# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

**"JnanaSangama", Belgaum -590014, Karnataka.**

**FULL STACK WEB DEVELOPMENT & DEVOPS REPORT**
**on**

# COLLEGE ADMISSION APPLICATION FORM

***Submitted by***


**Jeevanthi Kashyap (1BM21CS080)**
**Jyothika C N(1BM21CS083)**
**Kaushik Potluri(1BM21CS089)**
**Keerthi P Reddy (1BM21CS090)**


***Under the Guidance of***
**Dr.Shyamala G**
**Assistant Professor, B.M.S.C.E.**

***in partial fulfillment for the award of the degree of***
**BACHELOR OF ENGINEERING**
***in***
**COMPUTER SCIENCE AND ENGINEERING**


**B.M.S. COLLEGE OF ENGINEERING**
**(Autonomous Institution under VTU)**
**BENGALURU-560019**

**Jun-2023 to Sep-2023**

# B. M. S. College of Engineering,

**Bull Temple Road, Bangalore 560019**

(Affiliated To Visvesvaraya Technological University, Belgaum)

## Department of Computer Science and Engineering

## CERTIFICATE

This is to certify that the project work entitled "**COLLEGE ADMISSION APPLICATION FORM**" carried out by **Jeevanthi Kashyap (1BM21CS080), Jyothika C N(1BM21CS083), Kaushik Potluri(1BM21CS089) and Keerthi P Reddy (1BM21CS090)** who are bonafide students of **B. M. S. College of Engineering.** It is in partial fulfillment for the award of **Bachelor of Engineering in Computer Science and Engineering** of the Visveswaraya Technological University, Belgaum during the year 2022-2023. The project report has been approved as it satisfies the academic requirements in respect of **Full Stack Web development & DevOps (22CS4AEFWD)** project work prescribed for the said degree.

Signature of the Guide

Dr.Shyamala G
Assistant Professor,
Dept. of CSE
B.M.S.C.E., Bengaluru

Signature of the HOD

Dr. Jyothi S Nayak
Prof.& Head, Dept. of CSE
B.M.S.C.E., Bengaluru

External Viva

Name of the Examiner — Signature with date

1._____ _____

2. _____ _____

# B.M.S. COLLEGE OF ENGINEERING

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

***DECALARATION***

We, Jeevanthi Kashyap (1BM21CS080), Jyothika C N(1BM21CS083), Kaushik Potluri(1BM21CS089) and Keerthi P Reddy (1BM21CS090), students of 4th Semester, B.E, Department of Computer Science and Engineering, B. M. S. College of Engineering, Bangalore, hereby declare that, this Full Stack Web development & DevOps project work entitled "COLLEGE ADMISSION APPLICATION FORM" has been carried out by us under the guidance of Shyamala G, Assistant Professor, Department of CSE, B. M. S. College of Engineering, Bangalore during the academic semester Jun-2023 to Sep-2023.

We also declare that to the best of our knowledge and belief, the development reported here is not from part of any other report by any other students.

Signature

Jeevanthi Kashyap (1BM21CS080)

Jyothika C N (1BM21CS083)

Kaushik Potluri (1BM21CS089)

Keerthi P Reddy (1BM18CS004)

# Abstract

The " COLLEGE ADMISSION APPLICATION FORM " project employs an extensive technology stack encompassing HTML, CSS, JavaScript, XAMPP, PHP, MySQL, Apache, Git, and DevOps tools. Through collaborative development, it crafts an interactive front-end interface using HTML, CSS, and JavaScript. Seamlessly integrating XAMPP, PHP, and MySQL, the back-end infrastructure adeptly manages data operations and storage, with the Apache web server facilitating robust web hosting. Employing Git and DevOps tools bolsters version control and collaborative workflows, while Docker containers optimize deployment. The inclusion of CI/CD pipelines further enhances development by automating integration, testing, and deployment, culminating in a holistic solution that simplifies admission management through technology.

# Table of Contents

# Table of Figures

# 1. Introduction

## 1.1. Background

Student admissions in a college is a time-consuming process. Every institution has its own method of admission process such as entry of student details through a portal or entering by filling in a form which further needs to be processed. But these methods consume a lot of time. In the case of an offline application form proper validation takes time and consumes a lot of work. And proper analysis of the entered details becomes difficult. To overcome such troubles, we need online admission applications.

## 1.2. The Problem Statement

Develop a comprehensive online admission application form catering to college students' needs. The form should gather a wide array of information, including personal particulars, educational history, and miscellaneous details. Upon submission, the system should generate a unique application ID for each applicant and seamlessly compile all the provided information into a structured PDF document. The generated PDF should present the entered details in a clear and organized manner, facilitating easy review for both applicants and admission officers. Focus on creating an intuitive interface that ensures a user-friendly experience throughout the data entry process. Additionally, implement robust error-checking mechanisms to validate the accuracy of the provided data and guarantee the integrity of the generated application PDFs.

## 1.3. The COLLEGE ADMISSION APPLICATION FORM Vision

Incorporate COLLEGE ADMISSION APPLICATION FORM vision into the development of the online college student admission application form, aiming to leverage our expertise to create a user-friendly, efficient, and customized solution. COLLEGE ADMISSION APPLICATION FORM commitment to quality assurance ensures accurate data collection, validation, and the seamless generation of organized PDFs. By aligning with COLLEGE ADMISSION APPLICATION FORM vision, we prioritize delivering a streamlined application process that allows colleges to focus on core admissions tasks, enhancing overall efficiency and applicant satisfaction.

### 1.4. Why COLLEGE ADMISSION APPLICATION FORM?

Engaging a COLLEGE ADMISSION APPLICATION FORM for the specified college admission application form brings specialized expertise in interface design, data validation, and PDF generation. This approach guarantees an efficient development process, tailored customization to the institution's requirements, and top-notch quality. By entrusting technical intricacies to the COLLEGE ADMISSION APPLICATION FORM, the college can prioritize its core functions. The result is a seamless and proficient application procedure that enhances user experience and optimizes administrative efforts.

# 2. SOFTWARE REQUIREMENT SPECIFICATION (SRS)

## 2.1 Objectives

- Gathering information of the students required for college purpose
- To save time, effort and cost to manually process all the data
- Easier to save and store student data in a software rather than a hard copy getting mishandled
- To automate individual validations making the admin's task easier.

## 2.2 Requirement

**Technologies and Tools Used:**

- Frontend: HTML, CSS, JavaScript
- Backend: PHP, XAMPP
- Database: MySQL
- DevOps Tools: Docker for containerization, GitHub for version control, GitHub Actions for CI/CD, and Docker Hub for deployment.

**Hardware Configuration:**

A PC with the following or greater specifications:

• Intel Core i7 (6th gen or higher)

• 8 GB RAM

• 500 GB Hard Drive

• A stable internet connection (2Mbps or higher).

# 3. System Design