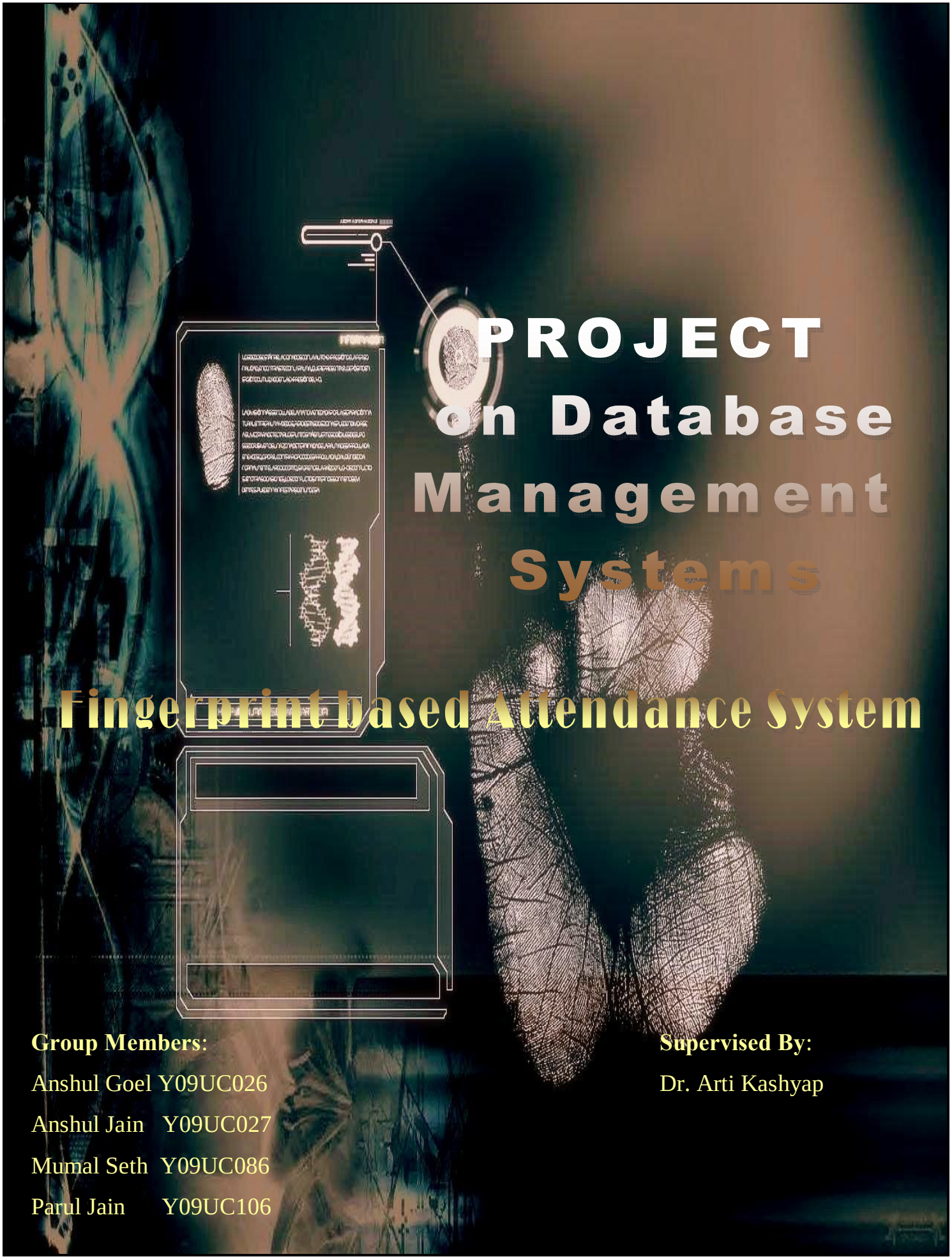

PROJECT on Database Management Systems

Fingerprint based Attendance System

Group Members:

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Mumal Seth Y09UC086

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Supervised By:

Dr. Arti Kashyap

Abstract:

In this project we have tried to use the knowledge that we gained in this course to make a Fingerprint based Attendance System. Although we had aimed to implement it using hardware but due to hardware constraints we have tried to implement it online. In this system the Faculty for a particular course switches ON the system and the system marks attendance for the students on the basis of their fingerprint. This system is hosted on http://172.22.29.117:8080/Attendance/.

