UNIT-2

Table AND LIST

Syllabus :-

2. Table and List

→ Creating lists:
→ Ordered list,
→ Unordered list.
→ Nested list
→ Definition list.
→ Creating tables and
→ Inserting pictures.

UNIT-2

Table and list

TOPIC
⇒ Creating lists:

TOPIC
⇒ Definition of lists:-

List are basic elements in a document, when used correctly they keep concepts organized and structured.

Ex:-

```
\documentclass[option]{Article}
\begin{document}
\begin{list}{}{fruits:}{}
    \item apple
    \item banana
    \item pineapple
    \item custurd apple
    \item grapes
    \item mango
    \item guava
\end{list}
\end{document}
```

open latex option (menu) → List environment → \begin{list}

output

```
fruits: apple
fruits: banana
fruits: pineapple
fruits: custured apple
fruits: grapes
fruits: mango
fruits: guava.
```

TOPIC

⇒ Ordered list :-

Ordered list have the Same Syntax inside a different environment:

→ the ordered lists are generated by a \enumerate environment and each entry must be preceded by the control Sequence \item, which will automatically generate the number labelling the item.

→ The enumerate labels consists of Sequential numbers, these numbers start at 1 with every call to the enumerate environment.

Ex:-

```
\documentclass [option] {Article}
\begin {document}
\begin {enumerate}
    \item apple
    \item banana
    \item pineapple
    \item custurd apple
    \item grapes
    \item mango
    \item guava
\end {enumerate}
\end {document}
```

open later
↓
list environment
↓
\begin {enumerate}

Output

1. apple
2. banana
3. pineapple
4. custurd apple.
5. grapes
6. mango
7. guava.

TOPIC

⇒ Un ordered list :-

The unordered (un-numbered) lists are produced by the itemize environment.

Each entry must be preceded by the control sequence \item.

→ By Default the individual entries are indicated with a black dot, so-called bullet.

→ The text in the entries may be of any length.

Ex:-

```
\documentclass[ ]{article}
\begin{document}
\begin{itemize}          → open later ↓ list environment ↓ itemize.
    \item apple
    \item banana
    \item pineapple
    \item Custurd apple.
    \item grapes
    \item mango
    \item guava.
\end{itemize}
\end{document}
```

Output

- apple
- banana
- pineapple
- Custurd apple
- grapes
- mango
- guava.

→ Unordered list another bullets apply:-

Ex:-
```
\documentclass[option][Article class]
\begin{document}
\begin{itemize}
  \item apple
  \item banana
  \item pineapple
\begin{itemize}
  \item fish
\begin{itemize}
  \item elephant
\begin{itemize}
  \item flowers
\end{itemize}
  \item frog
\end{itemize}
  \item custurd apple
  \item grapes
  \item mango
  \item guava
\end{itemize}
\end{document}
```

output

- apple
- banana
- pineapple
  - fish
    - elephant
      - flowers
    - tiger
  - frog
- custurd apple
- grapes
- mango
- guava

⇒ Ordered list another number types apply :- ③ - ①

→ Ex:-

```
\documentclass[option]{Article}
\begin{document}
\renewcommand{\labelenmii}{\Roman{enumi}}
\begin{enumerate}
\item apple
\item banana
\item pineapple
\begin{enumerate}
\item car
\item bike
\item Jeep
\begin{enumerate}
\item 5 star
\item munch
\begin{enumerate}
\item driver
\item pilot
\end{enumerate}
\item driver
\item pilot
\end{enumerate}
\item dairy milk.
\item eclairs
\end{enumerate}
\item bicycle
\item sumo
\item bus.
```

Output

1. apple
2. banana
3. pineapple
   - I car
   - II bike
   - III Jeep
     - i. 5 star
     - ii. munch
       - A. driver
       - B. pilot
     - iii. dairy milk
     - iv. eclairs
   - IV. bicycle
   - V Sumo
   - VI bus
   - VII train
4. Custard apple
5. grapes.
6. mango
7. guava

⇒ List Styles:- ordered & unordered :-

As many other latex elements, unordered and ordered list styles can be personalized.

→ ordered lists styles:-

The numbering styles change depending on the depth of the nested lists.

