

L^AT_EX: Online module 11

Venkata Manem

Univ. of Waterloo

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Topics to be covered

- Error handling
- Types of errors
- Examples

Errors

- The formatting process is interrupted if there is a mistake in the source file
- It is good to know about handling errors during compilation
- Makes the task easy to rectify \LaTeX code

contd...

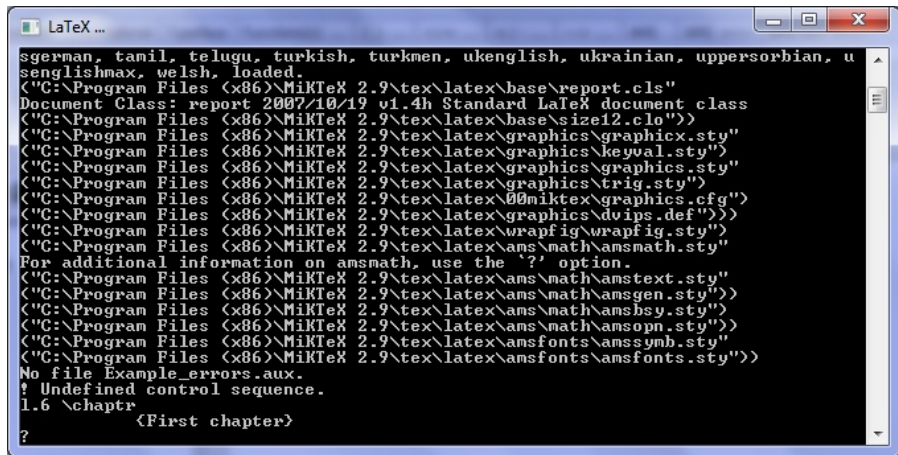
During compilation, if \LaTeX finds an error it pauses, then any of the following letters can be typed:

- x- Exit the program immediately
- q- It does not display any more error messages till the compilation is done
- h- Help mode

Error1: Typographical

- This occurs if there is any typographical mistake in any of the commands
- Example: Instead of typing
`\chapter{first chapter}`
you had written
`\chaptr{first chapter}`
- The error message is notified with the location, say line number 6 (in our example).

Error 1: message



```
sgerman, tamil, telugu, turkish, turkmen, ukenglish, ukrainian, uppersorbian, u
senglishmax, welsh, loaded.
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\base\report.cls"
Document Class: report 2007/10/19 v1.4h Standard LaTeX document class
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\base\size12.clo"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphicx.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\keyval.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphics.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\trig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\00miktex\graphics.cfg")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\dvips.def"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\wrapfig\wrapfig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsmath.sty"
For additional information on amsmath, use the '?' option.
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amstext.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsgen.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsbsy.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsopn.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amssymb.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amsfonts.sty"))
No file Example_errors.aux.
?! Undefined control sequence.
1.6 \chapter
      <First chapter>
?
```

Fig1: Snap shot of error that occurred due to typographical mistake in commands

Error 2: braces

- There is a chance that braces can be missed or extra when you type in set of equations or within any commands
- Example for missed brace: Instead of typing

$x+y = f(x_{\{1}})$

you had written

$x+y = f(x_{\{1})}$

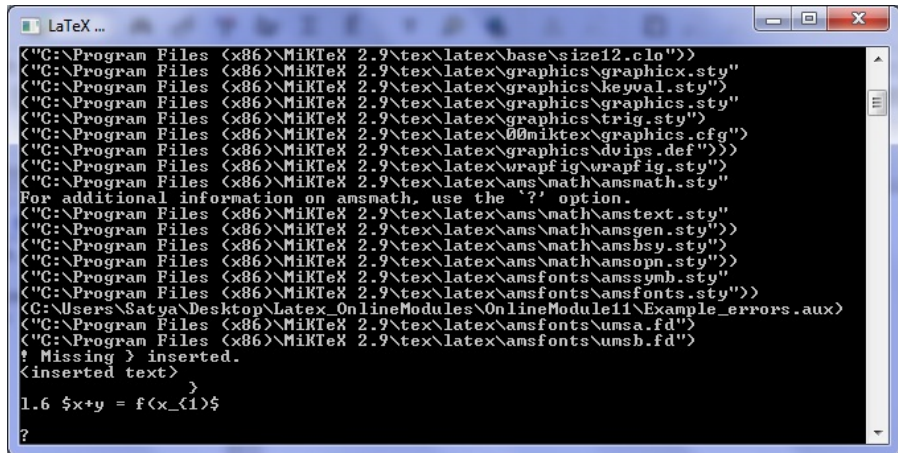
- Example for extra brace: Instead of typing