Features:

This system apart from marking attendance also maintains the records of the students as well as the faculty members. We have tried to incorporate the following features:

- **Administrator**: For the modification of crucial information we have created an administrator account. The Administrator only has the privilege to add/remove courses, edit profiles of students and faculty members.
- **Login Page**: On this page the students and faculty members can log into their accounts and view their information.
- **Register Page**: For the students and faculty members who donôt have their accounts can create their accounts by clicking on REGISTER on the login page. The register page asks for data and creates a profile.
- **Timetable**: This page displays the schedule of all the courses.
- **Attendance**: On this page a list of the currently running courses and their respective faculty is displayed. There is a slot for the faculty fingerprint. Once the faculty fingerprint matches with anyone of the faculty member whose name is being displayed on the page the system automatically turns ON the database to be modified. Now the students are required to input their fingerprints and their attendance is marked.

Tools used:

- **Database Management System**: MySql
- **Server for hosting the project**: Apache Tomcat with port number 8080.
- **Programming scripts**: Java Server Pages, Javascript, HTML,CSS.

Relation to course:

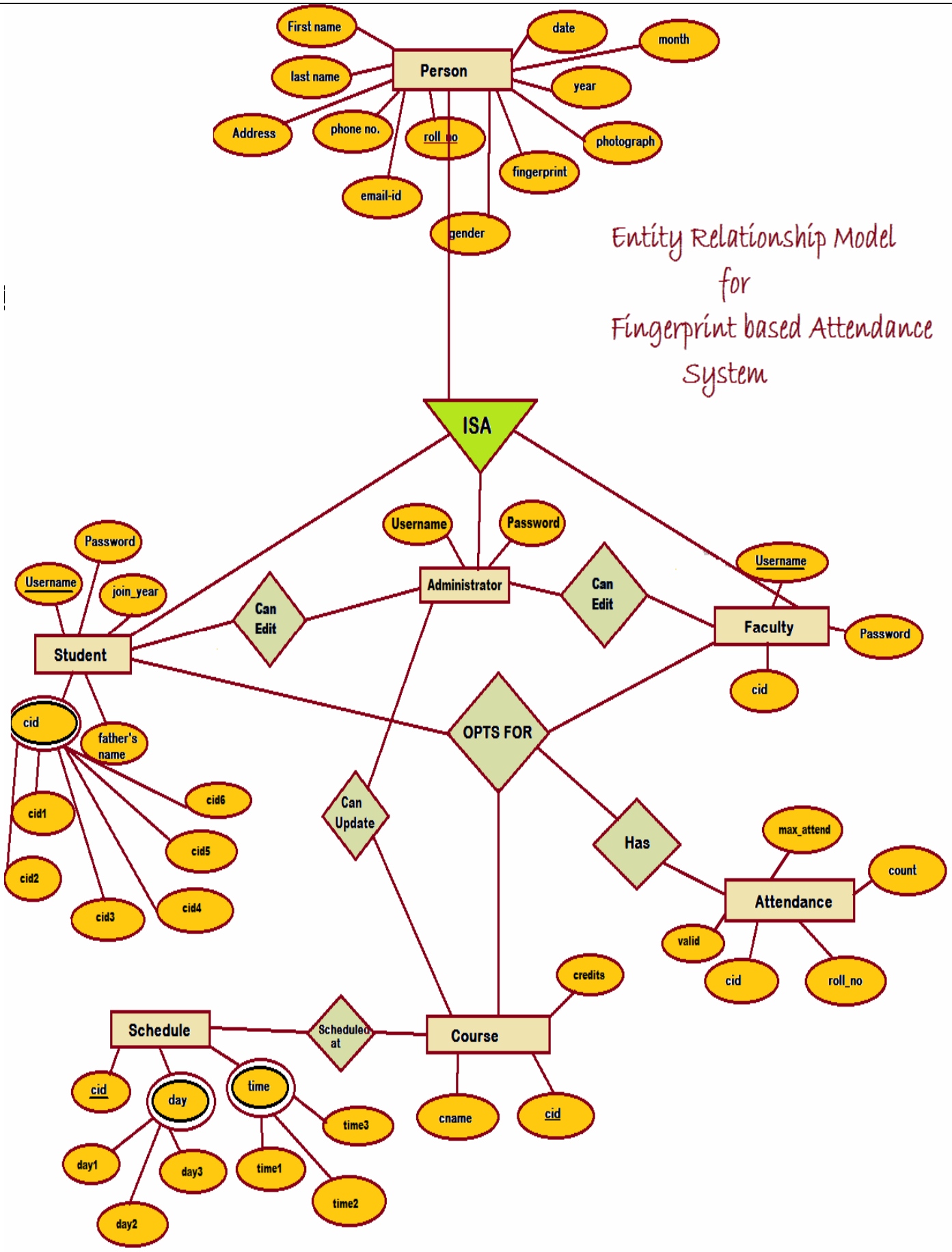
This whole project like many other projects has two ends. The Front end consisting of the GUI which has been made using our prior knowledge and the Back end consisting of database interaction which we have learnt in this course. We have tried to incorporate the following things that we have learnt in this course.

