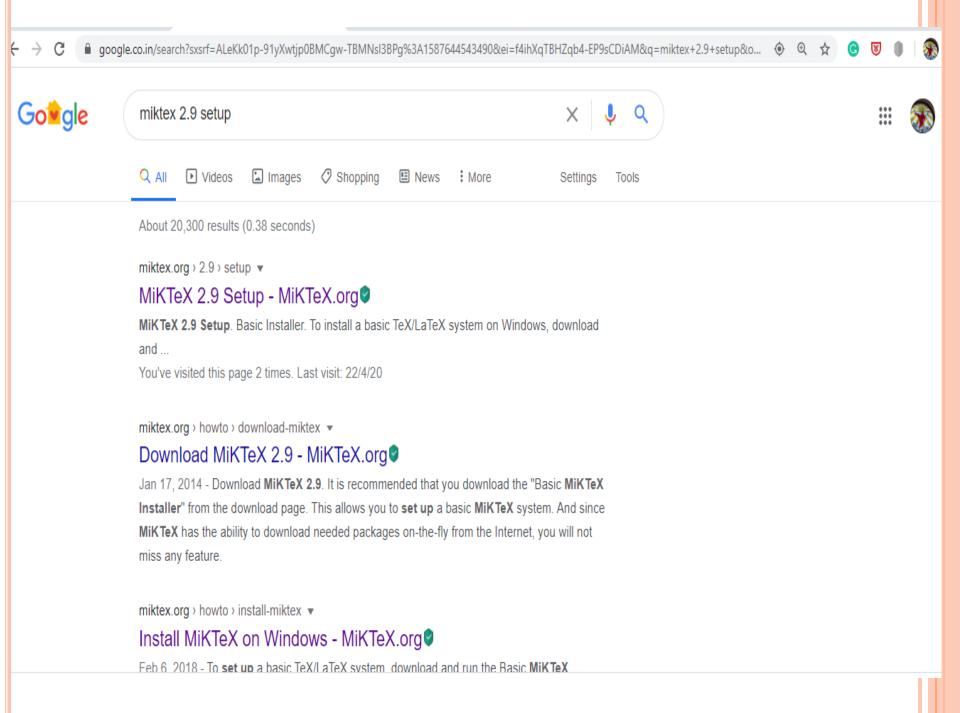
ONLINENSTIONAL WORKSHOP ON THE BASICS OF DOCUMENTATION USING LATEX

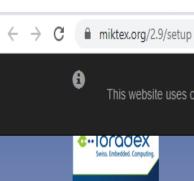
# INSTALLATION

https://miktex.org/2.9/setup

Or

Type MiKTeX 2.9 Setup in Google





**NXP®** 

i.MX8

Apalis System on Module

On-board dual-band 802.11ac 2x2 MU-MIMO

Wi-Fi and Bluetooth 5

Heterogeneous multi-core

Direct Breakout™









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♣ Net Installer

This installer allows you download all packages and install a complete TeX/LaTeX system on Windows.

