CSE 2004- DATABASE MANAGEMENT SYSTEMS

REVIEW 3

Prepared By-

Name-Porwal Kakshak
Reg.No-17BCE0699
Slot- F1/L57+L58

Submitted to-

Prof. Geetha Mary A

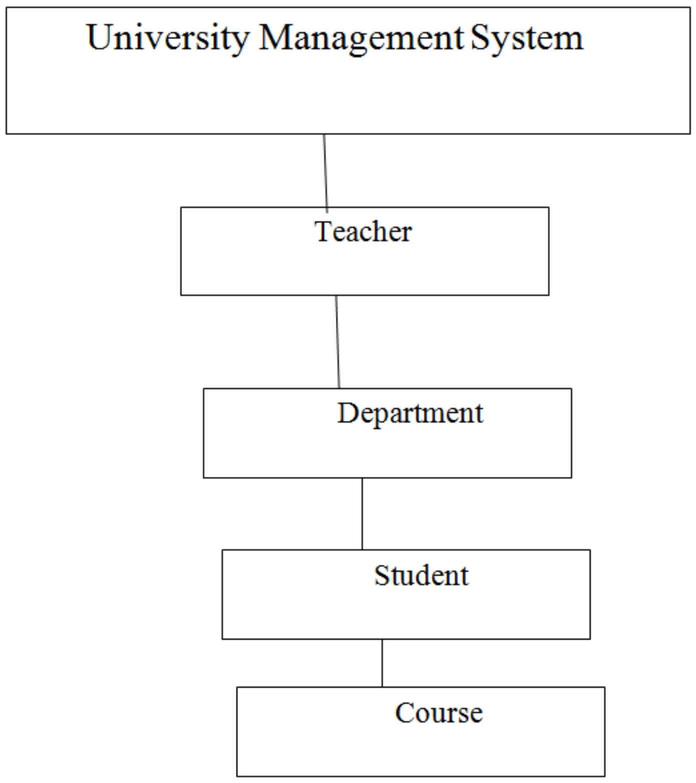
ABSTRACT

University Management System (UMS) deals with the maintenance of university, college, faculty, student information within the university. University Management System is an automation system, which is used to store the college, faculty, student, courses and information of a college. Starting from registration of a new student in the college, it maintains all the details regarding the attendance and marks of the students. It collects related information from all the departments of an organization and maintains files, which are used to generate reports in various forms to measure individual and overall performance of the students. It can handle all details about a student. The details include Online course Offering, Seat allocation, student take their course by own. Student management system is managed by a Department. It is the job of the Department to insert update and monitor the whole process. The system will serve the management to reduce cycle times, faster keep track of data, and improve the service, increase information sharing and providing facilities to store information centrally.

INTRODUCTION

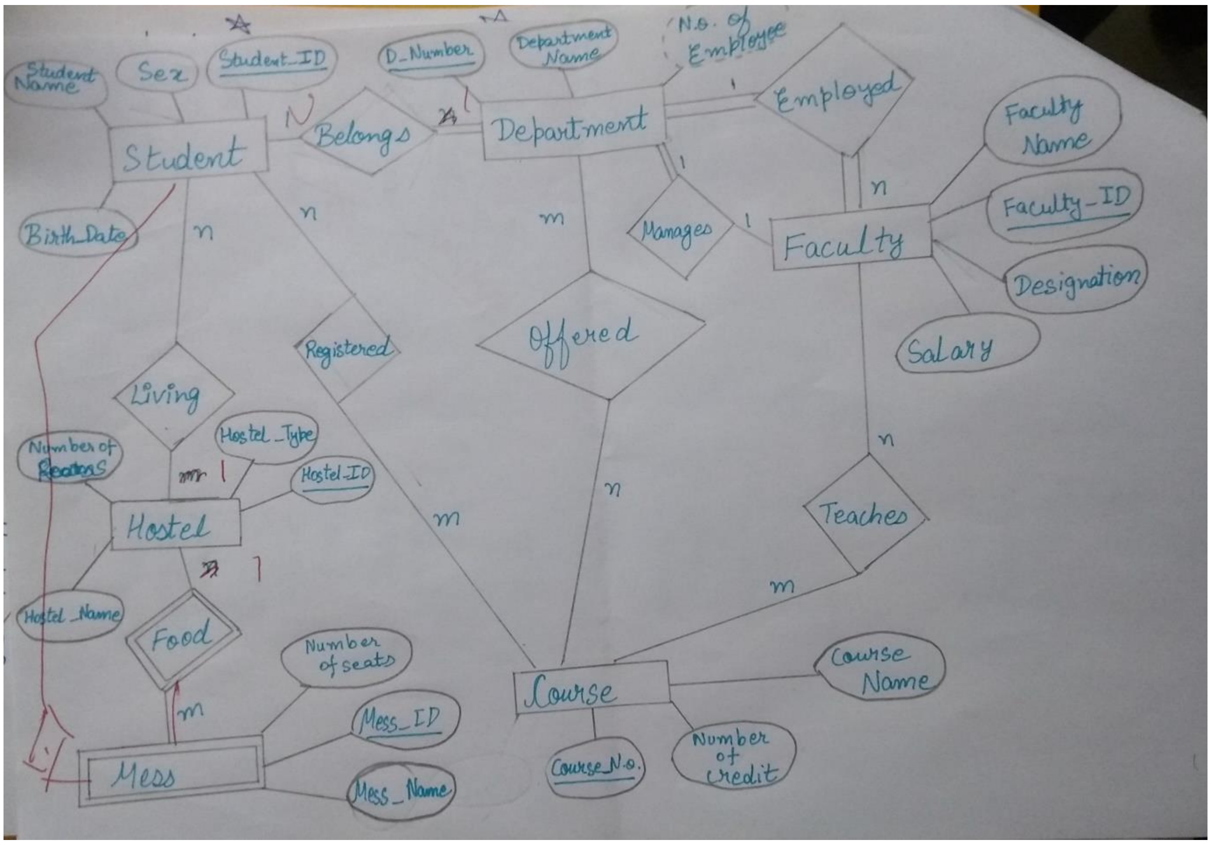
After analyzing the requirements of the task to be performed, the next step is to analyze the problem and understand its context. The first activity in the phase is studying the existing system and other is to understand the requirements and domain of the new system. Both the activities are equally important, but the first activity serves as a basis of giving the functional specifications and then successful design of the proposed system. Understanding the properties and requirements of a new system is more difficult and requires creative thinking and understanding of existing running system is also difficult, improper understanding of present system can lead diversion from solution. The main objective of this project is to establish an integrated University Management system which enables us to automate the dynamic administrative processes in the university. This can be achieved through: Supporting the decision-making process. Improving the services provided to the students, Teacher and Department. Improving the accuracy of the follow up and management of student data in the university. The main objective of the proposed university management system is to computerize the existing system and reduce manpower and time consumption. It helps to maintain information of students and teachers. Generate test results and students’ score related to respective subject and department. Reduce error in data management. Centralized database management.

