

# Using L<sup>A</sup>T<sub>E</sub>X for High Quality Project Report Generation

A PROJECT REPORT

*Submitted in partial fulfilment for the award of the degree of*

MS

in

Software Engineering

By

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Under the Guidance of

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VIT UNIVERSITY



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(Estd. u/s 3 of UGC Act 1956)

Vellore - 632 014, Tamil Nadu, India

## **DECLARATION BY THE CANDIDATE**

I here by declare that the project report titled, **“Using L<sup>A</sup>T<sub>E</sub>X for High Quality Project Report Generation”** submitted by me to VIT University, Vellore in partial fulfilment of the requirement for the award of the degree of **M.S. (Software Engineering)** is a record of bonafide project work carried out by us under the guidance of **Dr. Krishna Chandramouli (Associate Professor)**. I further declare that the work reported in this project has not been submitted and will not be submitted, either in part or in full, for the award of any other degree or diploma in this institute or any other institute or university.

Place: Vellore

Signature of the Candidate

Date:

Santhos Baala RS (09MSE038)



**VIT**  
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Vellore - 632 014, Tamil Nadu, India

**SCHOOL OF INFORMATION TECHNOLOGY AND ENGINEERING [SITE]**  
**SOFTWARE ENGINEERING DIVISION**  
**BONAFIDE CERTIFICATE**

This is to certify that the project report titled, “**Using L<sup>A</sup>T<sub>E</sub>X for High Quality Project Report Generation**”, submitted by **Santhos Baala RS (09MSE038)** to VIT University, Vellore in partial fulfillment of the requirement for the award of the degree of M.S. (Software Engineering) is a record of bonafide work carried out by him/her under my guidance. The project fulfills the requirements as per the regulations of this institute and in my opinion meets the necessary standards for submission. The contents of this report have not been submitted and will not be submitted either in part or in full, for the award of any other degree or diploma in this institute or any other institute or university.

**Dr. Krishna Chandramouli**

**Internal Guide**

Associate Professor,

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**Internal Examiner**

**External Examiner**

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## **Executive Summary**

This document describes how to use the `vitmsprojectreport` class with  $\text{\LaTeX}$  to produce high quality typeset project report that is suitable for submission to the School of Information Technology and Engineering (SITE). The class can further be extended to various courses and department by modifying the title page and department information.

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# 1. Introduction

## 1.1 About the Template

With a basic understanding of the  $\text{\LaTeX}$  language and say 10 to 20 commands, an author can produce beautiful typeset project report quickly, with minimal effort. The purpose of this document is to serve as a user guide for the project report template and document its special behaviours. Examples have also been provided for common tasks such as insertion of images, table, equation, etc., that can be copied as is by the users. It is assumed that the user has a basic knowledge on working of the  $\text{\LaTeX}$  system. Those lacking are strongly urged to lookup some excellent literature through [1].

Sufficient examples have been given in the document and as users request solutions for specific problems that they encounter, more will be added. However, an understanding of the  $\text{\LaTeX}$  system will help the user in unexplainable ways<sup>1</sup>. The main advantage of using the custom class is that, the user need not worry about the final layout. The class may be changed during the development of the project report, the user needs to just place the latest version of the class file, without touching the content<sup>2</sup>.  $\text{\LaTeX}$ , along with the custom class file gives an incredible expressive power its users so that they can focus on the semantics of the document.

## 1.2 Generic $\text{\LaTeX}$ Commands

$\text{\LaTeX}$  contains many commands and with it comes numerous built-in packages that add many features and provide options to customise the output. However, the user is advised to stick to the basic commands, illustrated in this document so that unexpected or incorrect output can be avoided. If, however a specific feature is requested it shall be considered and incorporated into the template. The class file for project report has been extended from the standard *report* class, supplied by  $\text{\LaTeX}$ . Therefore, whatever applied for report also applies for the custom class file.

---

<sup>1</sup>The  $\text{\LaTeX}$  system is a vast ocean. That said, you can mostly get away with copy-paste skills. You have to observe the source code of the examples and learn

<sup>2</sup>It is always recommended to get the latest class file from the repository and compile before project report submission.

### **1.3 Generating the Final Document**

The template development is an ongoing process. It is mature at this point from the point of view of semantics. Layout or default contents (e.g bonafide, acknowledgement, etc.,) may change at a later point in time. Therefore, before generating the final document, please make sure to check out a frozen version of the class file from the repository before compiling the class file.

