

# USAGE OF LATEX

## USER GUIDE



**RESEARCH & DEVELOPMENT**  
**JNT UNIVERSITY ANANTAPUR**  
**ANANTHAPURAMU-515002**

PREPARED BY:

**Prof. E. KESHA VA REDDY**  
DEPARTMENT OF MATHEMATICS  
JNTUA COLLEGE OF ENGINEERING  
ANANTHAPURAMU-515002  
ANDHRA PRADESH  
INDIA

# **Usage of Latex JNTUA class file**

## **Introduction**

Jntua.cls is a thoroughly re-written document class for formatting LATEX file, submission to JNTUA Research and Development. The class uses the environments and commands defined in LATEX kernel without any change in the signature so that clashes with other contributed LATEX packages such as hyperref.sty, preview-latex.sty, etc., will be minimal. Jntua.cls is primarily built upon the default report.cls. The class depends on the following packages for its proper functionality:

1. geometry.sty for margin settings;
  2. natbib.sty for citation processing;
  3. graphicx.sty for graphics inclusion;
  4. nomencl.sty for nomenclature;
  5. imakeidx.sty for making index;
  6. csquotes.sty for quotations;
  7. txfonts.sty optional font package, if document is to be formatted with Times And compatible math fonts;
  8. Hyperref.sty optional packages if hyper linking is required in the document.
- All the above packages are part of any standard LATEX installation. Therefore, the users need to be downloading any extra packages. Furthermore, users are free to make use of AMS math packages such as, amsmath.sty, amsthm.sty, amssymb.sty, amsfonts.sty, etc., if they want to. All these packages work in tandem with jntua.cls without any problems.

## **Installation**

The jntua.cls is available at JNTUA Research and Development. First install Miktex 2.9 from <http://miktex.org/> and then update all the packages from the nearest package updating centre, which is available from <http://ctan.imsc.res.in/systems/win32/miktex/tm/packages/>

## **Usage**

The class should be loaded with the command: `\documentclass [<options>]{jntua}`

Where the options can be the following:

1. thesis – Thesis format
2. synopsis – Synopsis format
3. presubsynopsis –Pre-Submission seminar format
4. MS – MS by research

## **Frontmatter**

1. `\title{<enter your title here>}`
2. `\author{<CANDIDATE NAME>}`
3. `\registerno{<Register Number>}`
4. `\supervisor{<SUPERVISOR NAME>}`
5. `\cosupervisor{<CO-SUPERVISOR NAME>}` if required, otherwise % symbol at the beginning of this line.
6. `\date{MONTH - YEAR}`
7. `\department{<DEPARTMENT>}`

## **Floats**

Figures may be included using the command, `\includegraphics` in combination with or without its several options to further control graphic. `\includegraphics` is provided by `graphic[s,x].sty` which is part of any standard LATEX distribution. `graphicx.sty` is loaded by default. LATEX accepts figures in postscript format while pdfLATEX accepts \*.pdf, \*.mps (metapost), \*.jpg and \*.png formats. pdfLATEX does not accept graphic files in postscript format. The `table` environment is handy for marking up tabular material. If users want to use `multirow.sty`, `array.sty`, etc., to fine control/enhance the tables, they are welcome to load any package of their choice and `jntua.cls` will work in combination with all loaded packages.

## **Enumerated and Itemized Lists**

jntua.cls provides an extended list processing macros which makes the usage a bit more user friendly than the default LATEX list macros. With an optional argument to the `\begin{enumerate}` command, you can change the list counter type and its attributes.

```
\begin{enumerate}[1.]
```

```
\item The enumerate environment starts with an optional argument  
'1.' so that the item counter will be suffixed by a period.
```

```
\item You can use '(a)' for alphabetical counter and '(i)' for roman counter.
```

```
\begin{enumerate}[a]
```

```
\item Another level of list with alphabetical counter.
```

```
\item One more item before we start another.
```

```
\begin{enumerate}[(i)]
```

```
\item This item has roman numeral counter.
```

```
\item Another one before we close the third level.
```

```
\end{enumerate}
```

```
\item Third item in second level.
```

```
\end{enumerate}
```

```
\item All list items conclude with this step.
```

```
\end{enumerate}
```

```
\begin{enumerate}[Step 1.]
```

```
\item This is the first step of the example list.
```

```
\item Obviously this is the second step.
```

```
\item The final step to wind up this example.
```