System Hierarchy/Requirements



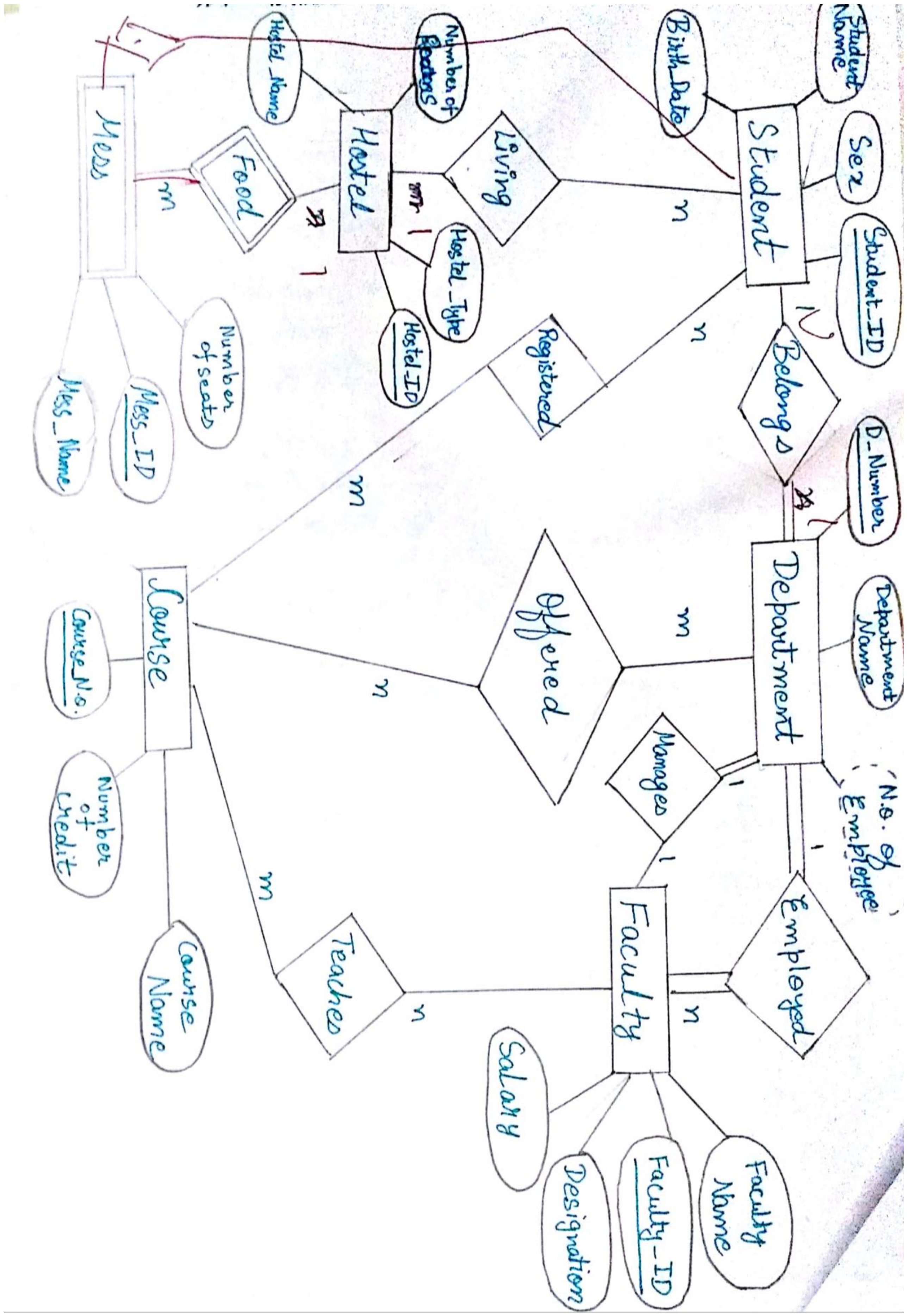
Change-management policies must provide a formal mechanism for proposing changes in the product line and supporting the systematic assessment of how the proposed changes will impact the product line. Change-management policies govern how changes in the product line requirements are proposed, analyzed, and reviewed. The coupling between the product line requirements and the core assets is leveraged by the use of traceability links between those requirements and their associated core assets. Changes in the requirements can then trigger the appropriate changes in the related core assets.