### **1.4 Asking Questions**

You can post your questions in the forum or if you encounter any problem related to unexpected/incorrect output due to the template send an e-mail to the contributors at the [github](#) page.

### **1.5 Contributing**

The project is hosted on GitHub [2] and uses the GIT repository management system. Contributors can fork the project and send pull requests to the repository for the changes to be merged. The patch will be evaluated and if found to be good, merged into the master branch of the repository. If however, a separate template is required for other departments and courses, the project can be forked and maintained separately. Issues, pertaining to the template, such as rendering faults, can be posted in the issues section of the repo. The contributors shall also put up a list of items that need improvement or new features in progress that people can contribute to.

## 2. Auto-Generated Pages

The parts of the document, unique to the project report are generated by a predefined template, using simple commands. The order in which the commands are issued determine the corresponding order of these individual pages. The arguments that need to be passed to these commands are explained in the following sections. The sequence of commands to generate such pages have already been placed in the example document and it is recommended not to touch those, expect when inserting your project specific information.

### 2.1 The Title Page

The user can generate the title page using the `\maketitlepage` command. The detailed syntax is given in Figure 2.1.

---

```
\maketitlepage
{Project Title}
{Name}
{RegNo}
{Guide Name}
{Guide Title}
```

---

Figure 2.1: The syntax of `\maketitlepage` command

Note that you should always set the title page to be the first page of the document, so issue this command right after the document begins. The template also collects information like your name and regno when you declare the title page so that it can be auto-inserted into other pages like declaration and bonafide. The following subsections d

#### 2.1.1 Project Title

Your project title should be placed here. If your title is long and you are not satisfied with the way the lines break, use `\\` to insert line breaks at suitable locations. Note the inclusion of blank space after the backslashes.

E.g. `{A very very\\ long long title}`.

### 2.1.2 Regno

Supply your register number here. A long name will automatically push the register number to the next line. However, to be safe, prepend your RegNo with `\\`.

E.g. `{\\09MSE038}`.

### 2.1.3 Guide Name

Your guide's name goes here. Make sure to add your guide's title too, Prof., Dr., etc. Also, be sure to add a non-breaking space “~” after the title so that unintended line breaks are prevented. Follow the regular convention of first name, last name.

E.g. `{Prof.~Robert}` or `{Dr.~John}`.

### 2.1.4 Guide Title

Your Guide's title(designation) goes here. Do not abbreviate anything.

E.g `{Assistant Professor (Senior)}`.

## 2.2 Declartion Page

Use `\makedeclarationpage` command, rest is automatically generated!

## 2.3 Bonafide Page

Use `\makebonafidepage` command, rest is automatically generated!

## 2.4 Acknowledgement Page

Use `\makeackpage` command to generate the page. The generated text is more than sufficient for acknowledgement. However, if there is a request for custom writeup for the acknowledgement page, we'll consider that<sup>1</sup>. There are three arguments to this page as given in Figure 2.2. Make sure to prepend the names with appropriate titles, Mr, Dr, etc., and remember to give a non-breaking space character just after the title as you did for your guide's name 2.1.3

---

<sup>1</sup>We don't want to kill creativity!

---

```
\makeackpage  
{Dean Name}  
{Program Manager Name}  
{Year Co-Ordinator Name}
```

---

Figure 2.2: The syntax of `\makeackpage` command.

## 2.5 Executive Summary Page

The command `\makeexecsummarypage` creates the executive summary page. The only argument to this function is your executive summary. Keep it down to 1-2 paragraphs. An example is given in Figure 2.3.

---

```
\makeexecsummarypage{  
This document describes how to use the vitmsprojectreport  
class with \LaTeX\ to produce high quality typeset project  
report that is suitable for submission to the School of  
Information Technology and Engineering (SITE). The class  
can further be extended to various courses and department  
by modifying the title page and department information.  
}
```

---

Figure 2.3: Example usage of the `\makeexecsummarypage` command.

### 3. References

- [1] Stefan Kottwitz. *LaTeX beginner's guide*. Packt, Birmingham, UK, 2011.
- [2] RS Santhos Baala. Vit ms project report class, 2014. <https://github.com/santhosbaala/vitmsprojectreport>.