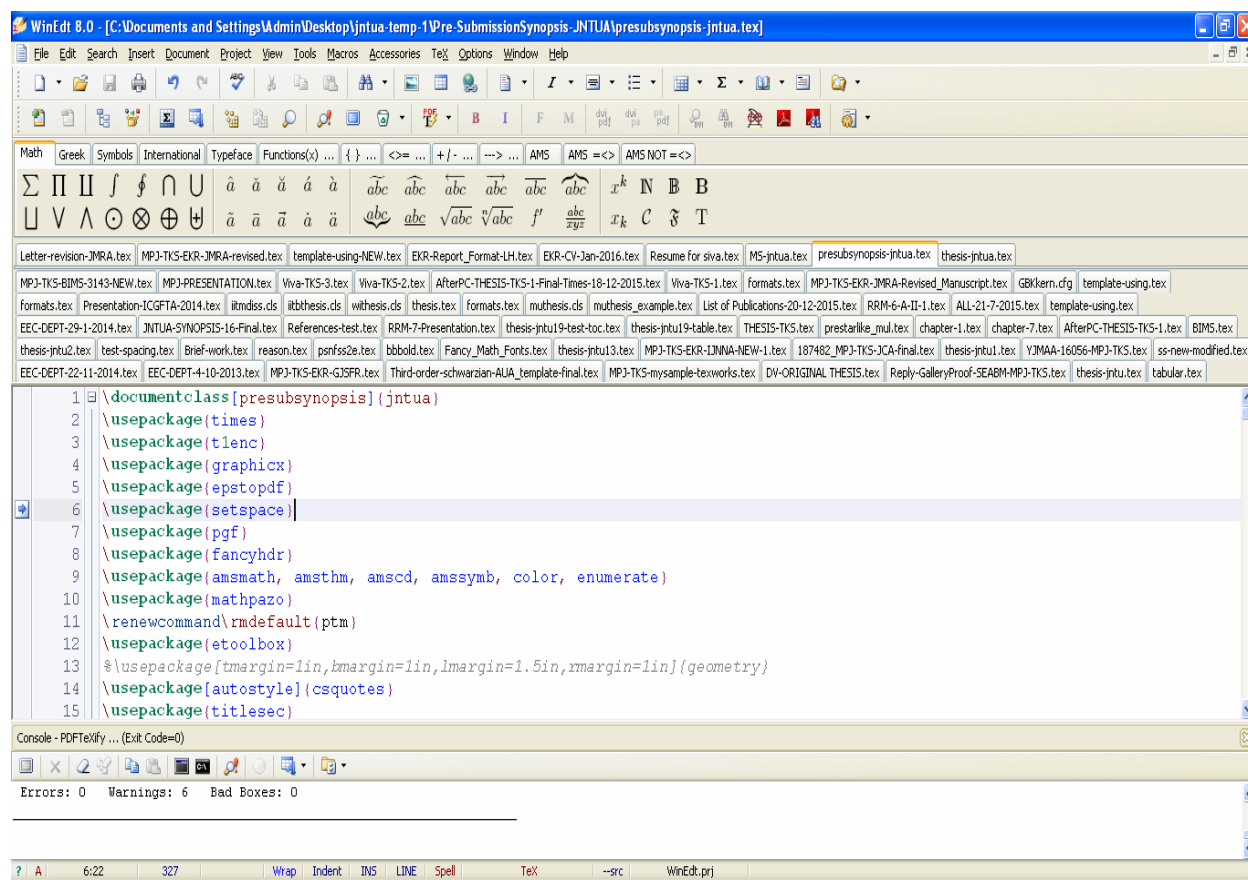
```
\end{enumerate}
```

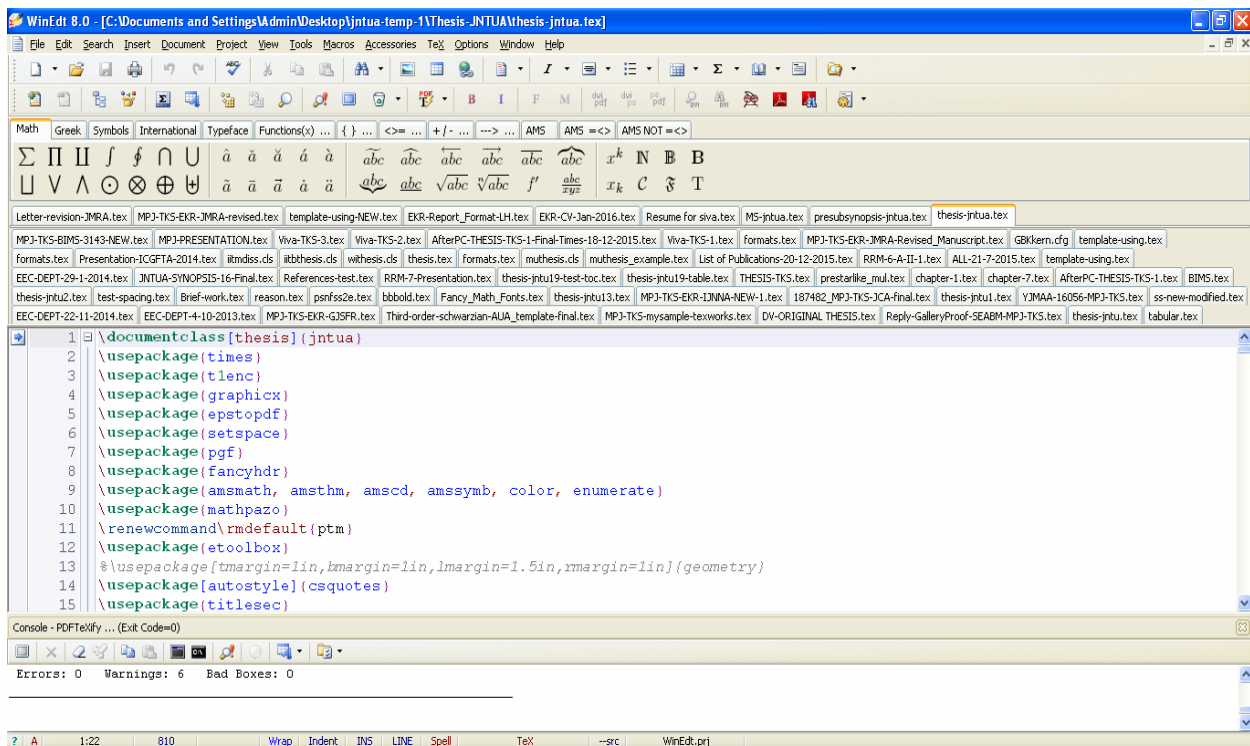
## Cross-references

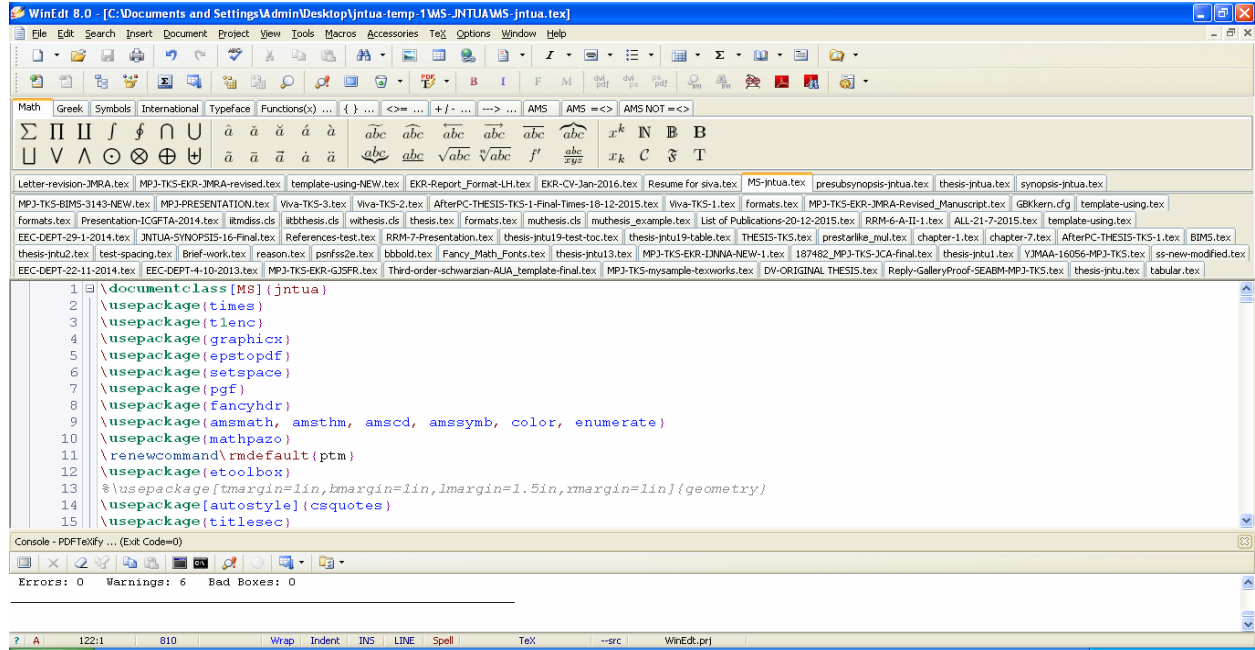
In electronic publications, articles may be internally hyperlinked. Hyperlinks are generated from proper cross-references in the article. For example, the words Fig. 1 will never be more than simple text, whereas the proper cross-reference `\ref{figure1}` may be turned into a hyperlink to the figure itself: Fig. 1. In the same way, the words Ref. [1] will fail to turn into a hyperlink; the proper cross-reference is `\cite{EKR2015}`. Cross-referencing is possible in LATEX for sections, subsections, formulae, figures, tables, and literature references.

## Bibliography

For details of various options of the natbib package, please take a look at the natbib documentation, which is part of any standard LATEX installation and download from <https://www.ctan.org/pkg/natbib?lang=en>.







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