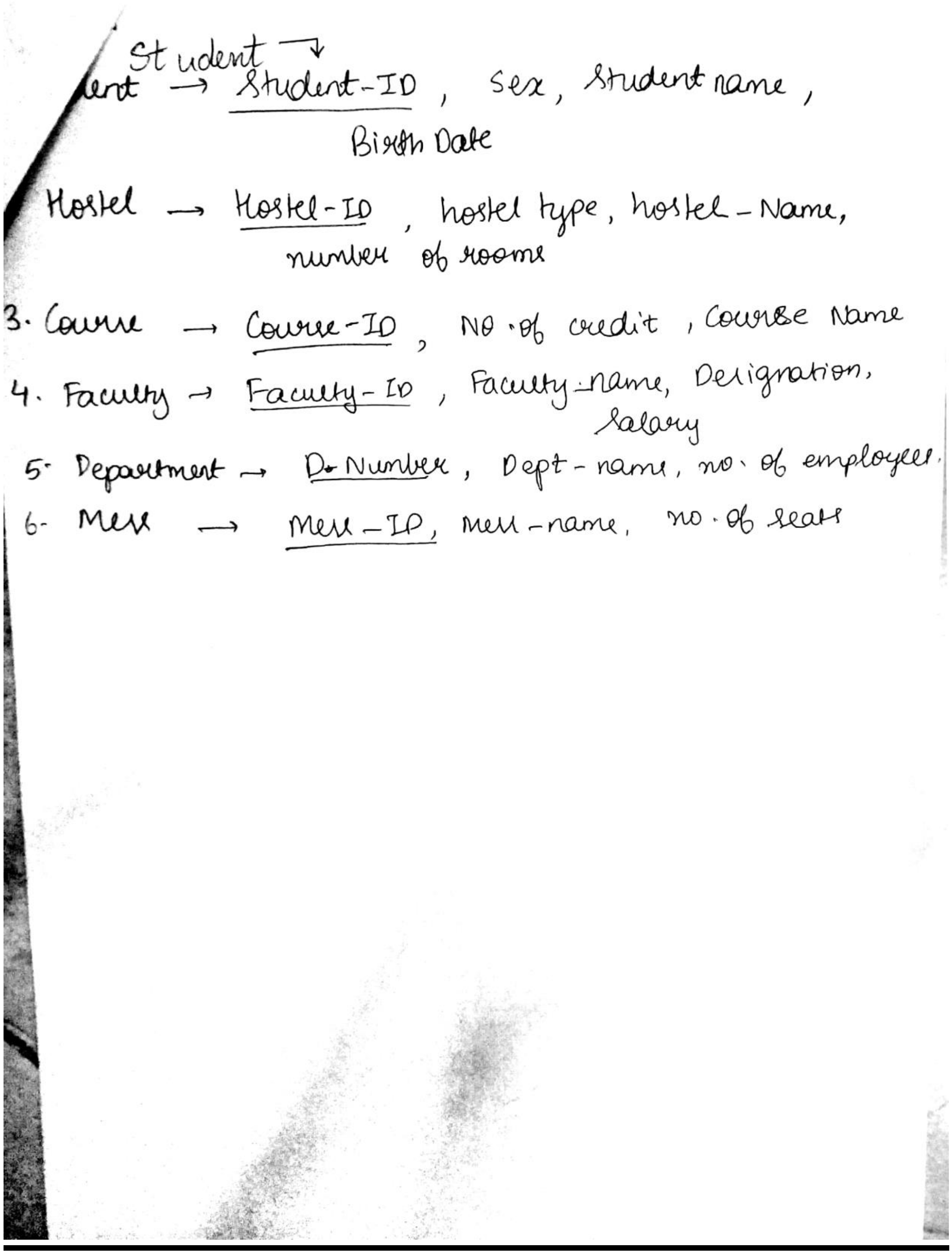
ER-DIAGRAM



Basic Requirements:

1. Student_Details
2. Department
3. Mess
4. Hostel
5. Course
6. Faculty


Student
Student Name
Birth_Date
Sex
Student_ID
Living
Hostel
Number of Rooms
Hostel_Name
Hostel_Type
Hostel_ID
Food
Mess
Number of seats
Mess_ID
Mess_Name
Belongs
Registered
Department
D_Number
Department Name
N.o. of Employee
Offered
Course
Course No.
Number of Credit
Course Name
Manages
Employed
Faculty
Teaches
Salary
Designation
Faculty_ID
Faculty Name
n
m
1



St udent ↴
ent → Student-ID , sex, Student name ,
Birth Date

Hostel → Hostel-ID , hostel type, hostel-Name,
number of rooms

3. Course → Course-ID , NO. of credit , Course Name

4. Faculty → Faculty-ID , Faculty-name, Designation,
Salary

5. Department → D. Number , Dept-name, no. of employees.

6. Mess → Mess-ID, Mess-name, no. of seats

ER-RELATIONSHIP-MODEL

- Student_Details
    1. Student_ID(Primary Key)
    2. Student_Name
    3. Sex
    4. Birth_Date
    5. Department_number(Foreign Key)
    6. Hostel_ID(Foreign Key)

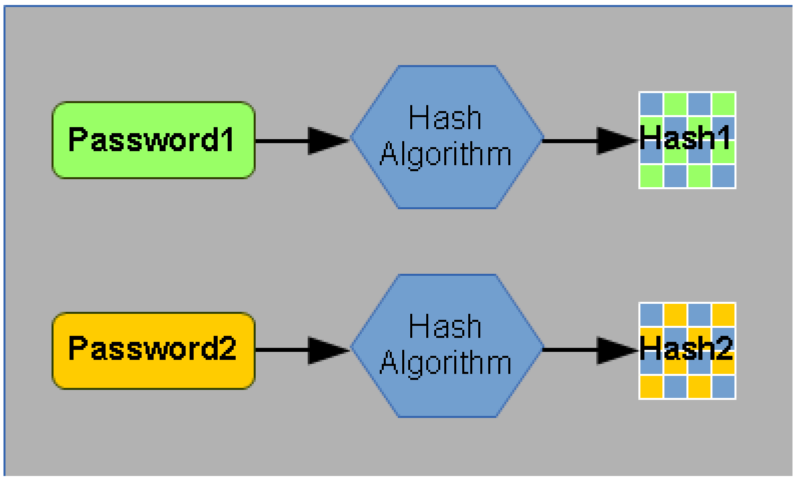
- Department
    1. Department_Number(Primary Key)
    2. Department_Name
    3. Faculty_ID(Foreign Key)
- Mess
    1. Mess_ID(Primary Key)
    2. Number_of_seat
    3. Student_ID(Foreign Key)
    4. Mess_Name
    5. Hostel_ID(Foreign Key)
- Hostel
    1. Hostel_ID(Primary Key)
    2. Hostel_Name
    3. Number_of_room
- Course
    1. Course_Number(Primary Key)
    2. Course_Name
    3. Number_of_credit
- Faculty
    1. Faculty_Name
    2. Faculty_ID(Primary Key)
    3. Designation
    4. Salary
    5. Department_Number(Foreign Key)
    6. Gender

- Teaches
    1. Course_Number(Foreign Key)
    2. Faculty_ID(Foreign Key)
- Offered
    1. Course_Number(Foreign Key)
    2. Department_Number(Foreign Key)
- Registered
    1. Student_ID(Foreign Key)
    2. Course_Number(Foreign Key)

Algorithm Used

Hash Function for Storing Passwords

Hashing converts a piece of data (either small or large), into a relatively short piece of data such as a string or an integer.



The process during a User registration:

- User fills out registration form, including the password field.
- The web script stores all of the information into a database.
- However, the password is run through a hash function, before being stored.
- The original version of the password has not been stored anywhere, so it is technically discarded.

The process during a User Login process:

- User enters Username and password.
- The script runs the password through the same hashing function.
- The script finds the user record from the database, and reads the stored hashed password.
- Both of these values are compared, and the access is granted if they match.

