



**MADRAS INSTITUTE OF TECHNOLOGY  
ANNA UNIVERSITY  
DEPARTMENT OF INFORMATION TECHNOLOGY**

**DATABASE MANAGEMENT SYSTEMS LABORATORY  
IT5312 REGULATION-2019**

**PROJECT TITLE** : TIME TABLE MANAGEMENT  
SYSTEM

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**DEPARTMENT** : DEPARTMENT OF  
INFORMATION TECHNOLOGY

**SUBJECT CODE** : IT5311

**SUBJECT TITLE** : DATABASE MANAGEMENT  
SYSTEMS LABORATORY

# **TIMETABLE MANAGEMENT SYSTEM**

## **PROBLEM STATEMENT:**

To develop a database regarding creation and maintenance of academic timetable for the individual semesters and also for the individual faculties automatically.

## **OBJECTIVES:**

The main objective of this project is to design a **Relational DBMS software** that Encloses the following object:

1. To reduce the manual work to generate the timetable for the institutions.
2. To increase the efficiency of managing the Timetable for the individual semesters and also for the individual faculties with clash.
3. To manage the details of the Timetable, Faculty, Room, Semester, Subject.
4. To monitor the information and transaction of the Semester, Lecture rooms and faculties availability.
5. To improve the searching facilities based on various factors such as timetable, room, semester, faculty.
6. To edit, add and update and delete the records to improve the results of the database.

## **INPUT / OUTPUT DATA:**

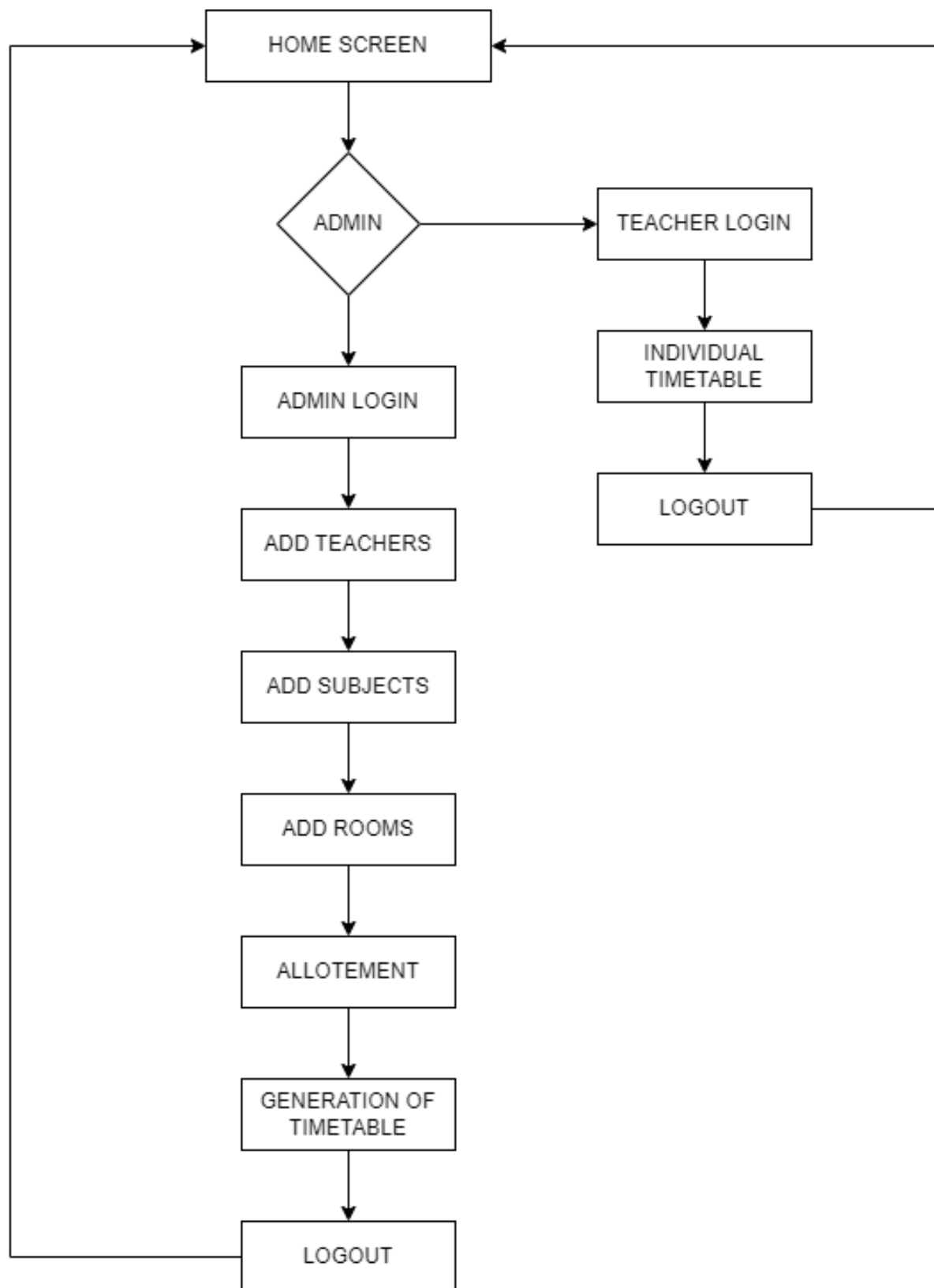
The Timetable Management Database requires the following input data:

