

L^AT_EX WORKSHOP

AN INTRODUCTION TO L^AT_EX

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IIT Guwhati

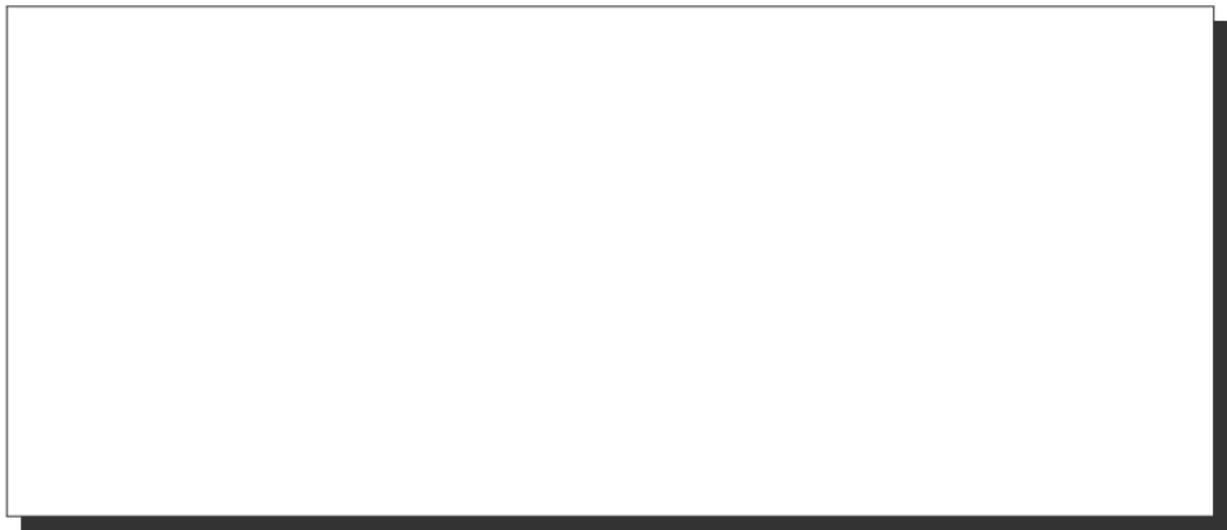


1. Image & Table
2. Table

IMAGE & TABLE

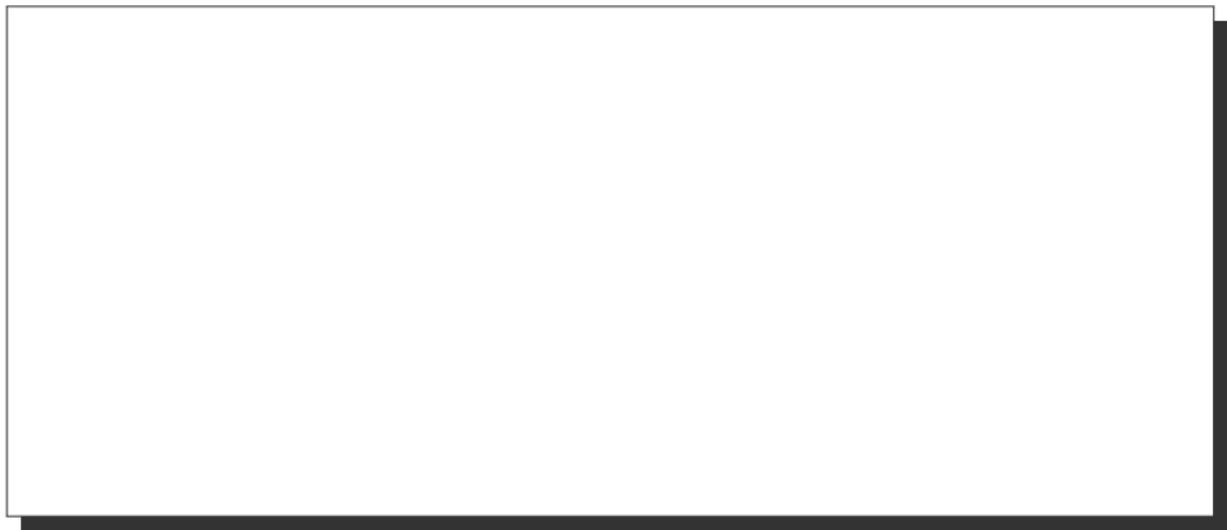
Inserting Image

- First create a image directory, say `images`



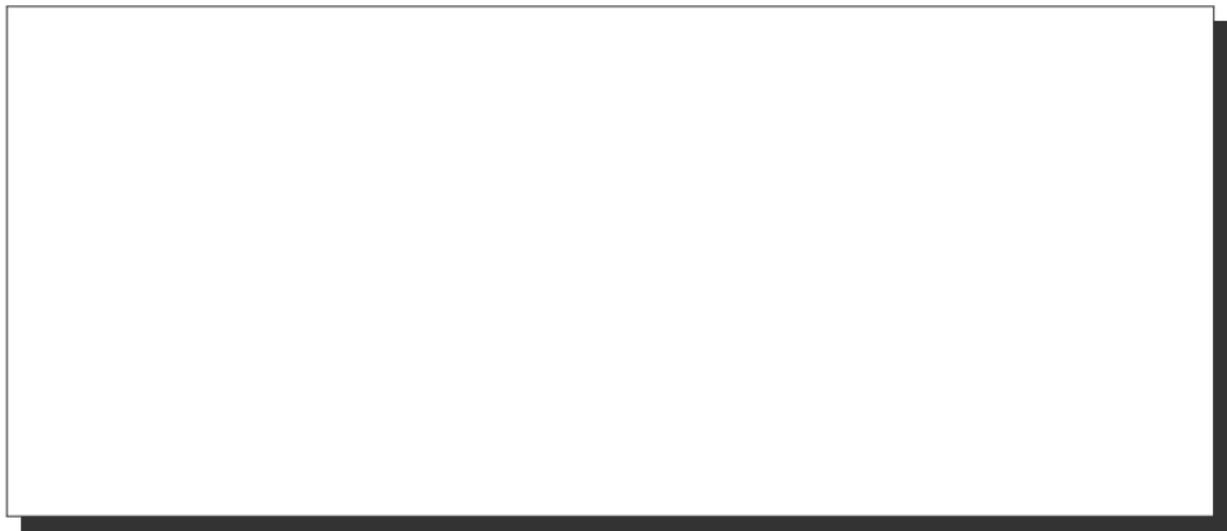
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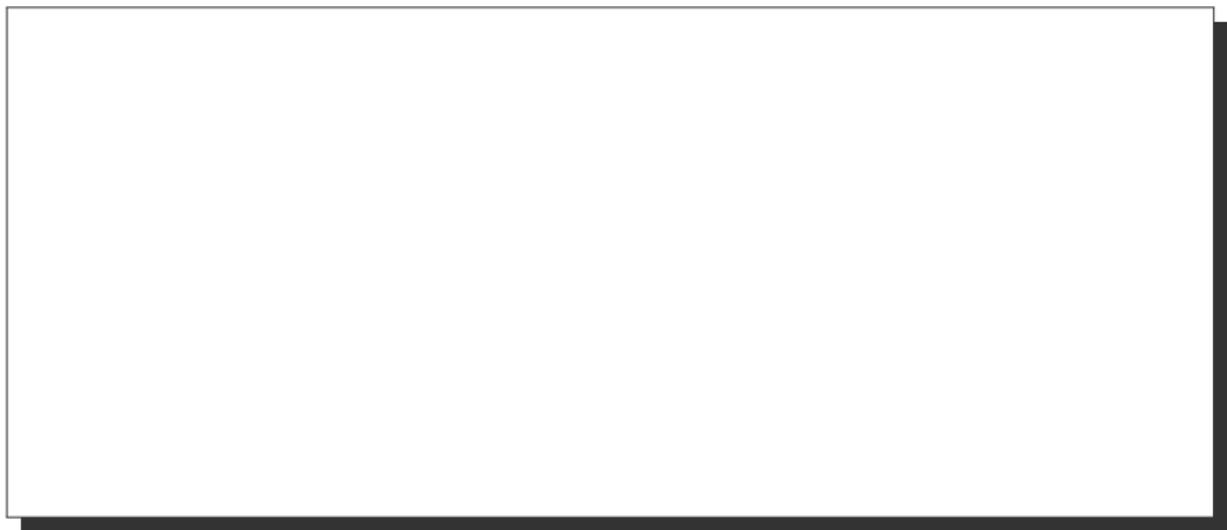
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- Insert following two line in preamble part of your document

```
\usepackage{graphicx}  
\graphicspath{ {images/} }
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- `\includegraphics[opt1,opt2]{file_name}` commend is use to insert figure



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Try This.

```
\documentclass{article}
\usepackage{graphicx}
\graphicspath{ {images/} }

\begin{document}
This is my first figure insertion.