$x+y = f(x_{\{1}})$

you had written

$x+y = f(x_{\{1}})}$

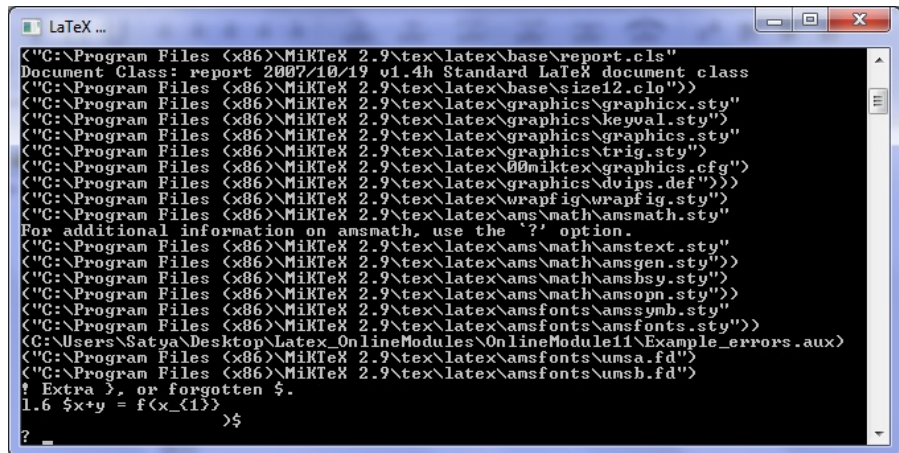
Error 2: message



```
LaTeX ...
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\base\size12.clo")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphicx.sty"
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\keyval.sty")
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphics.sty"
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\trig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\00miktex\graphics.cfg")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\dvips.def")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\wrapfig\wrapfig.sty")
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsmath.sty"
For additional information on amsmath, use the '?' option.
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amstext.sty"
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsgen.sty")
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\ambsy.sty")
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsonp.sty")
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amssymb.sty"
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amsfonts.sty")
("C:\Users\Satya\Desktop\Latex_OnlineModules\OnlineModule11\Example_errors.aux")
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsa.fd")
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsb.fd")
? Missing > inserted.
<inserted text>
}
1.6 $x+y = f(x_{<1>}$
?
```

Fig2: Snap shot of error that occurred due to missing braces

Error 2: message



```
LaTeX ...
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\base\report.cls"
Document Class: report 2007/10/19 v1.4h Standard LaTeX document class
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\base\size12.clo">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphicx.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\keyval.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphics.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\trig.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\00miktex\graphics.cfg">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\dvips.def">>
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\wrapfig\wrapfig.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsmath.sty"
For additional information on amsmath, use the '?' option.
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amstext.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsgen.sty">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\ambsy.sty">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsopt.sty">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amssymb.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsa.fd">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsb.fd">
! Extra }, or forgotten $.
1.6 $x+y = f(x_{1})
      >}
? _
```

Fig3: Snap shot of error that occurred due to extra braces

Error 3: dollar sign

- There is a chance that dollar signs can be missed when you type in set of equations