Date: 1/4/2019

File name: setup-2.9.6942-x64.exe

Size: 24.77 MB

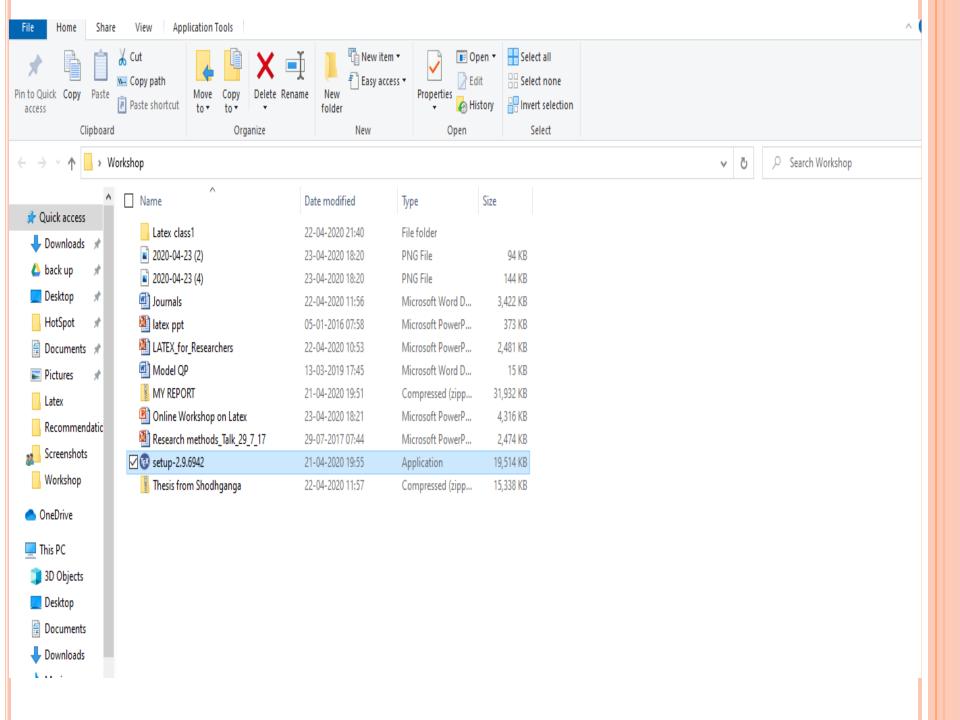
♣ Download

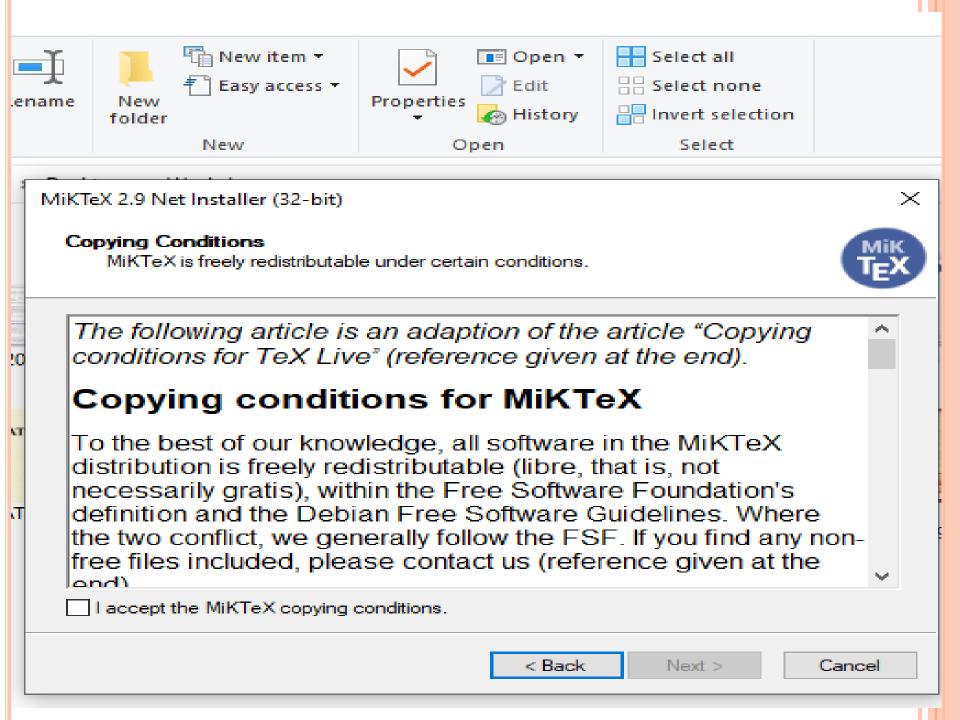
▲ MiKTeX Setup Utility

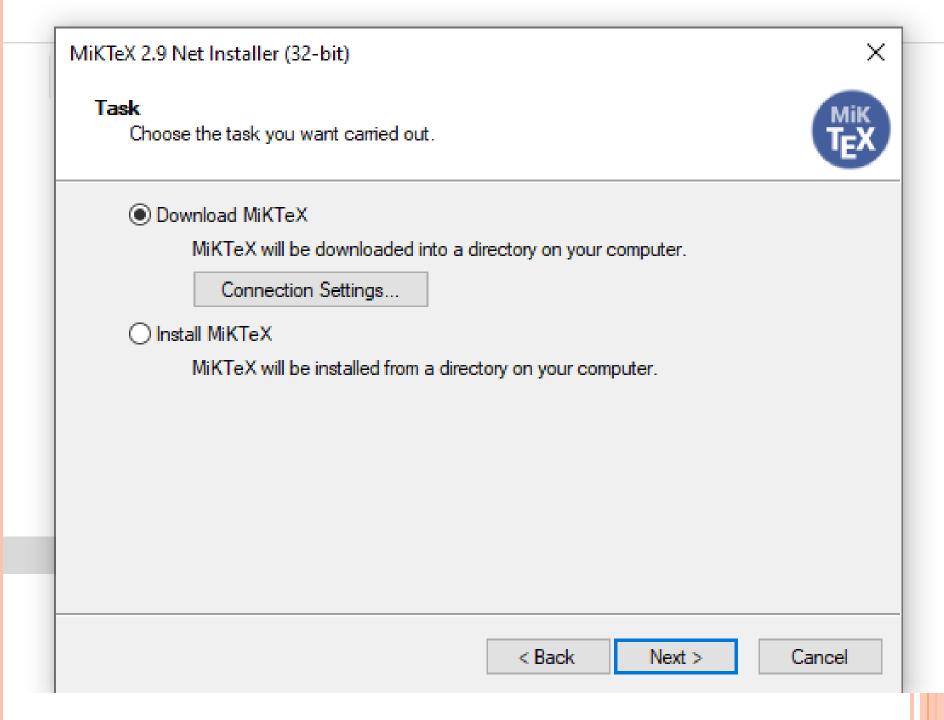












#### Package Set

Select the packages you want installed.



#### ○ Basic MiKTeX

A directory will be created which contains the basic MiKTeX distribution.

This is the recommended option. MiKTeX can be configured to install missing packages automatically (in the course of use).

#### Complete MiKTeX

A directory will be created which contains the complete MiKTeX distribution.

Don't use this option unless you have a fast and reliable Internet connection.

< Back

Next >

Cancel:

### × MiKTeX 2.9 Net Installer (32-bit) MiKTeX Distribution Directory Specify the location of the directory which contains the MiKTeX distribution files. Download the MiKTeX distribution to: C:\Users\welcome\Desktop\MiKTeX Download Files Browse... < Back Next > Cancel 22-04-2020 11:57 Compressed (zipp... 15,338 KB

#### MiKTeX 2.9 Net Installer (32-bit)

#### $\times$

#### Review

Review the settings.