Source	SHA1 Hash
Password: 123745	8cb2237d0679ca88db6464eac60da96345154689
Password: 12389	94ae0a96d83a445d72a93417b63acui879ty7sdf
Password: This is a very long password	a04f5424328d9b7b7a4d8ce8e0eb69pedf623u62
Password: This is a secret password	dfda807d832b094184faeu1elwhtR2Xjkllmn2s4K

Some Key Points in Hashing

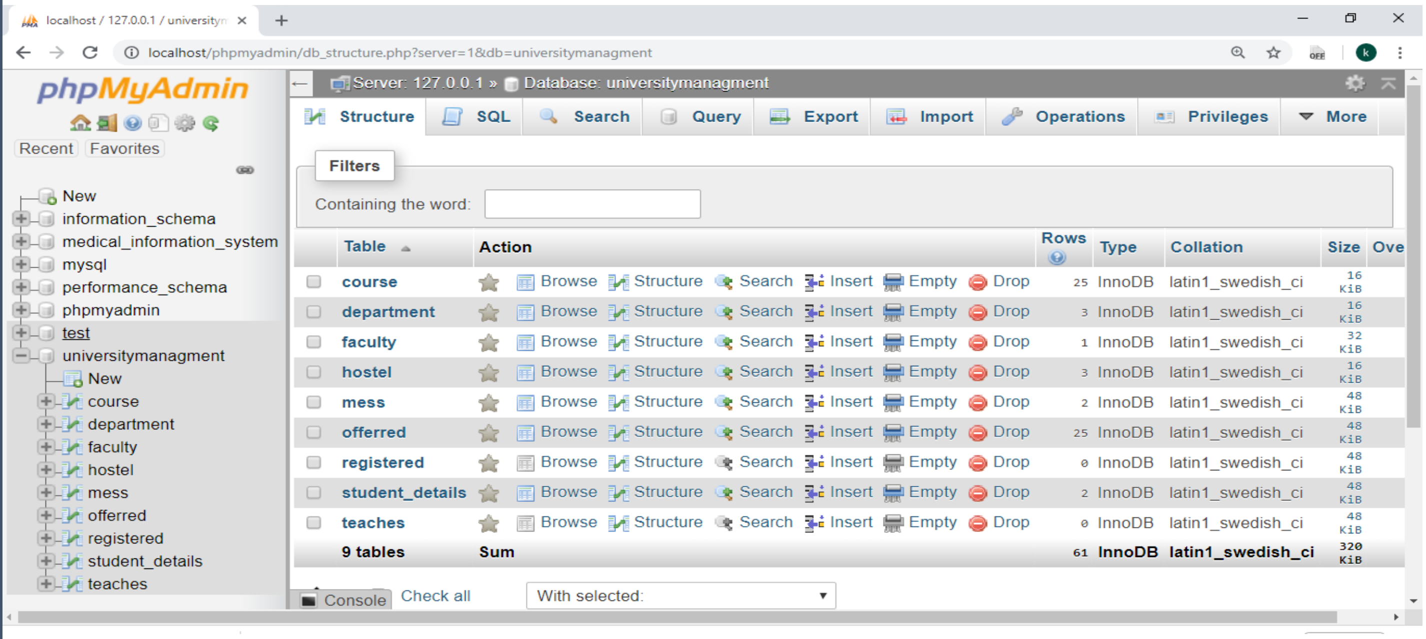
- Hashing is a one-way process
- A specific source password will always yield the same hash using the same algorithm, regardless of which system performs the hash (hash codes are persistent and portable).
- Minor changes to the source can result in a significantly different hash code.
- Hash codes are the same length regardless of the length of the source data we can hash a password, a sentence, an e-mail, or a whole file. The resulting hash codes will be the same length, and are guaranteed to be unique.

Advantages of Hashing

- Hashed passwords can’t be reversed, stolen, or compromised.
- There is no well-known encryption scheme or key that can be exploited.
- A hash code is useless so a stolen hash code can’t be used elsewhere.

Screenshots:

- **Database**


localhost/phpmyadmin/db_structure.php?server=1&db=universitymanagment

Server: 127.0.0.1 » Database: universitymanagment

Structure | SQL | Search | Query | Export | Import | Operations | Privileges | More

Filters

Containing the word:

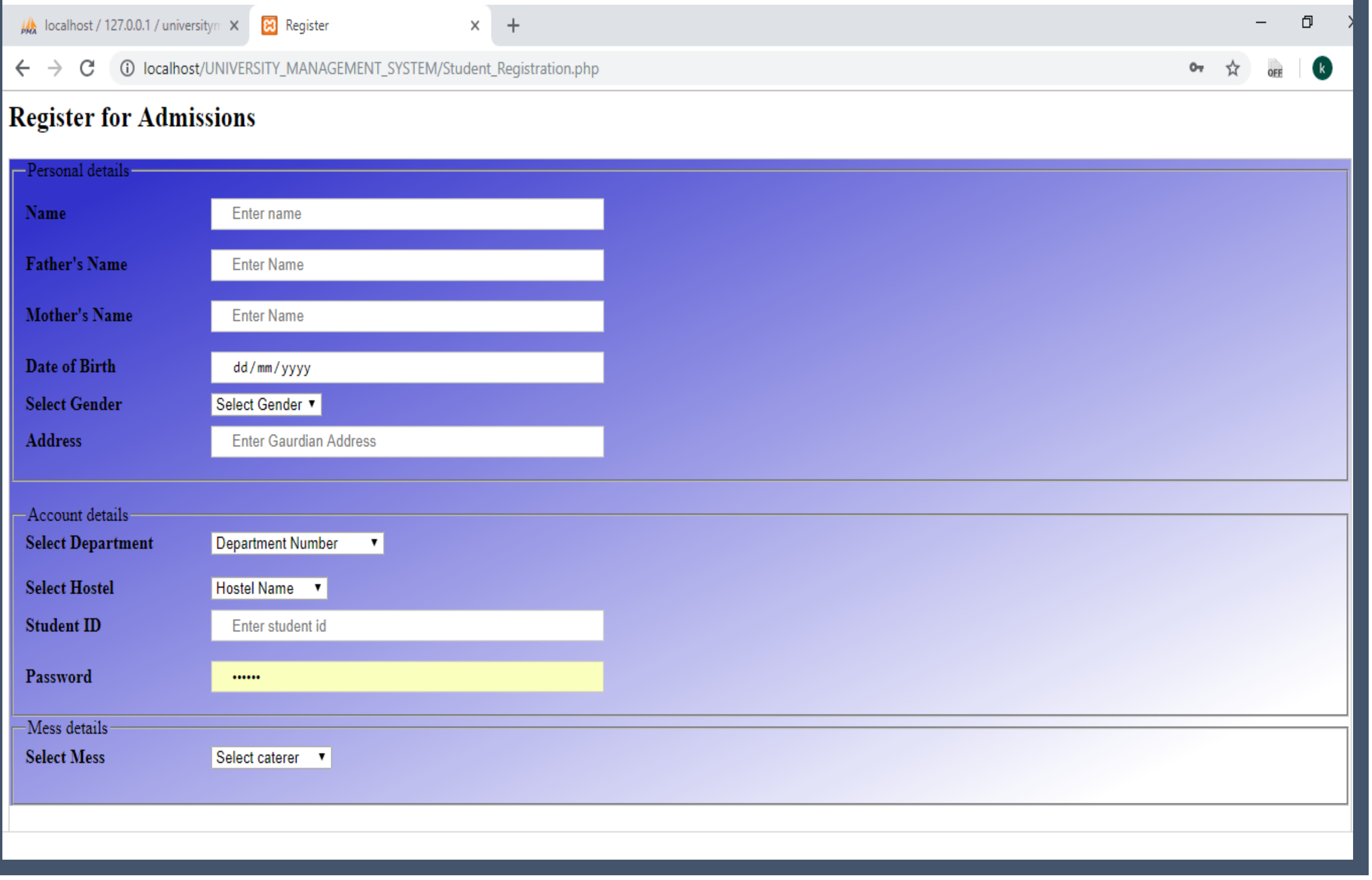
New
information_schema
medical_information_system
mysql
performance_schema
phpmyadmin
test
universitymanagment
- New
- course
- department
- faculty
- hostel
- mess
- offered
- registered
- student_details
- teaches