- Example: Instead of typing

$$\$x+y = f(x_{\{1}})\$$$

you had written

$$\$x+y = f(x_{\{1})$$

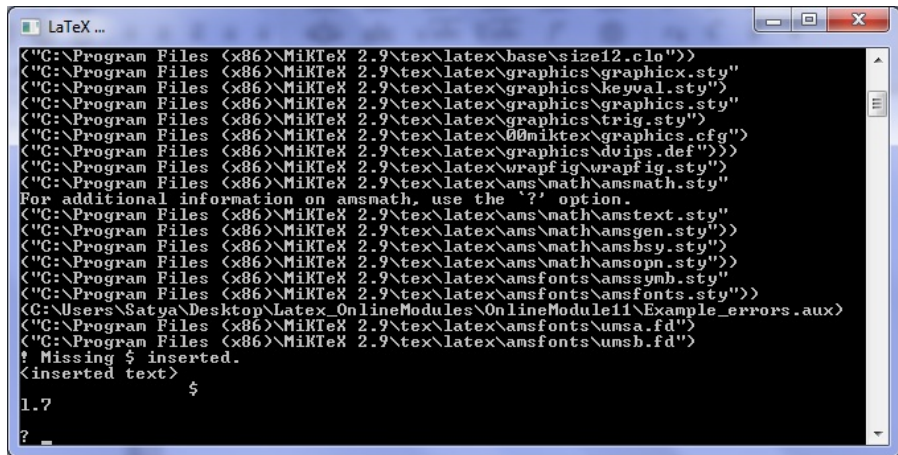
- Example: Instead of typing

$$\$\$x+y = f(x_{\{1}})\$\$$$

you had written

$$\$x+y = f(x_{\{1}})}\$\$$$

Error 3: message



```
LaTeX ...
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\base\size12.clo">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphicx.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\keyval.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphics.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\trig.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\00miktex\graphics.cfg">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\dvips.def">>
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\wrapfig\wrapfig.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsmath.sty"
For additional information on amsmath, use the '?' option.
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amstext.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsgen.sty">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amssy.sty">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsopn.sty">
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amssymb.sty"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amsfonts.sty">
<"C:\Users\Satya\Desktop\Latex_OnlineModules\OnlineModule11\Example_errors.aux"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsa.fd"
<"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsh.fd"
! Missing $ inserted.
<inserted text>
1.7
? _
```

Fig4: Snap shot of error that occurred due to missing dollar sign in math mode

Error 4

- Some times it is hard to find the actual error as discussed in the following example:
- Example: Instead of typing

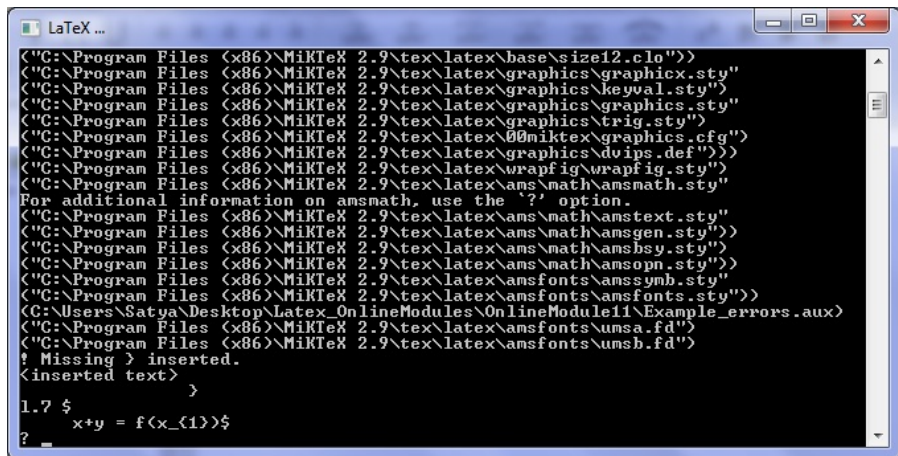
```
\begin{eqnarray}
x+y = f(x_{1})
\end{eqnarray}
```

you had written

```
\begin{eqnarray}
$x+y = f(x_{1})$
\end{eqnarray}
```

- Note that there should not be any dollar sign within the equation array environment

Error 4: message



```
LaTeX ...
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\base\size12.clo")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphicx.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\keyval.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphics.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\trig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\@0miktex\graphics.cfg")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\dvips.def"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\wrapfig\wrapfig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsmath.sty"
For additional information on amsmath, use the '?' option.
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amstext.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsgen.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsbsy.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsopn.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amssymb.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amsfonts.sty"))
("C:\Users\Satya\Desktop\Latex_OnlineModules\OnlineModule11\Example_errors.aux)
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsa.fd")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsh.fd")
! Missing > inserted.
<inserted text>
}
1.7 $
    x+y = f(x_{<1>})$
? _
```

Fig5: Snap shot of error that occurred due to a dollar sign in equation array environment

Error 5: figures

- There is one common mistake that users make when width command is used:
- Example: Instead of typing

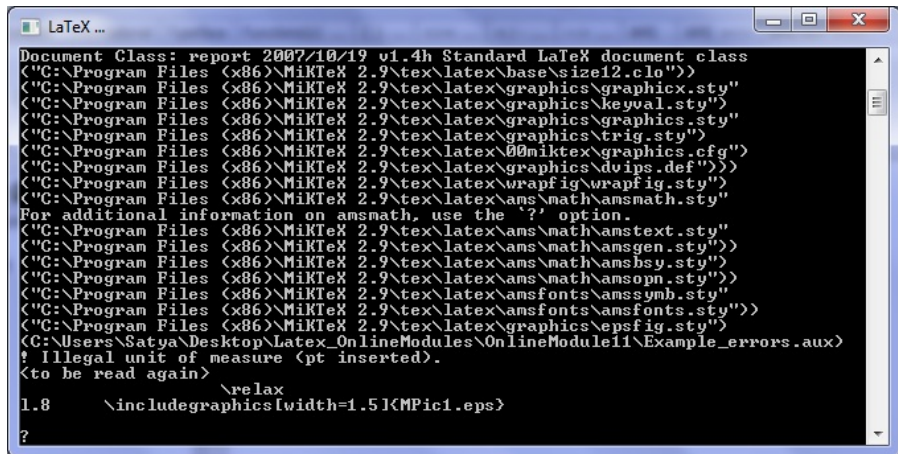
```
\begin{document}
  \begin{center}
    \includegraphics [width=1.5\textwidth] {MPic1.eps}
  \end{center}
```