\includegraphics{house}

There's a picture of a galaxy above
\end{document}
```

Inserting Image

- First create a image directory, say `images`
- Insert following two line in preamble part of your document
- `\includegraphics[opt1,opt2]{file_name}` commend is use to insert figure

Try This. (In the previous code replace `\includegraphics{universe}` by followings.)

```
\includegraphics[scale=1.5]{house}
```

```
\includegraphics[width=3cm, height=4cm]{house}
```

```
\includegraphics[width=\textwidth]{house}
```

```
\includegraphics[scale=1.2, angle=45]{house}
```

- Use `figure` environment and you don't have to worry about it's placement, \LaTeX will position it in a such way that it fits the flow of the document.

Try This.

```
\begin{figure}[h]
\includegraphics[width=8cm]{house}
\caption{Example of  $\sin(x)$ }\label{fig:1}
\end{figure}
```

The following figure `\ref{fig:1}` is a home of $\sin(x)$ and, the figure is in the page `\pageref{fig:1}`.

Position of Image

- Use `figure` environment and you don't have to worry about its placement, \LaTeX will position it in a such way that it fits the flow of the document.
- `\begin{figure}[h]`, the parameter inside the brackets set the position of the figure to `here`.

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Position of Image

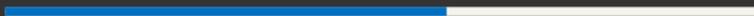
- Below a table to list the possible **positioning** values.

Parameter	Position
h	Place the float here.
t	Position at the top of the page.
b	Position at the bottom of the page.
p	Put on a special page for floats only.
!	Auto detect "good" float positions.
H	Places the float at precisely the location in the \LaTeX code.

H is somewhat equivalent to **h!**.

Abbreviation	Definition
<code>pt</code>	A point, is the default length unit. About 0.3515mm
<code>mm</code>	a millimetre
<code>cm</code>	a centimetre
<code>in</code>	an inch
<code>ex</code>	the height of an x in the current font
<code>em</code>	the width of an m in the current font
<code>\linewidth</code>	width of the line in the current environment
<code>\paperwidth</code>	width of the page
<code>\paperheight</code>	height of the page
<code>\textwidth</code>	width of the text
<code>\textheight</code>	height of the text
<code>\unitleght</code>	units of length in the picture environment.

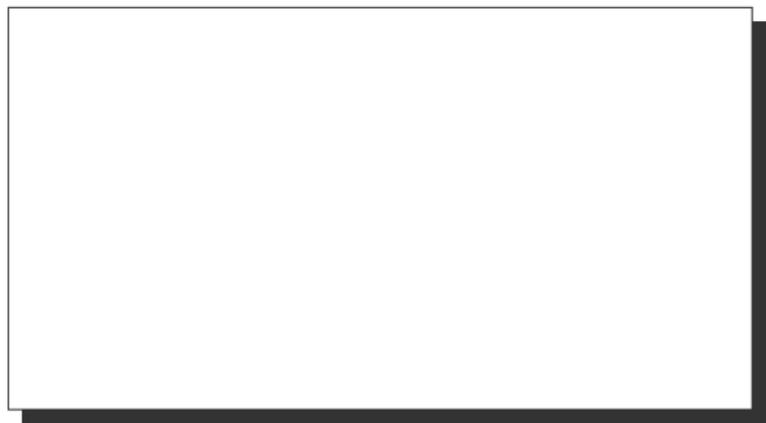
TABLE



Various Table

- `tabular` Environment to draw table.

cell1	cell2	cell3
cell4	cell5	cell6
cell7	cell8	cell9



Various Table

- `tabular` Environment to draw table.
- You must specify a parameter `{c c c}` corresponding to three columns to specify that the text inside each one of them must be centred. `\hline` will draw horizontal line.

cell1	cell2	cell3
cell4	cell5	cell6
cell7	cell8	cell9