Table	Action							Rows	Type	Collation	Size
course	☆	Browse	Structure	Search	Insert	Empty	Drop	25	InnoDB	latin1_swedish_ci	16 KiB
department	☆	Browse	Structure	Search	Insert	Empty	Drop	3	InnoDB	latin1_swedish_ci	16 KiB
faculty	☆	Browse	Structure	Search	Insert	Empty	Drop	1	InnoDB	latin1_swedish_ci	32 KiB
hostel	☆	Browse	Structure	Search	Insert	Empty	Drop	3	InnoDB	latin1_swedish_ci	16 KiB
mess	☆	Browse	Structure	Search	Insert	Empty	Drop	2	InnoDB	latin1_swedish_ci	48 KiB
offerred	☆	Browse	Structure	Search	Insert	Empty	Drop	25	InnoDB	latin1_swedish_ci	48 KiB
registered	☆	Browse	Structure	Search	Insert	Empty	Drop	0	InnoDB	latin1_swedish_ci	48 KiB
student_details	☆	Browse	Structure	Search	Insert	Empty	Drop	2	InnoDB	latin1_swedish_ci	48 KiB
teaches	☆	Browse	Structure	Search	Insert	Empty	Drop	0	InnoDB	latin1_swedish_ci	48 KiB
9 tables	Sum							61	InnoDB	latin1_swedish_ci	320 KiB

Check all With selected:

- **Frontend:**

Student Registration Form


localhost/UNIVERSITY_MANAGEMENT_SYSTEM/Student_Registration.php

Register for Admissions

Personal details

Name	Enter name
Father's Name	Enter Name
Mother's Name	Enter Name
Date of Birth	dd/mm/yyyy
Select Gender	Select Gender
Address	Enter Gaurdian Address

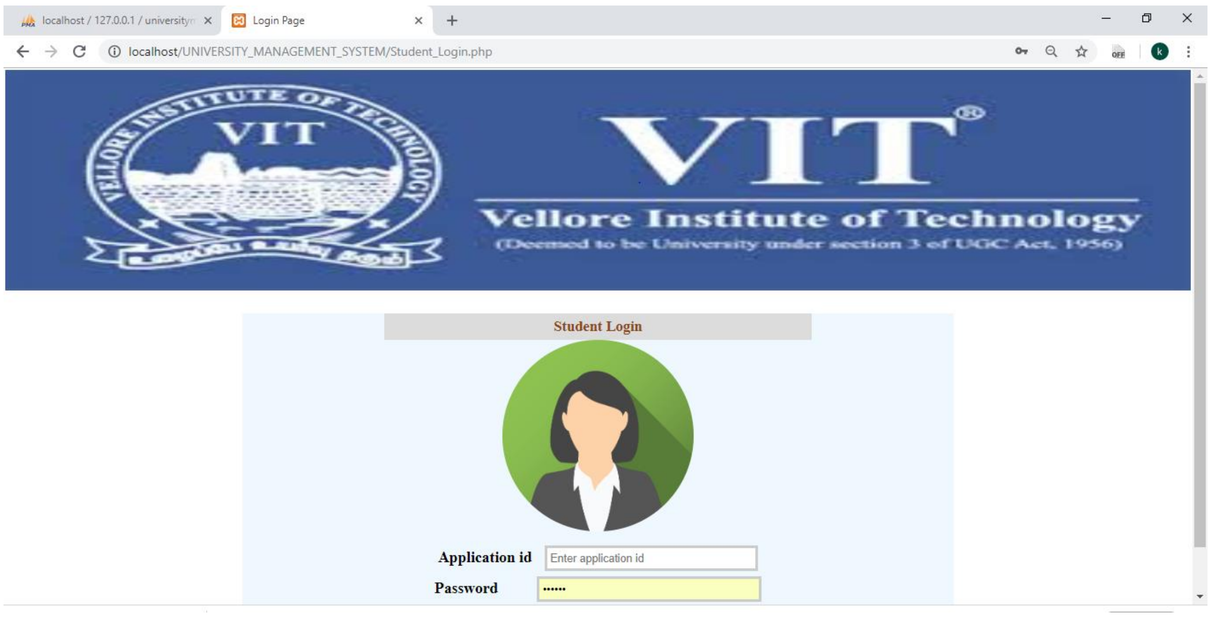
Account details

Select Department	Department Number
Select Hostel	Hostel Name
Student ID	Enter student id
Password	••••••