- Teachers Information
- Subject Information
- Classrooms Information

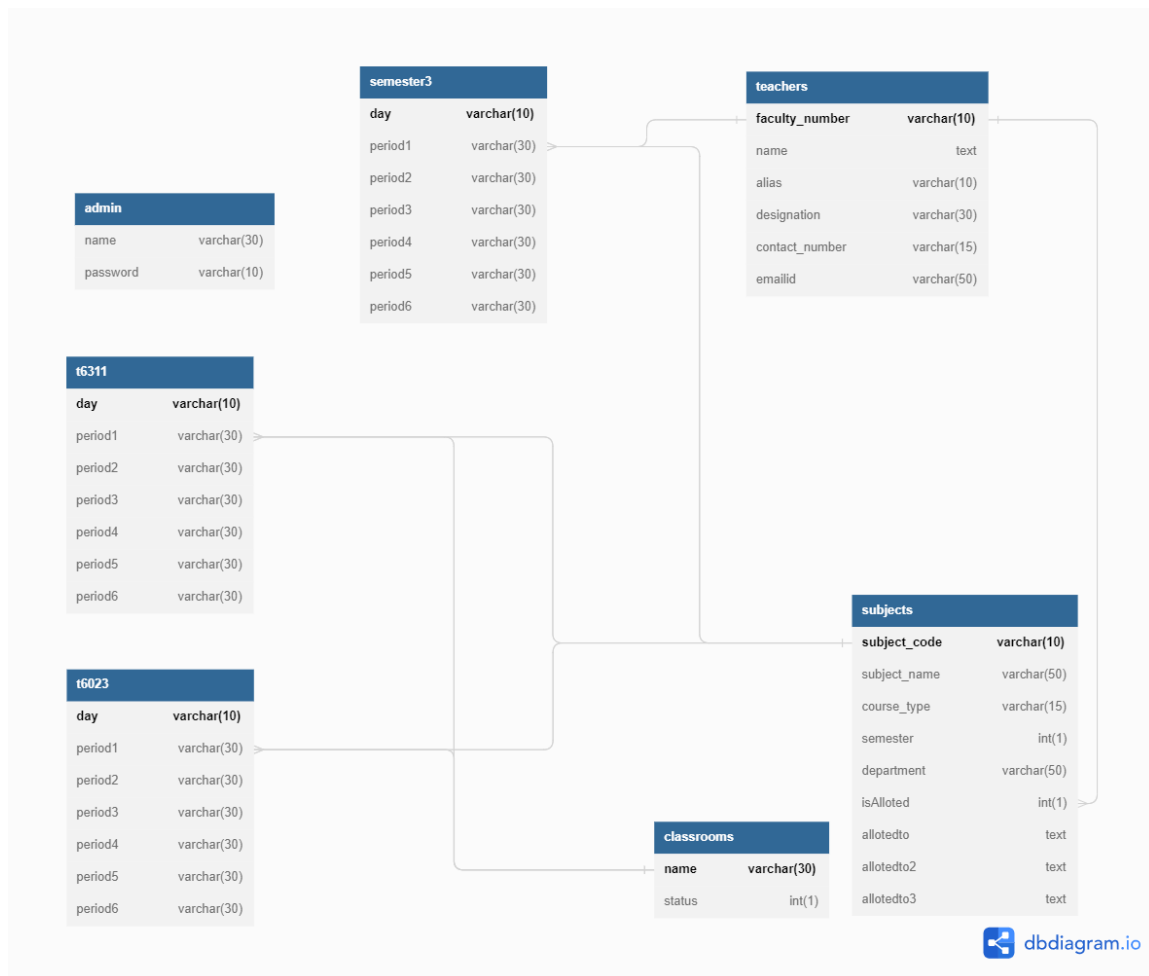
The Timetable Management Database generates the following output data:

- Timetable for the individual semester
- Timetable for the individual faculty

### PROCESS FLOW DIAGRAM:



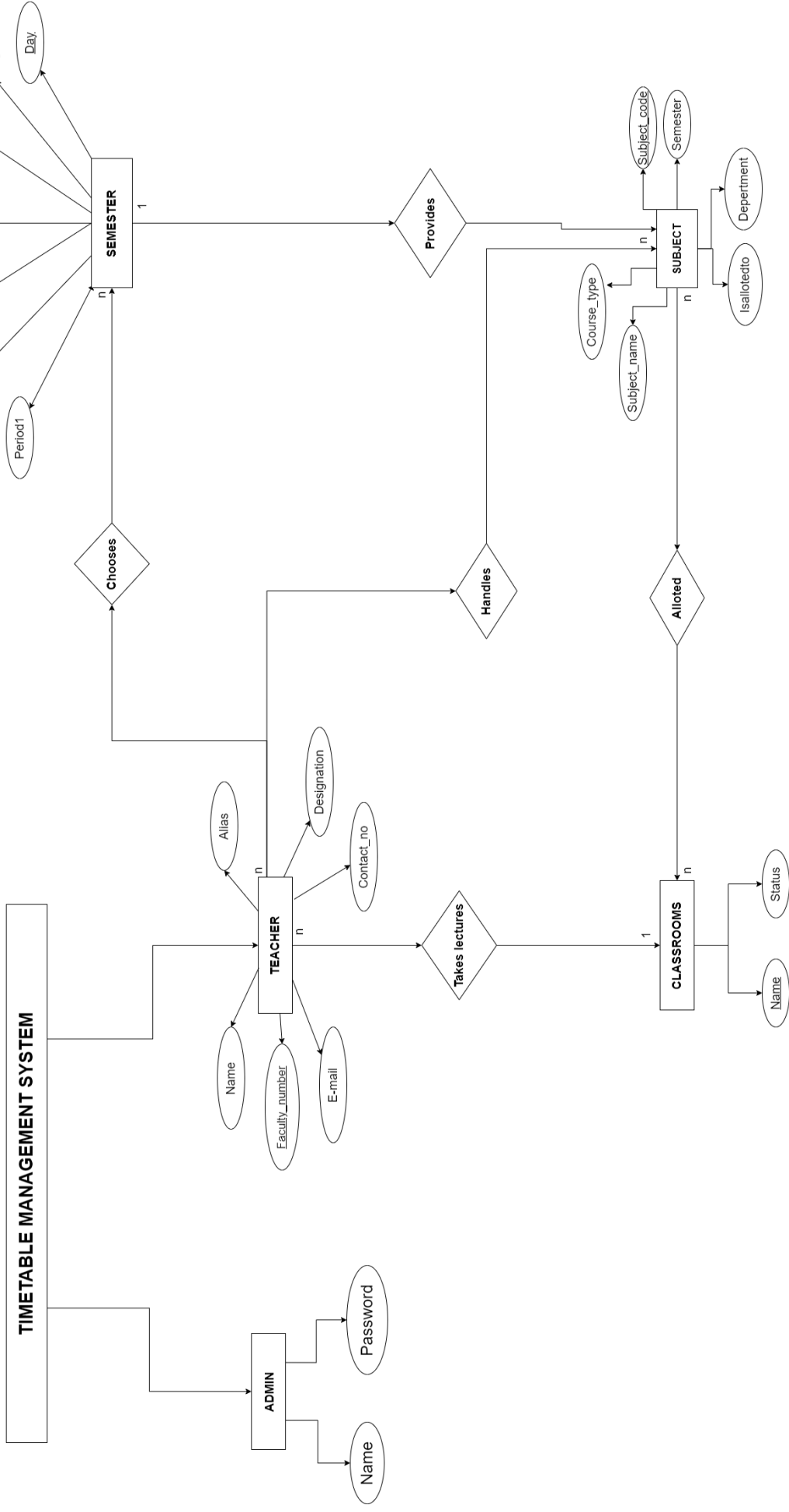
## DATABASE SCHEMA:



## PROGRAMMING LANGUAGES USED:

1. My-SQL
2. PHP- SERVER SCRIPTING
3. WEB PAGE DESIGNING:
  1. HTML
  2. CSS
  3. JAVA SCRIPT

## ER DIAGRAM:



## PROJECT OUTCOME:

### USER INTERFACE DESIGN:

The UI for the database is designed using web development tools such as HTML5, CSS, Bootstrap. Java script is used for form validation and PHP-MySQL Connectivity is used to connect the database at the backend to the frontend.

### FUNCTIONALITIES OUTPUT SCREENSHOTS WITH THE DESCRIPTIONS:

#### HOMEPAGE:

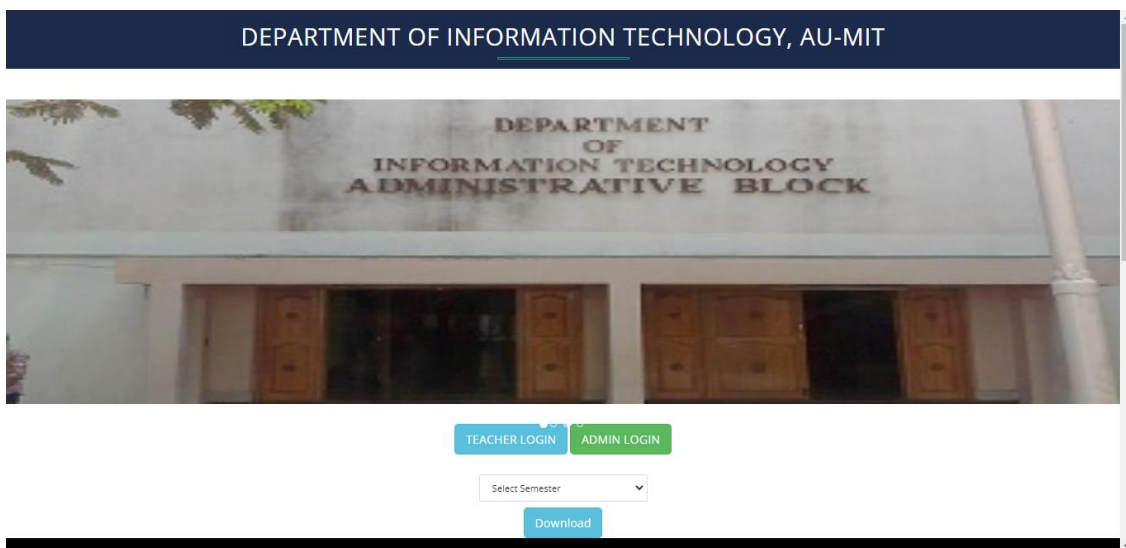


Fig 1.A Homepage

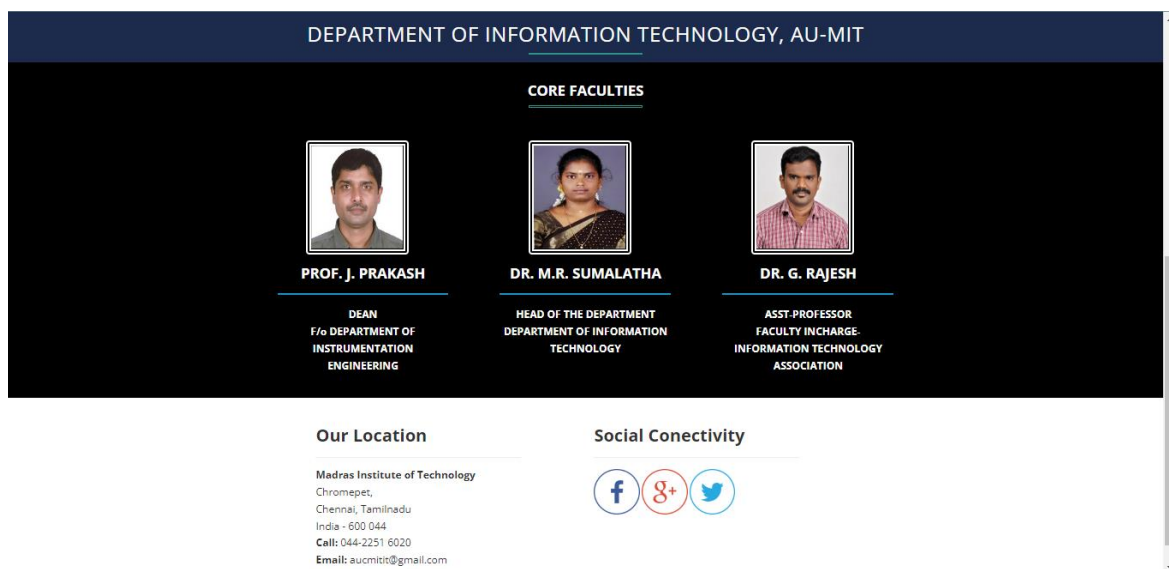


Fig 1.B Homepage

The homepage consists for the basic information of the department such as Some snaps of the department, The details of the core faculties of the department, Location of the department and the social connectivity details.