Ex:- (1)

```
\begin{enumerate}
  \item First level
  \item First level
 \begin{enumerate}
   \item Second level
   \item Second level
  \begin{enumerate}
    \item third level
    \item third level
   \begin{enumerate}
     \item fourth level
     \item fourth level
    \end{enumerate}
  \end{enumerate}
 \end{enumerate}
\end{enumerate}
```

output

1. First level item
2. ~~First~~ first level
   (a) Second level
   (b) Second level
      i. Third level
      ii. Third level
         A. Fourth level
         B. Fourth level

The default numbering scheme is:

- Arabic number (1, 2, 3...) for level 1
- lower Case letter (a, b, c, ...) for level 2
- lower Case Roman numerical (i, ii, iii, ...) for level 3
- upper Case letter (A, B, C, ...) for level 4.

→ These numbers can be changed by redefining the commands that type set the numbers of various list levels. For example.

Ex:-
```
\renewcommand{\labelenumii}{\Roman{enumii}}
\begin{enumerate}
   \item first level
   \item first level
\begin{enumerate}
   \item Second level
   \item Second level
```

```
\begin{enumarate}
    \item third level
    \item third level
  \begin{enumerate}
      \item fourth level
      \item fourth level
    \end{enumerate}
  \end{enumerate}
\end{enumarate}
```

Output

1. first level
2. first level
    I. Second level
    II. Second level
        i. Third level
        ii. Third level
            A. Fourth level
            B. Fourth level

→ the command \renewCommand{\labelenumii}{\Roman{enumii}} changes the Second level to uppercase Roman numeral. It is possible to change the labels of any level, replace label enumii for one of the list below.

- \theenumi for level 1
- \theenumii for level 2
- \theenumiii for level 3
- \theenumiv for level 4

The command must be placed in the preamble to change the labels globally or right before \begin{enumerate} to change labels only in this list. there are some other styles, see the reference guide for a complete list.

→ In numbered lists the counter is incremented by \item before it is printed, and starts from 1, a, i, A, I This can be changed.

Ex:- \renewcommand{\labelenumii}{\Roman{enumii}}

```
\begin{enumerate}
  \item first level
  \item first level
\begin{enumerate}
   \item second level
   \item Second level
\begin{enumerate}
    \item third level
    \item third level
\begin{enumerate}
      \item fourth level
      \item fourth level
\end{enumerate}
\end{enumerate}
\end{enumerate}
```

output

1. first level item
2. first level item
   V. Second level
   VI. Second level
      i. Third level
      ii. third level
         A. fourth level
         B. fourth level

→ TO change the start number or letter you must use the \setCounter command. In the example, to to change the start number of level 2 to v the command \setCounter {enumii} {4} was used.

→ TO set the stat number to any other counter change enumii for any of these:

- enumi for level1
- enumii for level2
- enumiii for level3
- enumiv for level4

— o —

→ Unordered List Styles:-

The label scheme of unordered lists also changes depending on the depth of the nested list.

Ex:-
```
\begin{itemize}
  \item First level
  \begin{itemize}
    \item Second level
    \begin{itemize}
      \item third level
      \begin{itemize}
        \item fourth level
      \end{itemize}
    \end{itemize}
  \end{itemize}
\end{itemize}.
```

Output

- First level
  - Second level
    * third level
      - fourth level

→ The default label scheme for itemized lists:
- level 1 is \textbullet (•),
- level 2 is \textendash (–),
- level 3 is \textasteriskcentered (*)
- level 4 is \textperiodcentered (·).

→ these labels can be changed by redefining the commands that type set them for various list levels. for example, to change level 1 to black square and level 2 to white square we'll use.

Ex:-
```
\renewcommand{\labelitemi}{$\blacksquare$}
\renewcommand{\labelitemii}{$\square$}
\begin{itemize}
  \item first level
  \begin{itemize}
    \item second level
    \begin{itemize}
      \item third level
      \begin{itemize}
        \item fourth level
      \end{itemize}
    \end{itemize}
  \end{itemize}
\end{itemize}
```

output

- first level
  - second level
    - third level
      - fourth level

→ The mathematical symbols used in the previous example belong to the ams symb package, so you have to add \usepackage {amssymb} to your preamble.