Mess details

Select Mess	Select caterer

Student Login Page



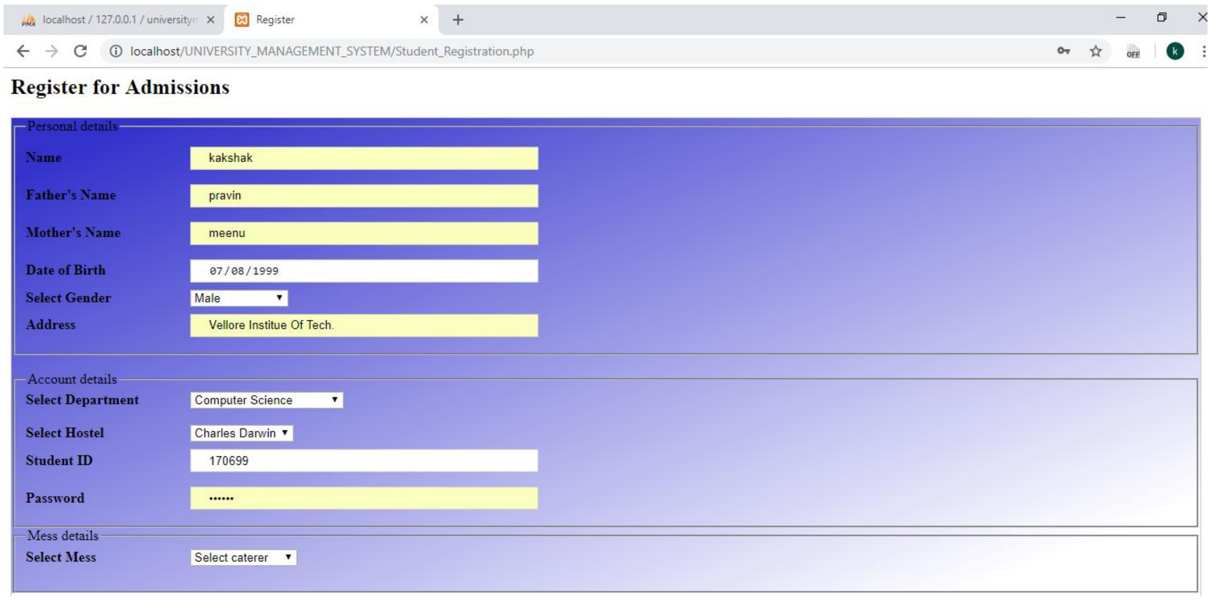
localhost/UNIVERSITY_MANAGEMENT_SYSTEM/Student_Login.php

VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Student Login

Application id	Enter application id
Password	••••••

Insertion



localhost/UNIVERSITY_MANAGEMENT_SYSTEM/Student_Registration.php

Register for Admissions

Personal details

Name	kakshak
Father's Name	pravin
Mother's Name	meenu
Date of Birth	07/08/1999
Select Gender	Male
Address	Vellore Institue Of Tech.

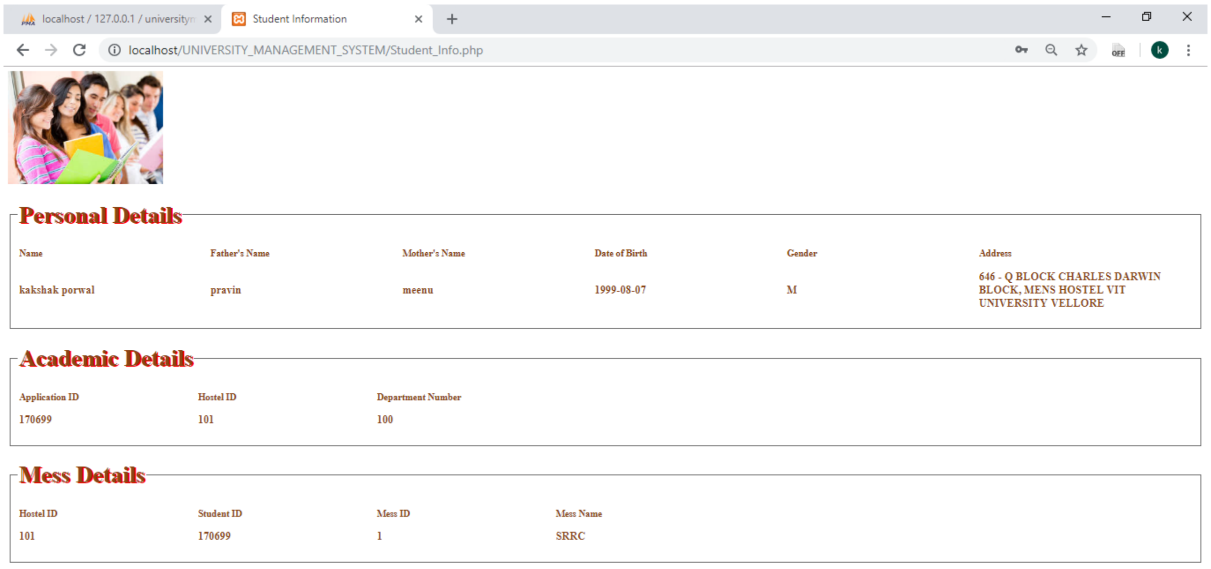
Account details

Select Department	Computer Science
Select Hostel	Charles Darwin
Student ID	170699
Password	••••••

Mess details

Select Mess	Select caterer

Display



localhost / 127.0.0.1 / university
Student Information
localhost/UNIVERSITY_MANAGEMENT_SYSTEM/Student_Info.php

Personal Details

Name	Father's Name	Mother's Name	Date of Birth	Gender	Address
kakshak porwal	pravin	meenu	1999-08-07	M	646 - Q BLOCK CHARLES DARWIN BLOCK, MENS HOSTEL VIT UNIVERSITY VELLORE