Also the home page asks for the admin and the teacher login. By clicking the admin button it asks for the username and the password and redirects to the page after the successful login. The same process follows for the teacher login.

Also it asks for choosing the semester and we can download the selected semester timetable by clicking the download button only after selecting the semester.

#### **CLICKING ADMIN LOGIN:**

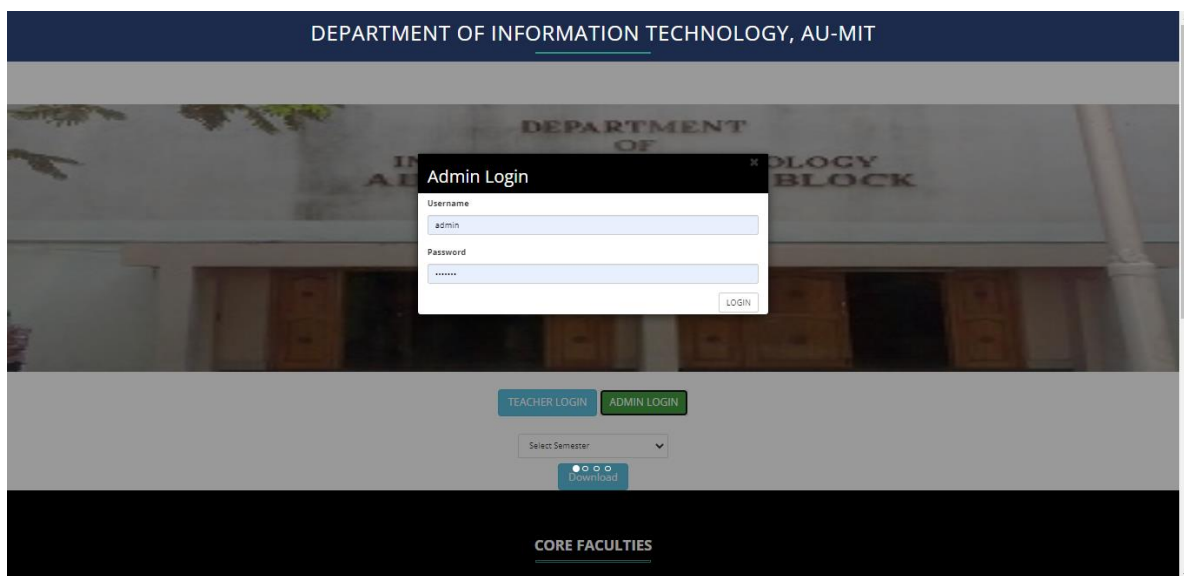


Fig 1C Homepage – Admin login Page

This admin login asks for the Username and the password. After the successful login it redirects to the admin page, where we can access and manage all the records.