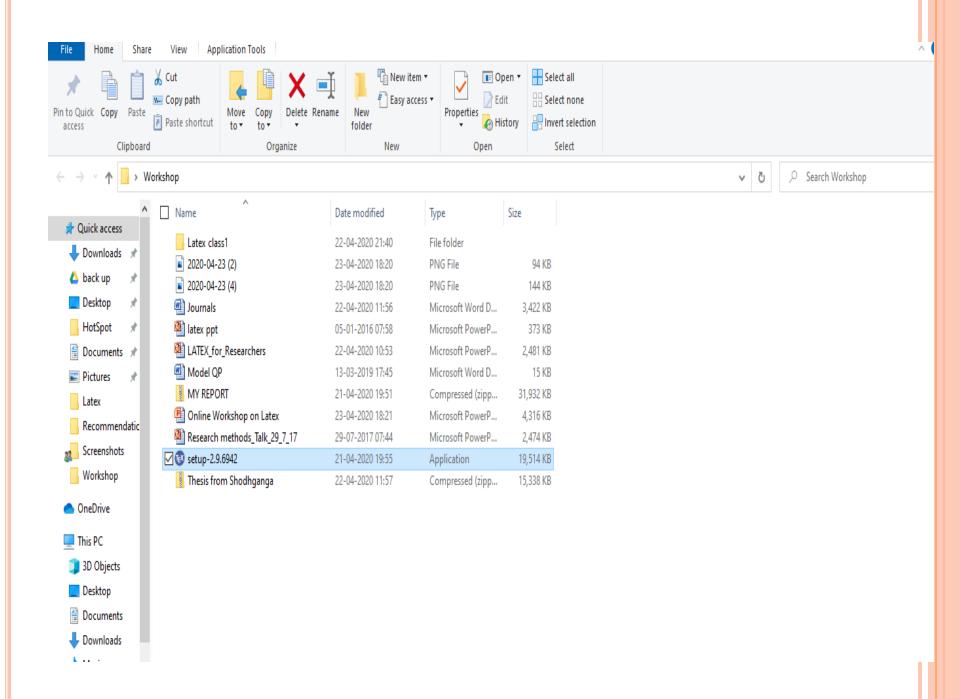
MiKTeX Setup Wizard has enough information to start the task. If you want to review or change any of the settings, click Back. If you are satisfied with the settings, click Start.

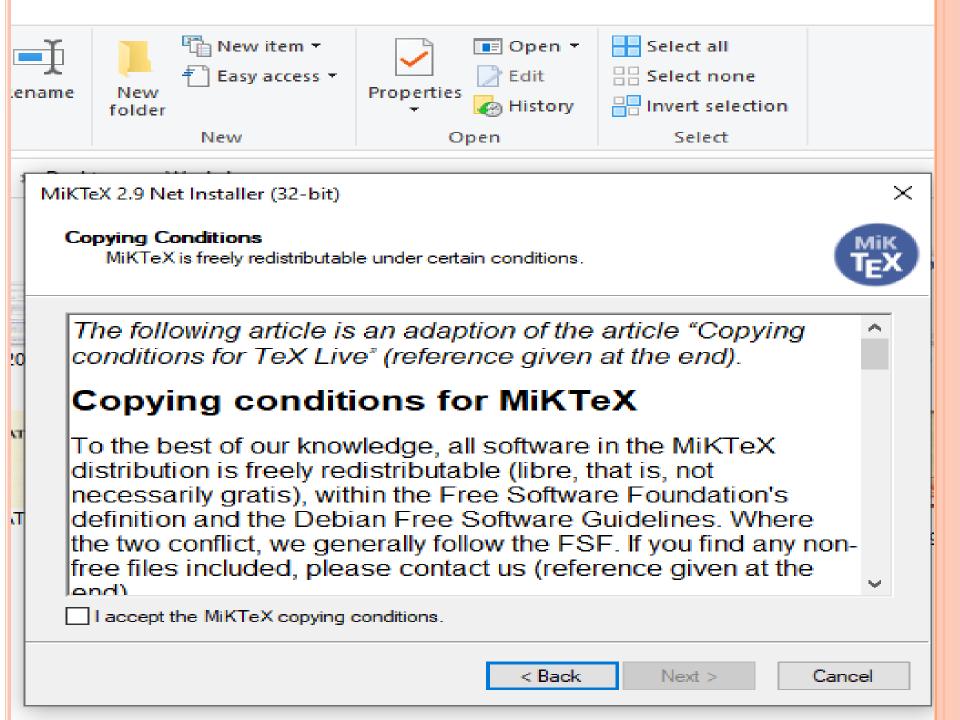
Download all packages from
http://ctan.imsc.res.in/systems/win32/miktex/tm/packages/
to
C:\Users\welcome\Desktop\MiKTeX Download Files

< Back

Start

Cancel





# MiKTeX 2.9 Net Installer (32-bit)



Task

Choose the task you want carried out.



Download MiKTeX

MiKTeX will be downloaded into a directory on your computer.

Connection Settings...