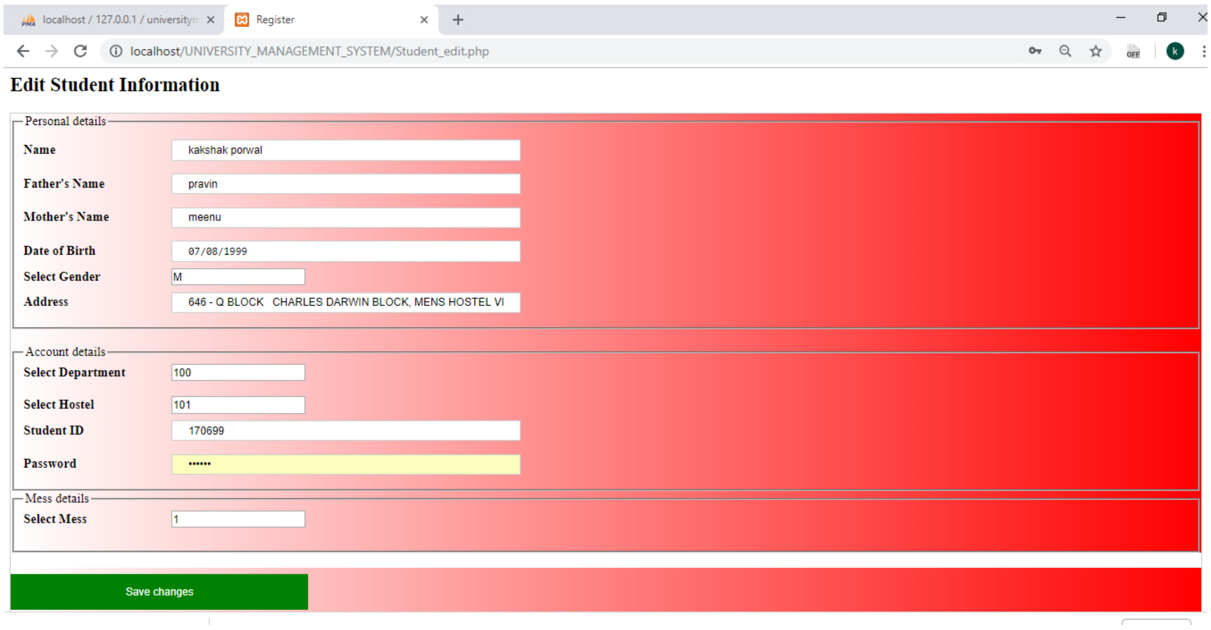
Academic Details

Application ID	Hostel ID	Department Number
170699	101	100

Mess Details

Hostel ID	Student ID	Mess ID	Mess Name
101	170699	1	SRRC

Edit



localhost / 127.0.0.1 / university
Register
localhost/UNIVERSITY_MANAGEMENT_SYSTEM/Student_edit.php
Save changes

Edit Student Information

Personal details

Name	kakshak porwal
Father's Name	pravin
Mother's Name	meenu
Date of Birth	07/08/1999
Select Gender	M
Address	646 - Q BLOCK CHARLES DARWIN BLOCK, MENS HOSTEL VI

