

**Visvesvaraya**

**Technological**

**University**

**BELAGAVI,**

**KARNATAKA**

**-**

**590**

**014.**

**A**

**MINI**

**PROJECT**

**REPORT**

**ON**

**“Hostel Management System”**

**Submitted**

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***Submitted***

***in***

***partial***

***fulfillment***

***of***

***the***

***requirement***

***for***

***the***

***award***

***of***

***degree***

***of***

**BACHELOR OF ENGINEERING IN**

**COMPUTER**

**SCIENCE**

**AND**

**ENGINEERING**

**Under**

**the**

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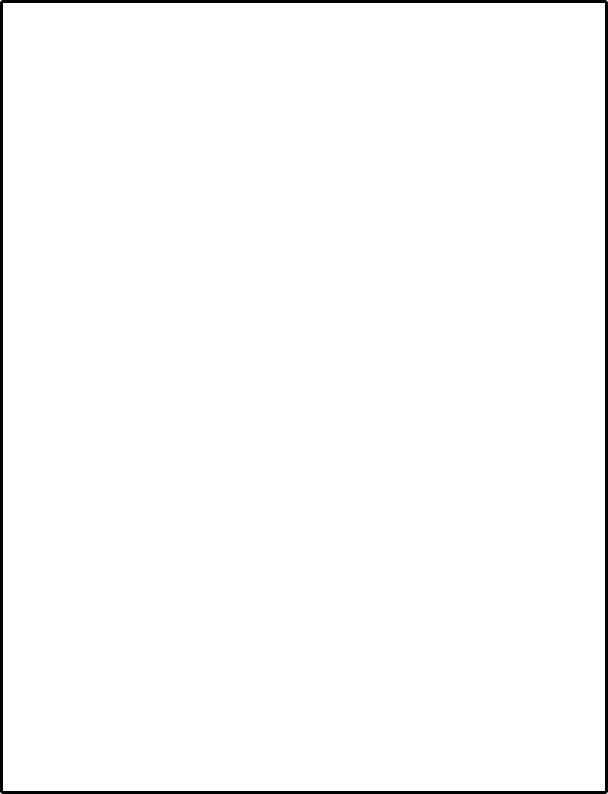
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of

Bachelor

of

Engineering

in

***COMPUTER***

***SCIENCE***

***&***

***ENGINEERING***

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during

the

academic

year

***2023-24***

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It

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corrections/suggestions

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Internal

Assessment

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been

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report

deposited

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department

library.

The

project

report

has

been

approved

as

it

satisfies

the

academic

requirements

in

respect

of

Project

work

prescribed

for

the

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# DEPARTMENT VISION



To be a leader in providing education with skilled technical knowledge imbibing professional ethics to the students in the field of computer science and engineering.

# DEPARTMENT MISSION



**Mission 1:** Imparting quality education to students by ensuring a learning environment through qualified faculty and good infrastructure

# Mission 2: Empower students to attain strong technical and ethical skills for a successful career in industry, academics, research and entrepreneurship through active engagement with all the stakeholders.ABSTRACT

A Database Management System (DBMS) is a software platform designed to create, manage, and interact with databases. It provides an organized way to store, retrieve, and manipulate data efficiently while ensuring data integrity, security, and concurrent access. DBMSs support various data models, such as relational, hierarchical, and object-oriented, enabling users to manage large volumes of data systematically. They offer tools for defining data structures, querying and updating data, and managing transactions, ensuring that operations are processed reliably and accurately. With the ability to handle multiple users and large datasets, DBMSs are essential for applications ranging from enterprise systems to small-scale projects, facilitating data management through features like data abstraction, indexing, and backup functionalities

The `hostel\_management\_system` database is designed to manage various aspects of a hostel system, including student accommodations, hostel and mess facilities, and related administrative tasks. The core tables include `Student`, `Hostel`, `Room`, `Mess`, `Mess\_Allocation`, `Hostel\_Manager`, and several auxiliary tables such as `Application`, `Application\_mess`, and `Payment`.

The `Student` table holds details about each student, including their ID, name, department, year of study, and contact information. It also references the hostels, rooms, and messes they are assigned to, along with their mess card details. The `Hostel` table records information about each hostel, including its name, total number of rooms, current occupancy, and student count. Similarly, the `Room` table tracks individual rooms within hostels, indicating whether they are allocated and linking them to the corresponding hostel.The `Mess` table contains information about mess facilities, including their name, type (Veg or Non-veg), and capacity. The `Mess\_Allocation` table is responsible for tracking the allocation of mess cards to students, including whether each card is currently allocated or not. The `Hostel\_Manager` table manages the details of hostel managers, including their credentials and the hostels and messes they oversee.To facilitate the application process, the `Application` table records applications made by students for hostel accommodations, while the `Application\_mess` table tracks applications for mess facilities. The `Payment` table is used to record payments made by students for hostel and mess services.Triggers are implemented to automatically update related tables: the `mess\_allocation\_update` trigger adjusts the vacancy count in the `Mess` table whenever a mess card allocation status changes, and the `allocation\_update` trigger updates the room and student counts in the `Hostel` table whenever a room's allocation status changes.

This schema supports a comprehensive hostel management system by integrating student accommodations, mess services, and administrative functionalities into a cohesive relational database structure, leveraging the capabilities of the DBMS to ensure efficient and reliable management of hostel resources and student information

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