

VISVESVARAYA TECHNOLOGICAL UNIVERSITY  
Jnana Sangama, Belagavi - 590 018



PROJECT REPORT ON  
**Title of the Project**

*Thesis submitted in partial fulfillment for the award of degree of*  
**Bachelor of Engineering**  
in  
**Electronics and Communication Engineering**

Submitted by

Keshav V Bharadwaj  
Sourav P Adi  
Vivek B A

1RN16EC164  
1RN16EC147  
1RN16EC178

*Under the Guidance of*  
**Dr. Uma S V**  
*Associate Professor*



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
(Accredited by NBA for the academic Years 2018-19, 2019-20 and 2020-21)

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Channasandra, Dr. Vishnuvardhan Road, Bengaluru-560098  
2019-20

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## CERTIFICATE

Certified that thesis work entitled “**Title of the Project Report**” is carried out by **Student-1, Student-2, Student-3, and Student-4** in partial fulfillment for the award of Bachelor of Engineering in **Electronics and Communication Engineering** of Visvesvaraya Technological University, Belagavi, during the year 2019-2020.

It is certified that all corrections / suggestions indicated for internal assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in aspect of the project work prescribed for the award of degree of **Bachelor of Engineering**.

.....

**Name of the Guide**

Designation

.....

**Dr. Vipula Singh**

Head of Department

.....

**Dr. M K Venkatesha**

Principal

### External Viva

**Name of the examiners**

**Signature with date**

1 .....

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2 .....

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## **DECLARATION**

We here by declare that the entire work embodied in this project report titled, **"Title"** submitted to **Visvesvaraya Technological University**, Belagavi, is carried out by us at the department of **Electronics and Communication Engineering** RNS Institute of Technology, Bengaluru under the guidance of **Name of the Guide**, Designation. This report has not been submitted in part or full for the reward of any Diploma or degree of this or any other university.

Name	USN	Signature
1.	1RN16EC	.....
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3.	1RN16EC	.....
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# Abstract

L<sup>A</sup>T<sub>E</sub>X eases our pressure in writing thesis & reports because of its powerful features such as automatic hyphenation, table of contents, figures & tables, powerful bibliography tool, citations, Automatic Numbering of Chapter, sections, figures & tables, its beautiful fonts, professional output...

Writing too much of code for gives bad impression on L<sup>A</sup>T<sub>E</sub>X. But now we have numerous gui tools like gedit-latex-plugin, T<sub>E</sub>Xmaker, Lyx & emacs, which are very much user friendly.

This VTU-project-report-template is written using popular document class, “Memoir”. In the coming chapters, we hav given small help manual required for writing report & at the end about template

# Acknowledgement

The joy and satisfaction that accompany the successful completion of any task would be incomplete without thanking those who made it possible.

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Name1

Name2

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# Acronyms

# Chapter 1

## Introduction

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### 1.1 Motivation

**Title:** Remote servicing of IPTV using DirectFB and VNC.

### 1.2 Objectives

Assume you have an IPTV in your home and it has some technical problem. It will be better if the TV technician can solve the problem remotely over Internet.

### 1.3 Methodology

The project involves 2 primary objectives

1. Exploring VNC system module of DirectFB and building it onto the target IPTV
2. Extending remote accessibility of IPTV from outside LAN

### 1.4 Applications

DirectFB features and VNC features have been implemented in IPTV independently.

### 1.5 Advantages and Disadvantages

The primary goal is establishing communication between IPTV and a remote PC for remote serviceability of IPTV.

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## 1.6 Organisation of the Report

## Chapter 2

### Literature survey

# Chapter 3

title

# Chapter 4

title

## **Chapter 5**

### **Conclusion and Future scope**

# References

- [1] Andrew S. Tanenbaum: *Operating Systems Design and Implementation*, Prentice Hall, 2006
- [2] About IPTV on Wikipedia <http://en.wikipedia.org/wiki/IPTV>
- [3] About VNC on Wikipedia [http://en.wikipedia.org/wiki/Virtual\\_Network\\_Computing](http://en.wikipedia.org/wiki/Virtual_Network_Computing)
- [4] LibVNC server <http://libvncserver.sourceforge.net>
- [5] DirectFB documentation <http://elinux.org/DirectFB>
- [6] jointSPACE documentation [http://sourceforge.net/apps/mediawiki/jointspace/index.php?title=Main\\_Page](http://sourceforge.net/apps/mediawiki/jointspace/index.php?title=Main_Page)
- [7] PuTTY on Wikipedia <http://en.wikipedia.org/wiki/PuTTY>
- [8] Nicola L. C Talbot and Gavin C. Cawley. A fast index assignment algorithm for robust vector quantisation of image data. *In Proceedings of the I.E.E.E. International Conference on Image Processing*, Santa Barbara, California, USA, October 1997.



# Appendix A

## Topic 1