#### **AFTER LOGGING IN:**

The admin page contains the navigation bar which consists of the add teacher, add subject, add classrooms, allotment, generate timetable and the logout. The following screenshots provides the details of all the individual buttons:

#### **TEACHERS DETAILS:**

This provides the details of the teachers. Also it provides the add teacher option by clicking that we can add the new teacher to the database. Also by clicking the Import Excel button the teachers details will be downloaded as the excel sheet.

ADD TEACHERS
ADD SUBJECTS
ADD CLASSROOMS
ALLOTMENT
GENERATE TIMETABLE
LOGOUT

Choose File
No file chosen
IMPORT EXCEL
ADD TEACHER

Teacher's Information

Faculty No	Name	Alias	Designation	Contact No.	Email ID	Action
15023	Dr. G. Rajesh	Rajesh	Assistant Professor	9789765453	drrajesh@gmail.com	Delete
15311	Dr. Radha Senthil Kumar	RSK	Associate Professor	9843009902	rskmt@gmail.com	Delete
15352	Dr. Sangeetha	Sangeetha	Assistant Professor	9944607618	drsangeetha@gmail.com	Delete
15464	Dr. D. Vivekanandan	Vivek	Teaching Fellow	9867452310	vivekd@gmail.com	Delete
15465	Mr. V. Arulalan	Arulalan	Teaching Fellow	9843200989	arulalan@gmail.com	Delete
15467	Dr. Sunil Retmin Raj	Sunil	Teaching Fellow	9944653423	sunilmt@gmail.com	Delete
15468	Ms. P. Jayanthi	PJ	Teaching Fellow	9867564532	jayanthi@gmail.com	Delete
15480	Ms. P. Seethalakshmi	PS	Teaching Fellow	9944607618	seetha@gmail.com	Delete

Fig 2A Admin page – Add teacher option

## ADDING THE TEACHER:

ADD TEACHERS
ADD SUBJECTS
ADD CLASSROOMS
ALLOTMENT
GENERATE TIMETABLE
LOGOUT

Choose File
No file chosen

Add Teacher

Teacher's Name  
Dr. Sangeetha

Faculty No  
T6352

Alias  
sangeetha

Designation  
Assistant Professor

Contact No.  
9944607618

Email-ID  
drsangeetha@gmail.com

ADD

Faculty No	Name	Email ID	Action
15023	Dr. G. Rajesh	drrajesh@gmail.com	Delete
15311	Dr. Radha Senthil Kumar	rskmt@gmail.com	Delete
15464	Dr. D. Vivekanandan	vivekd@gmail.com	Delete
15465	Mr. V. Arulalan	arulalan@gmail.com	Delete
15467	Dr. Sunil Retmin Raj	sunilmt@gmail.com	Delete
15468	Ms. P. Jayanthi	jayanthi@gmail.com	Delete
15480	Ms. P. Seethalakshmi	seetha@gmail.com	Delete

## AFTER CLICKING THE ADD:

After entering all the details, by clicking the add button the teacher get added to the database.

T6352	Dr. Sangeetha	sangeetha	Assistant Professor	9944607618	drsangeetha@gmail.com	Delete
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Fig 2C Admin page – Add Teachers

Successfully the teacher got added.

## SUBJECT DETAILS:

This provides the details of the subjects . Also it provides the add subject option by clicking that we can add the new subject to the database. Also by clicking the Import Excel button the subject details will be downloaded as the excel sheet.



ADD TEACHERS
ADD SUBJECTS
ADD CLASSROOMS
ALLOTMENT
GENERATE TIMETABLE
LOGOUT

Choose File
No file chosen
IMPORT EXCEL
ADD SUBJECT

Subject's Information

Code	Title	Course Type	Semester	Department	Action
IT301	Database Management System	THEORY	3	IT	Delete
IT302	Database Management System - Laboratory	LAB	3	IT	Delete
IT303	Programming and Data Structures	THEORY	3	IT	Delete
IT304	Programming and Data Structures Laboratory	LAB	3	IT	Delete
IT305	Software Engineering	THEORY	3	IT	Delete
IT306	Digital Logic and Design	THEORY	3	IT	Delete

Fig 2D Admin Page – Add Subjects

ADDING THE SUBJECT:

ADD TEACHERS
ADD SUBJECTS
ADD CLASSROOMS
ALLOTMENT
GENERATE TIMETABLE
LOGOUT

Choose File
No file chosen
IMPORT EXCEL
ADD SUBJECT

Code
Title
Course Type
Semester
Department
Action

IT302
Database Management System - Laboratory
LAB
3
IT
Delete

IT303
Programming and Data Structures
THEORY
3
IT
Delete

IT304
Programming and Data Structures Laboratory
LAB
3
IT
Delete

IT305
Software Engineering
THEORY
3
IT
Delete

IT306
Digital Logic and Design
THEORY
3
IT
Delete

Add Subject
Subject Name
Database Management System
Subject Code
IT301
Course Type
THEORY
Semester
3
Department
IT
ADD

Fig 2E Admin Page – Add Subjects

This pages asks for the subjects details. Subject details such as subject name, Subject code, course type, semester, department.

AFTER CLICKING THE ADD:

After entering all the details, by clicking the add button the subject get added to the database.

Code	Title	Course Type	Semester	Department	Action
IT301	Database Management System	THEORY	3	IT	Delete

Fig 2F Admin Page – Add Subjects

Successfully the subject got added.

## CLASSROOM DETAILS:

This provides the details of the classrooms. Also it provides the add classroom option by clicking that we can add the new classroom to the database.

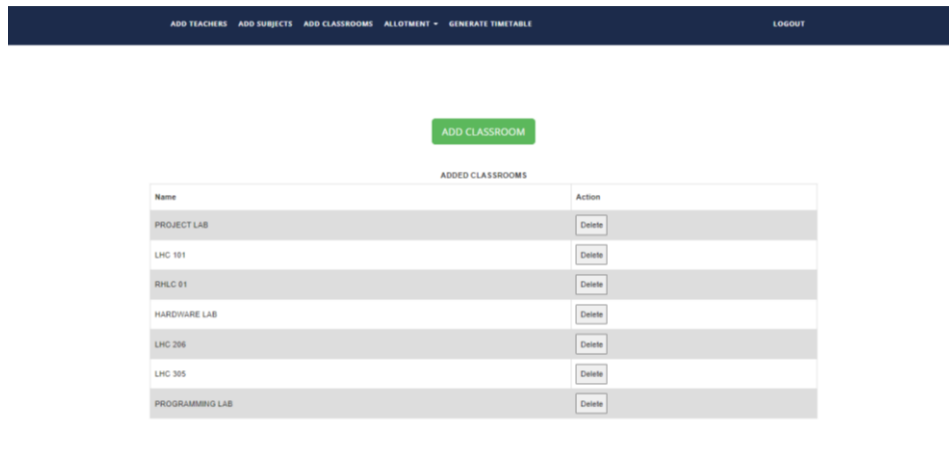


Fig 2G Admin Page – Add classrooms

## ADDING THE CLASSROOM:

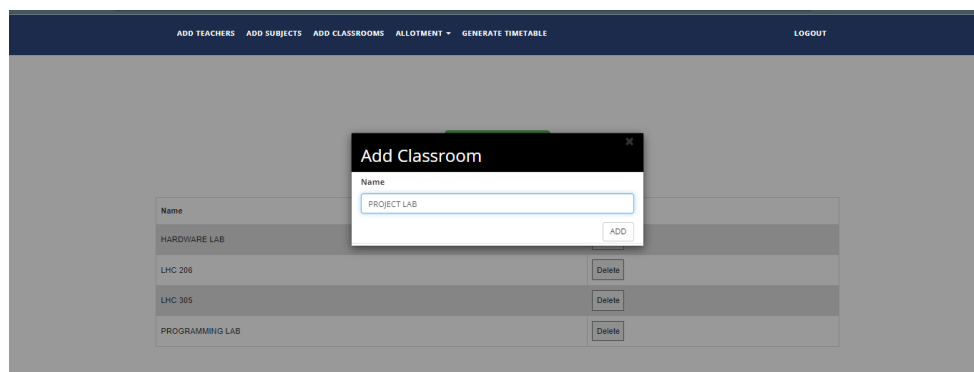


Fig 2H Admin Page – Add Classrooms

This pages asks for the subjects details such as the Classroom Name.

## AFTER ADDING THE CLASS ROOM:

After entering all the details, by clicking the add button the subject get added to the database.