you had written

```
\begin{document}
  \begin{center}
    \includegraphics [width=1.5] {MPic1.eps}
  \end{center}
```

- Note that text width command is missing within the figure environment

Error 5: message



```
LaTeX ...
Document Class: report 2007/10/19 v1.4h Standard LaTeX document class
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\base\size12.clo")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphicx.sty"
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\keyval.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphics.sty"
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\trig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\00miktex\graphics.cfg")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\dvips.def"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\wrapfig\wrapfig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsmath.sty"
For additional information on amsmath, use the '?' option.
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amstext.sty"
"C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsngen.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsbsy.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsopn.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amssymb.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amsfonts.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphics.sty")
("C:\Users\Satya\Desktop\Latex_OnlineModules\OnlineModule11\Example_errors.aux)
? Illegal unit of measure (pt inserted).
<to be read again>
      \relax
1.8   \includegraphics[width=1.5]{MPic1.eps}
?
```

Fig6: Snap shot of error that occurred due missing text width command

Error 6: tables

- Common mistake that users make which are not displayed during compilation
- Example: Instead of typing

```
\begin{tabular}{|c|c|c|}  
  \hline  
  {\it Departments}& {\it Number of faculty members}  
  & {\it Number of students}\\\hline  
  Dept.1 & $100$ & $45$ \\  
  Dept.2 & $75$ & $30$ \\  
  Dept.3 & $60$ & $20$ \\  
  \hline  
\end{tabular}
```


contd...

You had written

```
\begin{tabular}{|c|cc|}
  \hline
  {\it Departments} & {\it Number of faculty members}
& {\it Number of students}\\\hline
  Dept.1 & $100$ & $45$ \\
  Dept.2 & $75$ & $30$ \\
  Dept.3 & $60$ & $20$ \\
  \hline
\end{tabular}
```

Display1: table

<i>Departments</i>	<i>Number of faculty members</i>	<i>Number of students</i>
Dept.1	100	45
Dept.2	75	30
Dept.3	60	20

Fig7: Snap shot of a table when user forgets diving table into columns

contd...

- Example 2: Instead of typing

```
\begin{tabular}{|c|c|c|}  
  \hline  
  {\it Departments}& {\it Number of faculty members}  
  & {\it Number of students}\\\hline  
  Dept.1 & $100$ & $45$ \\  
  Dept.2 & $75$ & $30$ \\  
  Dept.3 & $60$ & $20$ \\  
  \hline  
\end{tabular}
```

contd...

You had written

```
\begin{tabular}{|c|c|c|}
  \hline
  {\it Departments} & {\it Number of faculty members}
  & {\it Number of students}\\\hline
  Dept.1 & $100$ & $45$ \\
  Dept.2 & $75$ & $30$ \\
  Dept.3 & $60$ & $20$ \\
  \hline
\end{tabular}
```

Display2: table

<i>Departments</i>	<i>Number of faculty members</i>	<i>Number of students</i>	
Dept.1	100	45	
Dept.2	75	30	
Dept.3	60	20	

Fig8: Snap shot of a table when user forgets an ampersand in the column definition

Error 6: Itemize

- Example: Instead of typing

```
\begin{itemize}  
\item Sample 1  
\item Sample 2  
\end{itemize}
```