```
\begin{tabular}{c c c }  
  cell1 & cell2 & cell3 \\  
  cell4 & cell5 & cell6 \\  
  cell7 & cell8 & cell9  
\end{tabular}
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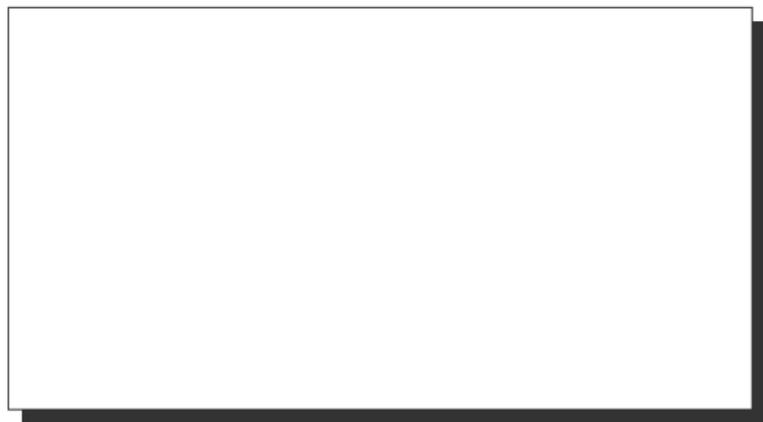
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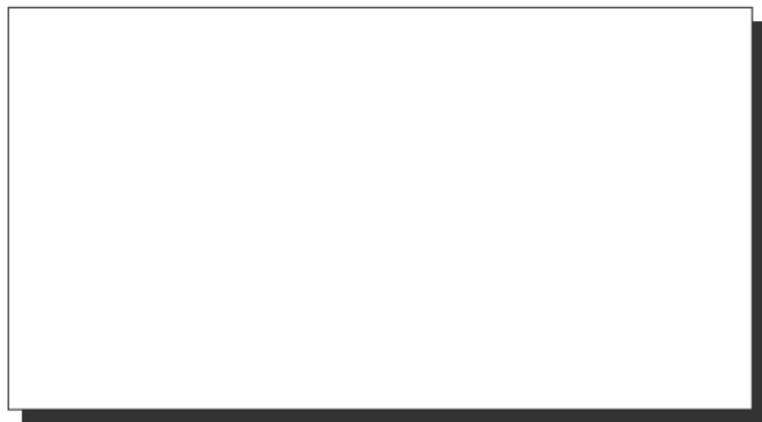
```
\begin{tabular}{|c|c|c| }
\hline
cell1 & cell2 & cell3 \\
cell4 & cell5 & cell6 \\
cell7 & cell8 & cell9 \\
\hline
\end{tabular}
```

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- Placing table in document same as `figure` only difference is here the environment is `table`

Col1	Col2	Col2
cell1	cell2	cell3
cell4	cell5	cell6
cell7	cell8	cell9

Table: Table caption



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Col1	Col2	Col2
cell1	cell2	cell3
cell4	cell5	cell6
cell7	cell8	cell9

Table: Table caption

```
\begin{table}[h!]\centering
\begin{tabular}{||c c c ||}
\hline
Col1 & Col2 & Col2 \\ \ [0.5ex]\hline\hline
cell1 & cell2 & cell3 \\
cell4 & cell5 & cell6 \\
cell7 & cell8 & cell9 \\ \ [1ex]\hline
\end{tabular}
\caption{Table caption}\label{table:1}
\end{table}
```

Various Option in tabular

Definition of `tabular` argument is

```
\begin{tabular}[pos]{cols}  
  table content  
\end{tabular}
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Abbreviation	Definition
<code>t</code>	the line at the top is aligned with the text baseline
<code>b</code>	the line at the bottom is aligned with the text baseline
<code>c</code>	(Default option) table is centred to the text baseline

Table: Option for `pos`

Various Option in tabular

Definition of `tabular` argument is

```
\begin{tabular}[pos]{cols}
  table content
\end{tabular}
```

Abbreviation	Definition
<code>l</code>	left-justified column
<code>c</code>	centred column
<code>r</code>	right-justified column
<code>p{width}</code>	paragraph column with text vertically aligned at the top
<code>m{width}</code>	paragraph column with text vertically aligned in the middle (requires <code>array</code> package)
<code>b{width}</code>	paragraph column with text vertically aligned at the bottom (requires <code>array</code> package)

Table: Option for `cols`

Some other Table

IITG Students			
Name	Department	Roll	Grade
Ram	MA	101	C
Shyam	CSE	102	B
Jodu	EEE	333	A
Modhu	ECE	652	AA
Modi	MA	199	A+

```
\begin{tabular}{|p{1cm}|p{2cm}|p{5cm}|p{1cm}| } \hline
\multicolumn{4}{|c|}{IITG Students} \\ \hline
Name & Department & Roll & Grade \\ \hline
Ram & MA & 101 & C \\
Shyam & CSE & 102 & B \\
Jodu & EEE & 333 & A \\
Modhu & ECE & 652 & AA \\
Modi & MA & 199 & A+ \\ \hline
\end{tabular}
```

- Table Generator (Online)

<http://www.tablesgenerator.com/>

THANK
YOU