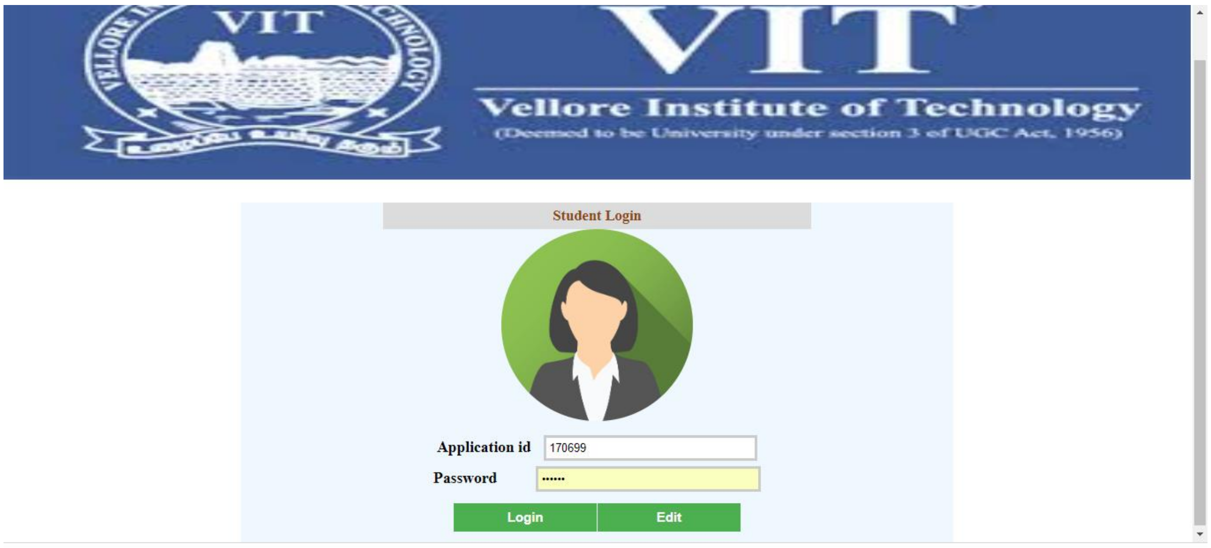
Account details

Select Department	100
Select Hostel	101
Student ID	170699
Password	••••••

Mess details

Select Mess	1

Faculty Login


VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

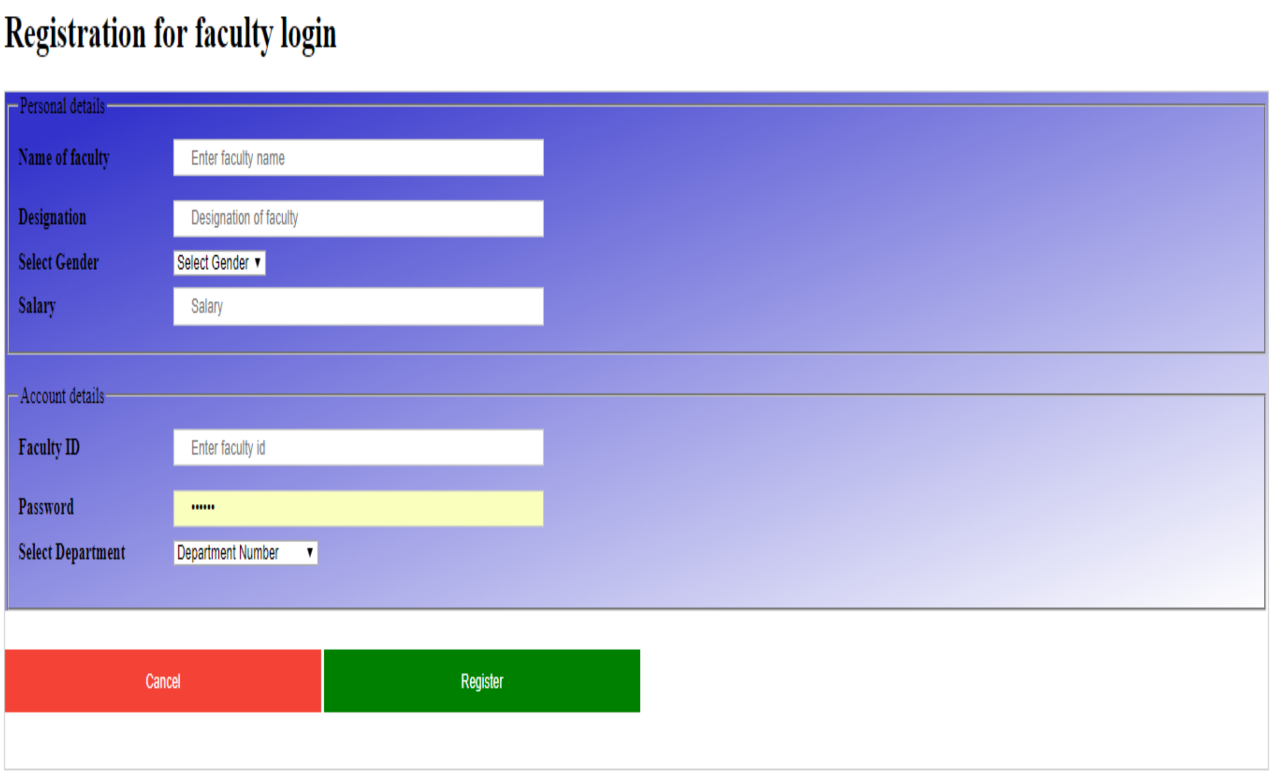
Student Login

Application id 170699

Password ••••••

Login Edit

Faculty Registration


Registration for faculty login

Personal details

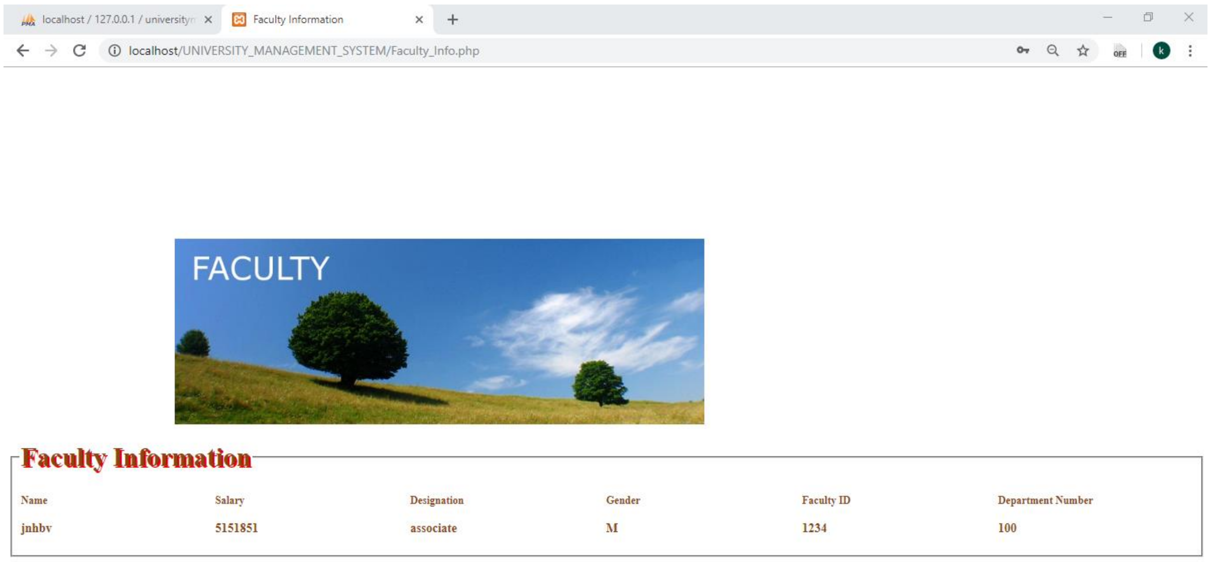
Name of faculty	Enter faculty name
Designation	Designation of faculty
Select Gender	Select Gender ▾
Salary	Salary

Account details

Faculty ID	Enter faculty id
Password	••••••
Select Department	Department Number ▾

Cancel Register

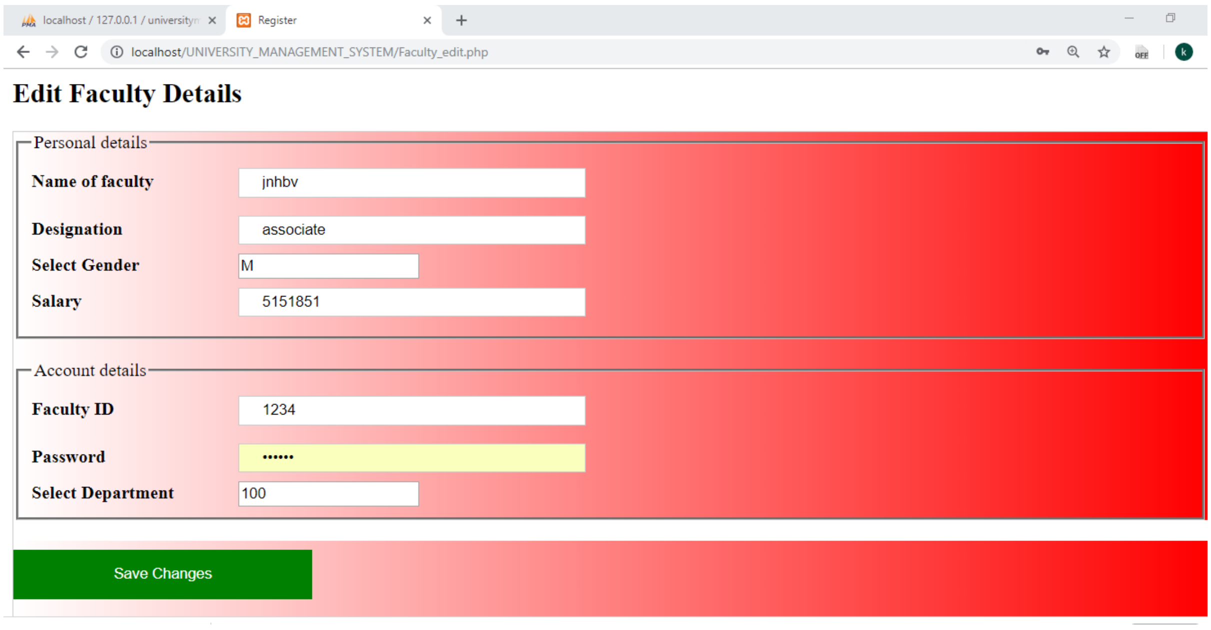
Faculty Display


localhost / 127.0.0.1 / university
Faculty Information
localhost/UNIVERSITY_MANAGEMENT_SYSTEM/Faculty_Info.php
FACULTY

Faculty Information

Name	Salary	Designation	Gender	Faculty ID	Department Number
jnhbv	5151851	associate	M	1234	100

Faculty Edit


localhost / 127.0.0.1 / university
Register
localhost/UNIVERSITY_MANAGEMENT_SYSTEM/Faculty_edit.php

Edit Faculty Details

Personal details

Name of faculty	jnhbv
Designation	associate
Select Gender	M
Salary	5151851

Account details

Faculty ID	1234
Password	••••••
Select Department	100

Conclusion

After applying university management system in HTML, CSS as front end and backend in PHP and database in MySQL. I was able to complete my project and it was helpful in designing and improving my knowledge and skills with further enhancement in web development. This project will be helpful and beneficial for the society and programmers for further enhancement.