang- language values- En, Fr, Hi, etc.

<HEAD>- contains title, script used and style definition etc.

<TITLE>- title on title bar

<BODY>- document body

Attributes-

background- to set an image as a background . <BODY background="sky.jpg">

bgcolor- to set a background color. <BODY bgcolor="grey">  
values in two ways . Color name or hexa number(eg. "#303030")

text- color of the text content in the page <BODY text="red">  
 link- color of the hyperlinks  
 alink color of the active link  
 vlink color of visited link  
 left margin, topmargin  
 eg:- <BODY link=yellow alink= red vlink=blue leftmargin=20 topmargin=20>

### Heading tags

<H1> to <H6>- six level of heading tags <H1> is biggest and <H6> is smallest  
 attribute- align (values: left, right, center)

<P>...</P> paragraph, attributes- align (values: left, right, center, justify)  
 <BR>- line breaking

### Text formatting tags:-

<B>- bold  
 <I>- italic  
 <U>-underline  
 <S> and <SRIKE>- striking through text (welcome)  
 <BIG>- big size  
 <SMALL>- small size  
 <STRONG>- bold text (same as <B>)  
 <EM>- emphasising the text (same as <I>)  
 <SUB> and <SUP>- subscript and superscript  
 eg:-  $H_2SO_4$   $H<SUB>2</SUB>SO<SUB>4</SUB>$   
 $A^2+B^2$   $A<SUP>2</SUP>+B<SUP>2</SUP>$   
 <BLOCKQUOTE>- to indent the content  
 <Q>- double quotation mark.  
 <PRE>- displaying preformatted text

<MARQUEE>- scrolling text  
 attributes- height, width, direction, behaviour, scrolldelay, scrollamount, loop, bgcolor, hspace, vspace

<FONT>- font characteristics  
 attributes- color, face, size

## 5 WEB DESIGNING USING HTML

### Lists (three type)

**Unordered list-** bullets or other graphics for items

tags: <UL>...</UL> and <LI>

attributes- type. Values: disc, square, circle (default value:disc)

Eg:- HTML code for following list

- RAM
- HARD DISK
- MOTHER BOARD
- PROCESSOR

```
<HTML>
<HEAD>
<TITLE> Unordered Lists </TITLE>
</HEAD>
<BODY >
  <UL>
    <LI> RAM </LI>
    <LI> HARD DISK </LI>
    <LI> MOTHER BOARD </LI>
    <LI> PROCESSOR </LI>
  </UL>
</BODY>
</HTML>
```

**Ordered list-** items in numerical or alphabetical order

tags: <OL>...</OL> and <LI>

attributes- type (values:1,i,I,a,A), start (to give starting no or letter)

Eg:- HTML code for following list

1. Registers
2. Cache
3. RAM
4. Hard Disk

```
<HTML>
<HEAD>
  <TITLE> Ordered Lists </TITLE>
</HEAD>
<BODY >
  <OL>
    <LI> Registers </LI>
    <LI> Cache </LI>
    <LI> RAM </LI>
    <LI> Hard Disk </LI>
  </OL>
</BODY>
</HTML>
```

**Definition list-** list of terms and definition

tags: <DL>...</DL>,<DT> and <DD>



**Links(Hyperlink)** : is a text or an image in a webpage that allow to move to another page or to other sections in a page by clicking on it. Two types of links

Internal- link to a section of same page

Tag: <A>...</A>

attributes- Name, Href

External link to another page

Tag: <A>...</A>

attributes- href

### Creating tables in a web page

Important tags: <TABLE>, <TH>, <TR>, <TD>

<TABLE>- it is a container tag

attributes-

border- thickness of the border line. Zero value – no border

bordercolor- color of table border

align- table position inside window. Values : left, right,center

bgcolor- background color of the table

background- background image for the table

cellspacing- space between cells

cellpadding- space between content and cell border

width & height- width and height of table

frame- table border display

values:- void- no border

above- border on top only

below- border on bottom only

hsides- border on top and bottom

lhs or rhs- border left or right

vsides- border on right and left

box or border- border on all sides

Rules- border between cells

values:- none- no rules

cols- rules between columns only

rows- rules between rows only

groups- rules between row groups and column groups

all- between all rows and columns

<TR>- rows in a table

attributes- align, valign, bgcolor

<TH>- table heading, <TD>- table data

attributes- align, valign, bgcolor,

colspan- no of columns occupied by a cell

rowspan- no of rows occupied by a cell

<CAPTION>- to give table caption

Eg:- Code for the following table.

ROLL NO.	NAME
1	Aliya
2	Arun

```
<HTML>
<HEAD>
  <TITLE> Html Tables </TITLE>
</HEAD>
<BODY>
  <TABLE Border="1">
    <TR>
      <TH>Roll No</TH>
      <TH>Name</TH>
    </TR>
    <TR>
      <TD>1</TD>
      <TD>Aliya</TD>
    </TR>
    <TR>
      <TD>2</TD>
      <TD>Arun</TD>
    </TR>
  </TABLE>
</BODY>
</HTML>
```

## 6 CASCADING STYLE SHEET

### CSS-Cascading style sheets.

Is an extension of HTML. It enhance the look and feel of a website. It was introduced by Hakon Wium Lie in 1994.