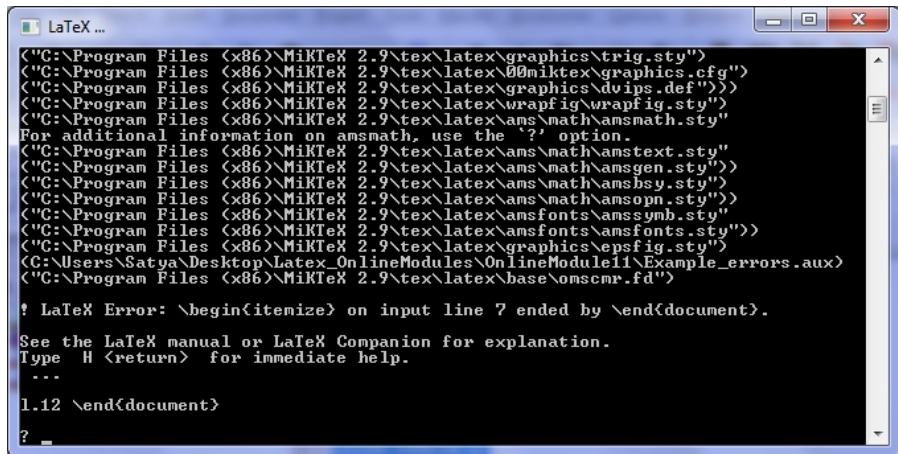
you had written

```
\begin{itemize}  
\item Sample 1  
\item Sample 2  
\item Sample 3
```

- Missing command:

```
\end{itemize}
```

Error 6: message



```
LaTeX ...
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\trig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\00miktex\graphics.cfg")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\dvips.def"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\wrapfig\wrapfig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ans\math\amsmath.sty"
For additional information on amsmath, use the '?' option.
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ans\math\amstext.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ans\math\amsgen.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ans\math\amsbsy.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ans\math\amsopn.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ansfonts\amssymb.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ansfonts\ansfonts.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\epsfig.sty")
("C:\Users\Satya\Desktop\Latex_OnlineModules\OnlineModule11\Example_errors.aux")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\base\omscmr.fd")

! LaTeX Error: \begin{itemize} on input line 7 ended by \end{document}.

See the LaTeX manual or LaTeX Companion for explanation.
Type H <return> for immediate help.
...
1.12 \end{document}
? _
```

Fig9: Snap shot of error that occurred in itemize environment

Error 7: Equation array

- Example: Instead of typing

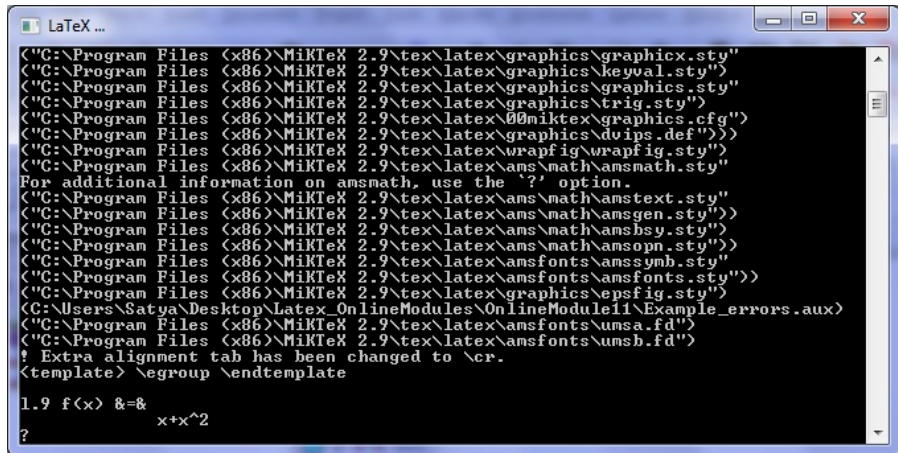
```
\begin{eqnarray}
a &=& b+c \\
f(x) &=& x+x^2
\end{eqnarray}
```

you had written

```
\begin{eqnarray}
a &=& b+c
f(x) &=& x+x^2
\end{eqnarray}
```

- Missing command: double backslash after the first equation. This error occurs, if the user is trying to align the equations but and missing the double back slash command

Error 7: message



```
LaTeX ...
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphicx.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\keyval.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\graphics.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\trig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\@00miktex\graphics.cfg")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\dvips.def"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\wrapfig\wrapfig.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsmath.sty"
For additional information on amsmath, use the '?' option.
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amstext.sty"
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsgen.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsbsy.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\ams\math\amsopn.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amssymb.sty")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\amsfonts.sty"))
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\graphics\epsfig.sty")
("C:\Users\Satya\Desktop\Latex_OnlineModules\OnlineModule11\Example_errors.aux")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsa.fd")
("C:\Program Files (x86)\MiKTeX 2.9\tex\latex\amsfonts\umsb.fd")
? Extra alignment tab has been changed to \cr.
<template> \egroup \endtemplate

1.9 f(x) &=&
           x+x^2
?
```

Fig10: Snap shot of error that occurred in equation array environment