- ER Model: The basic thing that we did before starting off with the project was to make an ER Model and check the feasibility of the project. This helped us in enlisting the various aspects and classify them in entities and relations.
- MySql Queries: In this project we have tried to incorporate the different queries such as Insert, Create, Update, and Alter that we learnt in this course.
- Triggers: To let the student know about his short attendance we have tried to incorporate the concept of triggers.
- System Time: We have tried to fetch the systemôs current time and have used it to compare with the time of the lectures stored in the database.

Entity Relationship Model:

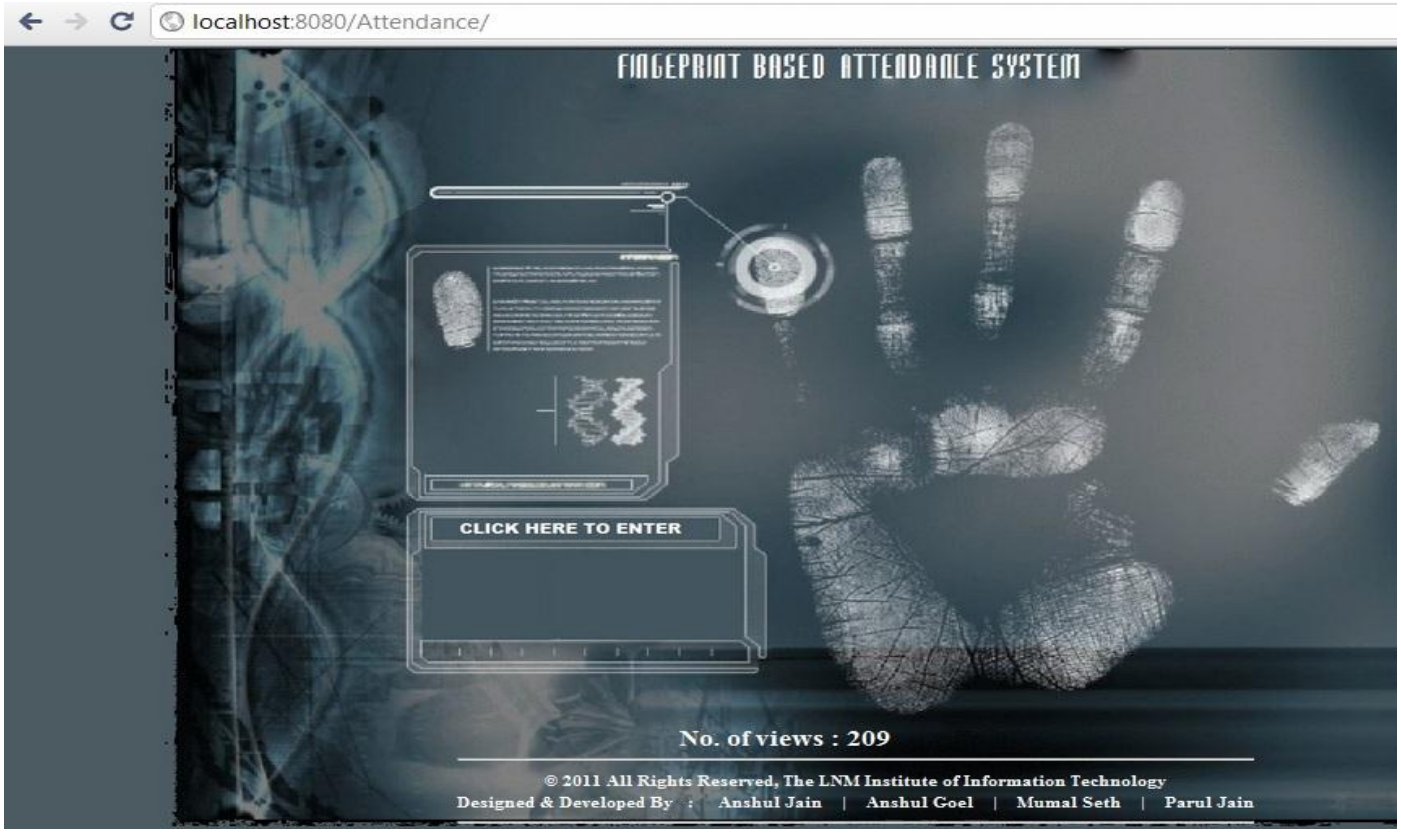
Entities and their attributes:

Person	Student	Faculty	Administrator	Attendance	Course	Schedule
First Name	Username	Username	Username	Cid	Cid	Cid
Last Name	Password	Password	Password	Roll No.	Cname	Day1
Roll No.	Join Year	Cid		Count	Credits	Day2
Address	Father's Name			Maximum Attendance		Day3
Phone No.	Cid1			Valid		Time1
Email-Id	Cid2					Time2
Gender	Cid3					Time3
Fingerprint	Cid4					
Photograph	Cid5					
Date	Cid6					
Month						
Year						

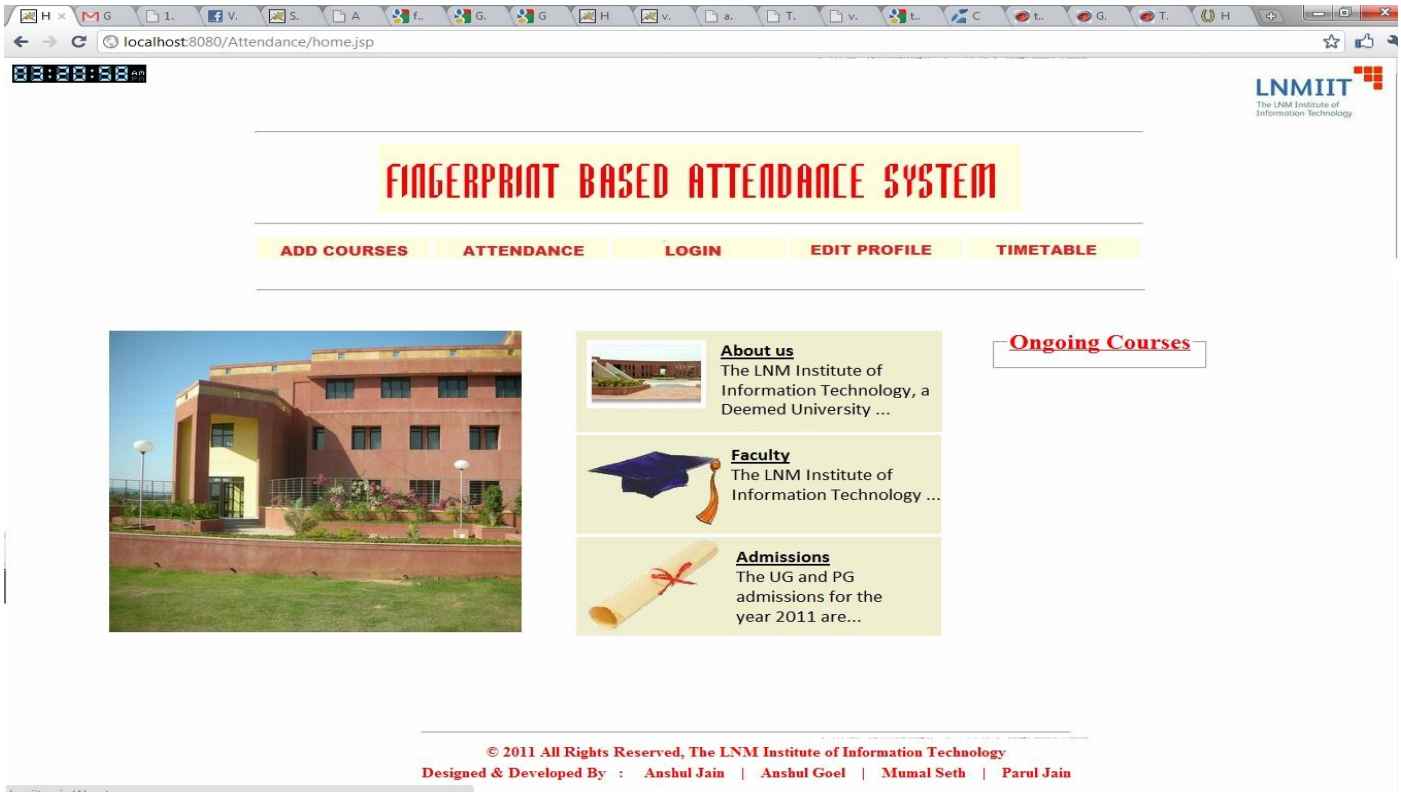

Entity Relationship Model
for
Fingerprint based Attendance
System
Person
First name
last name
Address
phone no.
roll_no
email-id
gender
fingerprint
photograph
year
month
date
ISA
Administrator
Username
Password
Can Edit
Can Edit
Student
Username
Password
join_year
cid
father's name
cid1
cid2
cid3
cid4
cid5
cid6
Faculty
Username
Password
cid
OPTS FOR
Can Update
Has
Attendance
max_attend
count
valid
cid
roll_no
Course
credits
cname
cid
Scheduled at
Schedule
cid
day
time
day1
day2
day3
time1
time2
time3

Snapshots:

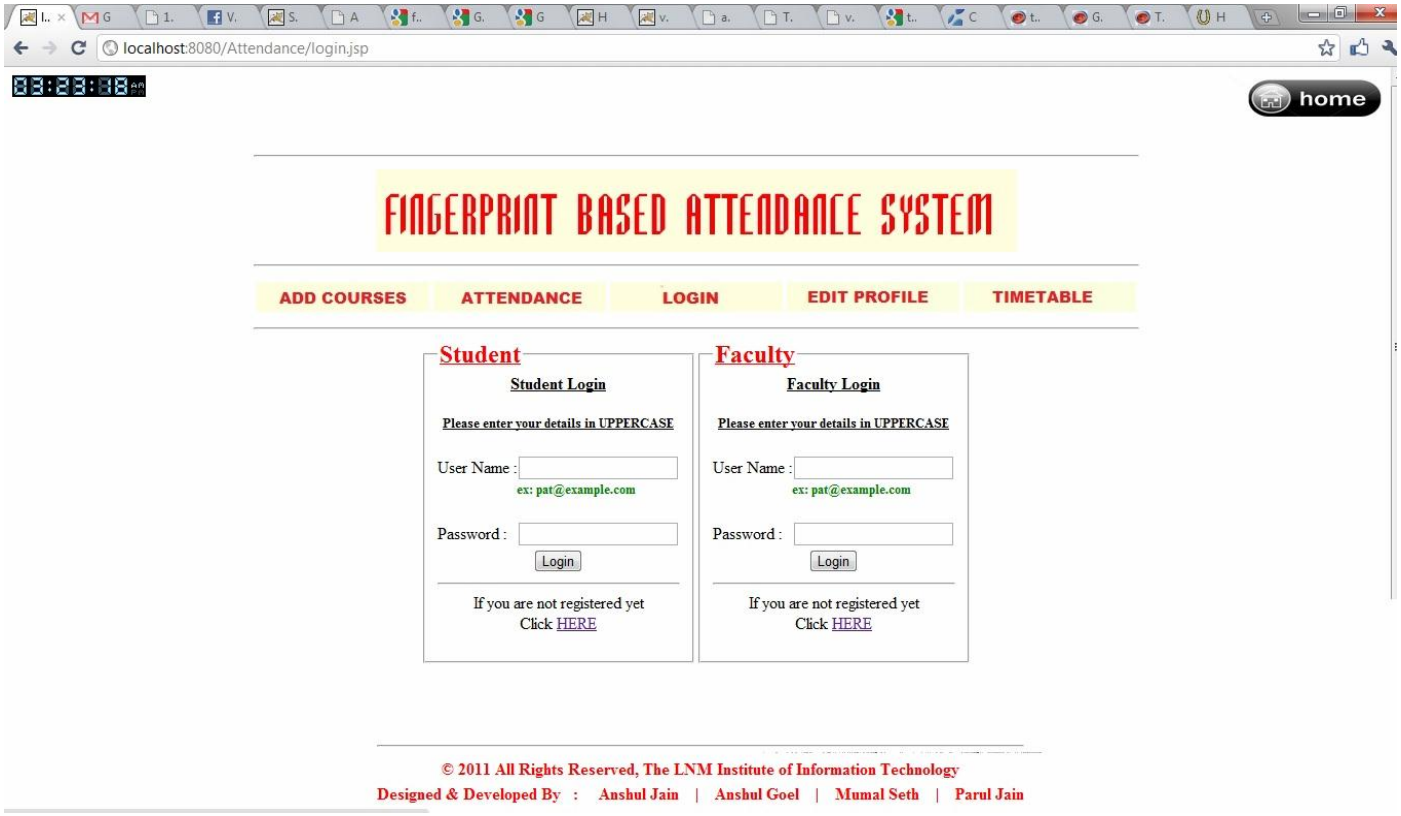
Main Page



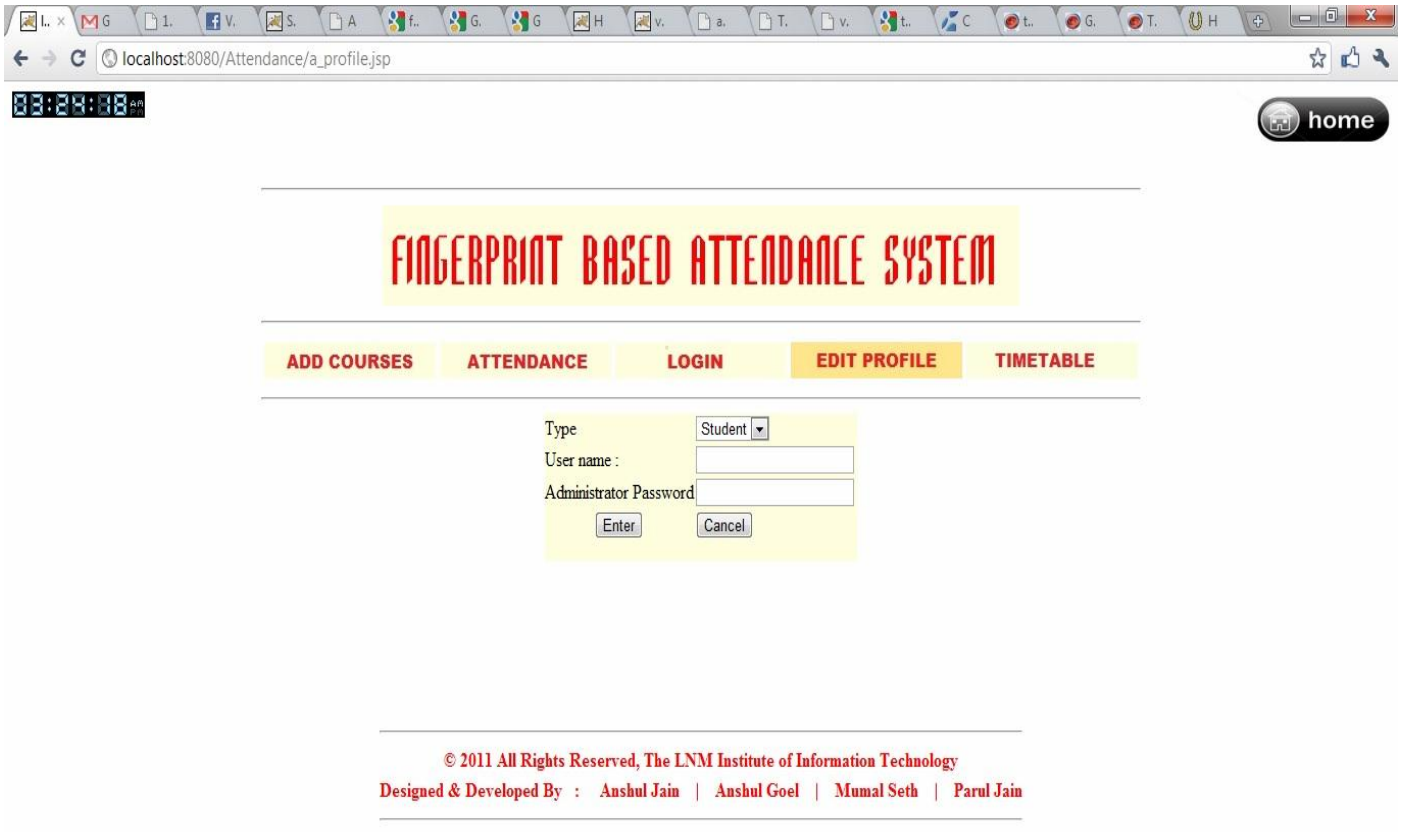
Home page



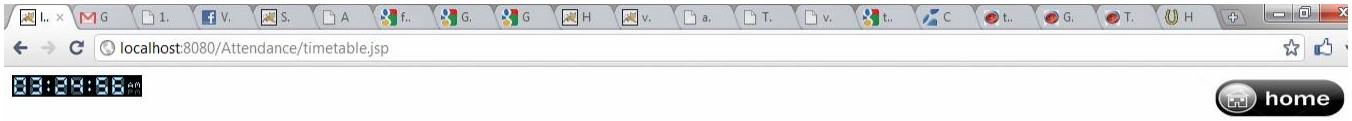
Login Page



Edit Page



Timetable Page



home

FINGERPRINT BASED ATTENDANCE SYSTEM

ADD COURSES | ATTENDANCE | LOGIN | EDIT PROFILE | TIMETABLE

Course name	Day1	Day2	Day3
Probability Theory and Stochastic Processes	Monday	Tuesday	Thursday
	09:30:00	09:30:00	09:30:00
Signals, Systems and Controls	Monday	Thursday	Wednesday
	08:30:00	11:30:00	09:30:00
Principles of Communication	Tuesday	Wednesday	Friday
	11.30.00	11.30.00	11.30.00
Computer Organization and Architechture	Monday	Wednesday	Friday
	10:30:00	10:30:00	09:30:00
Database Management Systems	Tuesday	Thursday	Friday