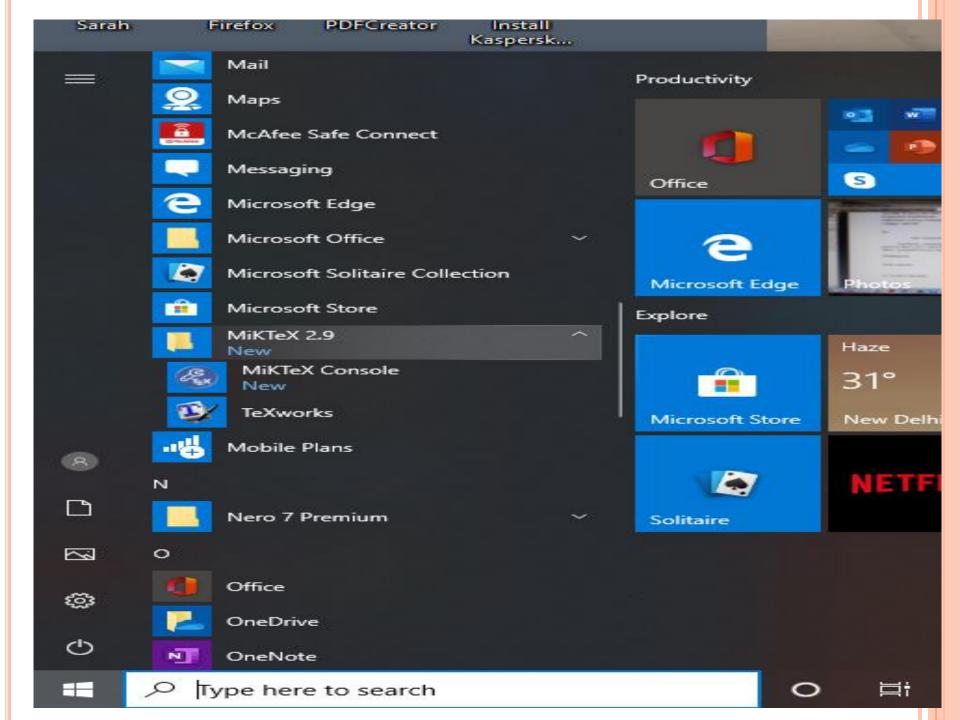
○ Install MiKTeX

MiKTeX will be installed from a directory on your computer.

< Back

Next >

Cancel



# SIMPLE TYPESETING

- o \documentclass{article}
- %\usepackage{amsmath}
- o %\usepackage{amsthm}
- o \begin{document}

0

• This is my \emph{first} document prepared in \LaTeX.

0

- I typed it on \today.
- We have seen that to typeset something in \LaTeX, we type in the text to be typeset together with some \LaTeX commands. Words must be seperated by spaces and lines may be broken arbitrarily.
- The end of a paragraph is specified by a \emph{blank line} in the input. In other words, whenever you want to start a new paragraph, just leave a blank line and proceed.

0

o \noindent The end of a paragraph is specified by a \emph{blank line} in the input. In other words, whenever you want to start a new paragraph, just leave a blank line and proceed.

\end{document}

- o \documentclass{article}
- o \begin{document}
- I think \LaTeX is fun.
- $\circ$  I think  $\LaTeX \setminus is fun.$
- Note the difference in right and left quotes in \lq single quotes \rq \ and \lq \lq double quotes \rq \rq.
- Note the difference in right and left quotes in \lq single quotes \rq \ and \lq \lq double quotes \rq \rq.
- X-rays are discussed in pages 221--225 of Volume 3--- the volume on electromagnetic waves.
- o \end{document}

- o \documentclass{article}
- o \begin{document}
- Maybe I have now learnt about 1% of \LaTeX.