→ TO redefine the label use one of the next commands, depending on the level of list mark you intend to change:

- \labelitemi for level 1
- \labelitemii for level 2
- \labelitemiii for level 3
- \labelitemiv for level 4

→ you can also change the item label for a specific entry, for example:

ex:-

```
\begin{itemize}
  \item Default item one
  \item Default item two
  \item[$\square$] Custom item lable three
\end{itemize}
```

output

- Default item one
- Default item two

□ Custom item lable three.

—o—

⇒ Nested list :-

In latex, you can insert a list inside another list.

The above lists may be included within one another, either mixed or of one type, to a depth of four levels.

Ex:-

```
\documentclass{article}
\begin{document}
\begin{enumerate}
  \item apple
  \item banana
  \item pineapple
  \item custard apple
\begin{enumerate}
  \item apple
  \item[!] banana
  \item[!] pineapple
\begin{enumerate}
  \item apple
  \item banana
\begin{enumerate}
  \item seed less fruits
\end{enumerate}
  \item pineapple
  \item custard apple.
\end{enumerate}
  \item custard apple
  \item grapes
  \item mango
  \item guava.
```

output

1. apple
2. banana
3. pineapple
4. Custard apple
   (a) apple
   ! banana
   ! pineapple
   i. apple
   ii. banana
   A. Seed less fruits
   iii. pineapple
   iv. Custardapple
   (b) custard apple
   (c) grapes
   (d) mango
   (e) guava
5. grapes
6. mango
7. guava

```
\end {enumerate}
    \item grapes
    \item mango
    \item guava
\begin {itemsize}
    \item apple
    \item banana
    \item pineapple
    \item custurd apple
    \item grapes
    \item mango
    \item guava
\end {itemize}
    \item apple
    \item banana
    \item pineapple
    \item custurd apple
    \item mango
    \item guava
\end {enumerate}
\end {document}
```

- apple
- banana
- pineapple
- custurd apple
- grapes
- mango
- guava

8. apple
9. banana
10. pineapple
11. custurdapple
12. grapes
13. mango
14. guava.

—•—

⇒ Definition List :-

These lists are created using the description environment. you use the \item command as before to specify each item but now it can take an optional argument which says what it is your describing.

Ex:-

```
\documentclass [option] {Article}
\begin {document}
  \begin {description}
    \item [pdf] portable document format
    \item [LAN] local area network.
    \item [wan] wide area network.
  \end {description}
\end {document}
```

open latex → list environment → begin {description}

output

pdf portable document format
lan local area network.
wan wide area network.

bold

-o-

Topic

⇒ Creating tables:-

When formatting a table you might require a fixed length either for each column or for the entire table. In the example below a fixed column width is established.

Ex:-

```
\document class {article}
\begin {document}
 \begin{tabular} {|c|c|c|}
  \hline
  1 & 2 & 3 \\
  \hline
  1 & 1 & 1 \\
  \hline
  1 & 1 & 1 \\
  \hline
 \end {tabular}
\end {document}
```

→ open wizards
↓
Quick tabular option.
↓
text box open

output

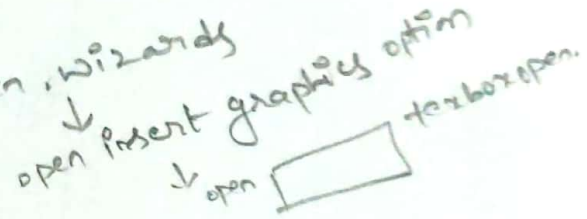
1	2	3
1	1	1
1	1	1

⇒ Inserting pictures :-

Images are essential element in most of the scientific documents. LATEX provides several options to handle images and make them look exactly what u need. In this article is explained how to include images in the most common formats, how to shrink, enlarge and rotate them, and how to reference them within your document.

Ex:-

```
\documentclass{article}
\usepackage{graphicx}
\begin{document}
\begin{figure}
\centering
\includegraphics[width=0.7\linewidth]{F:/DS_0113}
\caption{}
\label{fig:dsc01133}
\end{figure}
\begin{figure}
\centering
\includegraphics[width=0.7\linewidth]{F:/DSC_0113}
\caption{}
\label{fig:dsc0113}
\end{figure}
```



```
\begin{figure}
\centering
\includegraphics[width=0.7\linewidth]{F:/DSC_0214}
\caption{ }
\label{fig:dsc0214}
\end figure
\end{ fig document}
```

file to photo path

out put