	10:30:00	10:30:00	10:30:00
Operating Systems	Monday	Wednesday	Friday
	11:30:00	08:30:00	08:30:00
Digital Circuits and Systems Lab	Monday	Tuesday	Wednesday
	13:30:00	13:30:00	13:30:00
ECE II Lab	Monday	Friday	Saturday
	10:30:00	10:30:00	10:30:00
Transducers and Instrumentation	Monday	Tuesday	Wednesday
	16:30:00	15:30:00	16:30:00
Making of Modern India	Tuesday	Thursday	Friday
	16:30:00	16:30:00	16:30:00
Human Values and Professional Ethics	Tuesday	Thursday	Friday
	16:30:00	16:30:00	16:30:00
VLSI Fabrication technology	Monday	Wednesday	Friday
	14:30:00	14:30:00	15:30:00
Physics of the Universe	Tuesday	Wednesday	Thursday
	14:30:00	15:30:00	14:30:00
Design of Algorithms	Monday	Tuesday	Wednesday
	12:30:00	12:30:00	12:30:00
Organizational Behaviour: Human Psychology at Work	Monday	Thursday	Friday
	15:30:00	15:30:00	14:30:00
Remote Sensing and GIS	Monday	Tuesday	Wednesday
	16:30:00	15:30:00	16:30:00
Selected Readings in Literature	Tuesday	Thursday	Friday
	16:30:00	16:30:00	16:30:00
Non Linear Dynamics and Chaos	Monday	Wednesday	Friday
	14:30:00	14:30:00	15:30:00

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Designed & Developed By : Anshul Jain | Anshul Goel | Mumal Seth | Parul Jain

Conclusion: While working on this project we brushed up the knowledge we gained in this course and the hardships and problems faced in implementing such a real time project helped us learn a lot.

We would like to thank Dr Arti Kashyap for her constant support and guidance.