0

- $\circ$  Maybe I have now learnt about  $1\\%$  of  $\LaTeX$ .
- \textasciitilde, \#, \\$, \%, \textasciicircum, \&,\\_, \textbackslash, \{, \}

0

o \end{document}

- Text Positioning
- Type style
- Type Size
- Font Size
- Paper Size
- Page Formats
- Page style
- Page Numbering

#### **NEXT LINE**

```
\documentclass{article}
\begin{document}

This is the first line. \\ This is the second line.
\end{document}
```

#### TO INCREASE THE VERTICAL DISTANCE

```
\documentclass{article}
\begin{document}

This is the first line. \\[10pt] This is the second line.
\end{document}
```

#### CONT...

\documentclass{article}

\begin{document}

Graph theory is one of the most powerful mathematical tool for designing and analyzing topological structure of interconnection networks. \\[10pt]\] It is applied in diverse areas such as social sciences, linguistics, physical sciences, communication engineering and so on. It plays an important role in several areas of computer science, such as switching theory and logic design, parallel computing, artificial intelligence, formal languages, computer graphics, operating systems, compiler writing and information organization and retrieval.

A connection pattern of the components in a system is called interconnection networks or networks in short. An interconnection network consists of hardware and software entities that are interconnected to facilitate efficient computation and communication. These entities can be in the form of processors, processes, memory modules or computer systems.

\end{document}

#### CONT...

\documentclass{article}

\begin{document}

Graph theory is one of the most powerful mathematical tool for designing and analyzing topological structure of interconnection networks. It is applied in diverse areas such as social sciences, linguistics, physical sciences, communication engineering and so on. It plays an important role in several areas of computer science, such as switching theory and logic design, parallel computing, articial intelligence, formal languages, computer graphics, operating systems, compiler writing and information organization and retrieval. \\[10pt]

A connection pattern of the components in a system is called interconnection networks or networks in short. An interconnection network consists of hardware and software entities that are interconnected to facilitate efficient computation and communication. These entities can be in the form of processors, processes, memory modules or computer systems.

\end{document}

#### TEXT POSITIONING

#### TEXT POSITIONING

TEXT POSITIONING

#### TO BEGIN IN CENTER

\documentclass{article}

\begin{document}

Graph theory is one of the most powerful mathematical tool for designing and analyzing topological structure of interconnection networks.

\begin{center}

It is applied in diverse areas such as social sciences, linguistics, physical sciences, communication engineering and so on.

\end{center}

It plays an important role in several areas of computer science, such as switching theory and logic design, parallel computing, artificial intelligence, formal languages, computer graphics, operating systems, compiler writing and information organization and retrieval.

\end{document}

## Mighty things from small beginnings grow

John Dryden

\begin{flushright}.....\end{flushright}

for the text to begin with the right margin.

\begin{flushleft}....\end{flushleft}

for the text to begin with the left margin.

```
\documentclass{article}
\begin{document}
\begin{center}
Mighty things from small beginnings
grow\begin{flushright} John Dryden
\end{flushright}
\end{center}
\end{document}
```

#### TYPE STYLE

	STYLE	COMMAND
FAMILY	roman Sans serif typewriter	<pre>\textrm{roman} \textsf{sans serif} \texttt{typewriter}</pre>
SERIES	medium boldface	\textmd{medium} \textbf{boldface}
SHAPE	upright italic slanted SMALL CAP	<pre>\textup{upright} \textit{italic} \textsl{slanted} \textsc{small cap}</pre>

roman family, medium series, upright shape

```
\documentclass{article}
\begin{document}
\textsf{A polygon of three sides is called a triangle} and a polygon of four sides is called a quadrilateral
\end{document}
```

```
\documentclass{article}
\begin{document}
\texttt{\textsl{A polygon of three sides is called a triangle and a polygon of four sides is called a quadrilateral}}
\end{document}
```

```
\documentclass{article}
\begin{document}
\textit{A polygon of three sides is called a \emph{triangle} and a
polygon of four sides is called a \emph{quadrilateral}}
\end{document}
```

A polygon of three sides is called a *triangle* and a polygon of four sides is called a *quadrilateral* 

```
\documentclass{article}
\begin{document}
\textbf{A polygon of three sides is called a \emph{triangle} and a polygon of four sides is called a \emph{quadrilateral}}
\end{document}
```