### Advantage of using CSS

easy to change layout-  
reduce the size -  
bandwidth reduction-  
consistency-  
viewing options-  
save time-

a single CSS file can be used to change the layout of a page  
using separate CSS file  
as size reduced network traffic also reduce  
single CSS file maintain consistency  
separate CSS file for separate size of media devices  
less coding time for designer

### ways to add CSS in a webpage

- 1 internal-
- 2 external-
- 3 inline style-

## 7 WEB HOSTING

Web hosting- giving storage space in web server for websites  
web hosts- companies of web hosting

### types of web hosting

shared- many websites sharing single web server, RAM and CPU.  
Merits:- Cheaper, easy to use, slow.  
Demerits:- shared bandwidth slow the service  
Dedicated- a web server and its resources for a website  
good performance, expensive  
co-location- placing dedicated web server in service providers facility  
Virtual private Server- a shared web server which feels dedicated virtually  
eg:- Vmare, Virtualbox, Free VPS etc.

FTP client- software to transfer file to web server

SFTP -secure shell FTP

Free hosting- web hosting without charge  
eg- site.google.com, yola.com

## 8 DATA BASE MANAGEMENT SYSTEM

Database- organized collection of interrelated data  
DBMS- programs for storage, retrieval and managing database

### Advantages of DBMS

controlling data redundancy- all users use centralized databases  
data consistency- in centralized database updates are done in one place  
efficient data access-  
data integrity- by standard rules and error checking  
data security- using password and other technics  
sharing- several users use same database  
standard enforcement  
crash recovery- DBMS use some mechanism to protect data from crashes.

### Components of DBMS

Hardware- computers ,storage devices ,network devices and other supporting devices  
software- DBMS, application programs and utilities  
Data- operational data and meta data (meta data-data about data)  
field- smallest unit (eg. ad.no, name)  
record-collection of fields (eg. Details of a student)  
file- collection of records (eg. Details of students in a class)  
Users- users of database( DBA, programmer, sophisticated user and naive user)  
Procedure- instruction and rules related to database

### Users of database

DBA- who control the database  
duties- design of structure  
security  
data availability

Application programmer- who connect database through programs  
 Sophisticated user- who know about DBMS well  
 Naive user- common users

**Relation data model-** collection of tables  
 entity- a person or a thing  
 Relation- data in tabular form  
 Tuple- the row  
 Attribute- column  
 Degree- No of attributes or columns  
 Cardinality- no of rows  
 Domain- pool of values from which actual values appear in a column  
 schema- structure of databases  
 instance- is group of rows in a relation

**Keys-** way to identify a row in a relation uniquely  
 composite key- having more than one column  
 candidate key- column or columns that can be a key  
 Primary key- set of one or more attributes that can uniquely identify tuples in a relation  
 Alternate key- candidate key that is not primary key  
 Foreign key- a key in a table that is a primary key in another table

## 9 STRUCTURED QUERY LANGUAGE

SQL- standard database language

### **Components of SQL**

DDL- data definition language( defining structure)  
 CREATE, ALTER, DROP  
 DML- Data manipulation Language  
 SELECT, INSERT, UPDATE ,etc.  
 DCL- Data control language  
 GRANT, REVOKE

### **Data types-**

Numeric  
 int, dec  
 String  
 char- use of declared size  
 varchar- use of actual size  
 Date, time

### **Use of Commands**

CREATE TABLE – to create table  
 DROP TABLE - to remove a table from the database  
 INSERT INTO- to insert a raw into the table  
 SELECT ...FROM- to retrieve data from the table  
 UPDATE....SET - to modifying data in a table  
 DELETE FROM- to delete raw from the table

## 10 TRENDS AND ISSUES IN ICT

### **Mobile Communication Services**

SMS- (Short Message Service) .used to send text messages. SS7 protocol is used

MMS- multimedia message.

GPS- finding global position using satellite. Used in vehicle tracking, oil exploration, atmospheric studies etc.

Smart cards- plastic cards with computer chip that stores and transacts data. SIM card also use smart card tech.

### **Mobile operating system**

Android- linux based operating system for touch screen.

Maintained by OHA (Open handset Alliance).

Touch input.

User can customise their home screen with shortcuts.

Linux kernel, powerful memory and process management system.

Software development kit is available.

Different versions starting from Cupcake.

Appache licence allows freely modification.

Apps can be developed using Android apps.

**Cyber crimes-** crimes using computer or computer networking

#### **Against individual**

- 1 identity theft- using others identity informations.
- 2 Harassment- posting humiliating comments on gender, race, religion, nationality at individuals in social media (cyber stalking).
- 3 Impersonation - pretend to be another on net.
- 4 Violation of privacy- intrusion into the personal life of another without a valid reason.
- 5 Dissemination of obscene material