#### TYPE STYLE

	STYLE	COMMAND	DECLARATION
FAMILY	roman Sans serif typewriter	<pre>\textrm{roman} \textsf{sans} serif} \texttt{typewrit} er}</pre>	{\rmfamily roman} {\sffamily sans serify} {\ttfamily typewriter}
SERIES	medium boldface	<pre>\textmd{mediu m} \textbf{boldface}</pre>	{\mdseries medium} {\bfseries boldface}
SHAPE	upright italic slanted SMALL CAP	<pre>\textup{upright} \textit{italic} \textsl{slanted} \textsc{small} cap}</pre>	{\upshape upright} {\itshape italic} {\slshape slanted} {\scshape small cap}

#### Type size

Size	\tiny{size}
Size	\scriptsize{size}
Size	\footnotesize{size}
Size	\small{size}
Size	\normalsize{size}
Size	\large{size}
Size	\Large{size}
Size	\LARGE{size}
Size	\huge{size}
Size	\Huge{size}

```
\documentclass{article}
\begin{document}
Mighty things from {\tiny small} beginnings grow
\end{document}
\documentclass{article}
\begin{document}
Mighty things from \tiny \{small\} beginnings grow
\end{document}
```

```
\documentclass{article}
\begin{document}
Mighty things from {\tiny small} beginnings grow.\\
Mighty things from {\scriptsize small} beginnings grow.\\
Mighty things from {\footnotesize small} beginnings grow.\\
Mighty things from {\small small} beginnings grow.\\
Mighty things from {\normalsize small} beginnings grow.\\
Mighty things from {\large small} beginnings grow.\\
Mighty things from {\Large small} beginnings grow.\\
Mighty things from {\LARGE small} beginnings grow.\\
Mighty things from {\huge small} beginnings grow.\\
Mighty things from {\Huge small} beginnings grow.
\end{document}
```

# The Technical Institute

## CERTIFICATE

This is to certify that Mr. Sam has undergone a course at this institute and is qualified to be a technician.

The Director
The Technical Institute

### DOCUMENT CLASS

\documentclass{article}
book
report
letter

\documentclass[options]{class}

#### FONT SIZE

> 10pt

> 11pt

> 12pt

\documentclass[11pt]{article}

#### PAPER SIZE

letterpaper 11×8.5in

legalpaper 14×8.5in

executive paper  $10.5 \times 7.25$  in

a4paper  $20.7 \times 21$ in

a5paper  $21 \times 14.8$ in

b5paper 25×17.6in

# PAGE FORMAT

onecolumn

twocolumn

Oneside

twoside

oneside – article, report and letter twoside - book

#### PAGE STYLE

\pagestyle{.....}

\pagestyle{plain}

- page head is empty
- foot contains page number (centered with respect to the width of the text)
- default for the article.

\pagestyle{empty}

both head and foot are empty; no page numbers are printed.

\pagestyle{headings}

foot is empty; head contains page number & name of the chapter section or subsection

CLASS	OPTION	LEFT PAGE	RIGHT PAGE
book, report	One-sided	-	chapter
	Two-sided	Chapter	Section
article	One-sided	-	Section
	Two-sided	Section	Subsection

\pagestyle{myheadings}

same as headings section information in the head are not predetermined.

\markright or \markboth

\markboth{left head{right head} (two-sided) \markright{righthead} (one-sided)

\thispagestyle{style}
\thispagestyle{empty}

# PAGE NUMBERING

\pagenumbering{arabic}
roman
Roman
alph
Alph

\setcounter{page}{number}

# ASSIGNMENT

Download and install MikTeX and create a two page document which includes all the simple typesetting commands along with fonts and pagestyle that you have learnt today. Zip the folder which contains the document and mail us at <a href="mailto:mathssmc2020@gmail.com">mathssmc2020@gmail.com</a> before your next session.