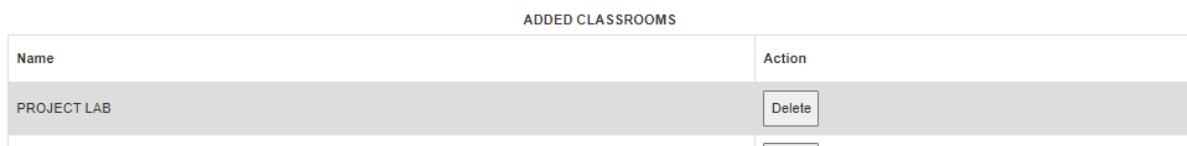


Fig 2I Admin Page – Add Classrooms

Successfully the new classroom got entered.

## ALLOTING THE TEACHERS FOR THE SUBJECTS:

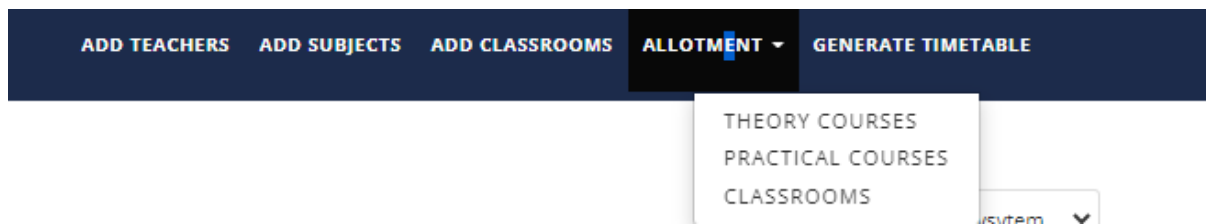


Fig 2J Admin Page: Allotment of the Subjects

THEORY COURSES – TO ADD TEACHERS TAKING THEORY CLASSES.

PRACTICAL COURSES – TO ADD TEACHERS TAKING LAB CLASSES.

CLASSROOMS – TO ALLOT CLASSROOM FOR THE CLASSES.

## ALOTTING THE THEORY SUBJECT TO THE APPROPRIATE STAFF:

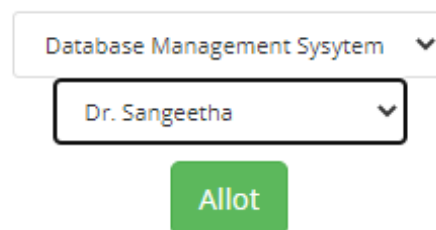


Fig 2K Admin Page: Allotment - Theory Subjects

## AFTER CLICKING ALLOT:

This page allows the allotment of the subject to the teachers. By selecting the teacher and adding the subject the selected teacher will be allotted to the opted subject. This is for the theory subjects.

ADD TEACHERS
ADD SUBJECTS
ADD CLASSROOMS
ALLOTMENT
GENERATE TIMETABLE
LOGOUT

Select Subject
Select Teacher
Allot

THEORY COURSES ALLOTMENT

Subject Code	Subject Title	Faculty No	Teacher's Name	Action
IT306	Digital Logic and Design	t6467	Dr. Sunil Retmin Raj	Delete
IT305	Software Engineering	t6023	Dr. G. Rajesh	Delete
IT303	Programming and Data Structures	t6311	Dr. Radha Senthil Kumar	Delete
IT301	Database Management System	T6352	Dr. Sangeetha	Delete

Fig 2L Admin Page: Allotment- Theory Subjects

Successfully the selected subject is allotted for the selected staff.

### ALLOTING THE PRACTICAL COURSES:

This page allows the allotment of the subject to the teachers. By selecting the teacher and adding the subject the selected teacher will be allotted to the opted subject. This is for the practical subjects.

ADD TEACHERS
ADD SUBJECTS
ADD CLASSROOMS
ALLOTMENT
GENERATE TIMETABLE
LOGOUT

Select Subject
Select Teacher
Select Teacher
Select Teacher
Allot

PRACTICAL COURSES ALLOTMENT

Subject Code	Subject Title	Faculty No	Teacher's Name	Faculty No	Teacher's Name	Faculty No	Teacher's Name	Action
IT304	Programming and Data Structures Laboratory	t6311	Dr. Radha Senthil Kumar	t6468	Ms. P. Jayanthi	t6465	Mr. V. Arulalan	Delete
IT302	Database Management System - Laboratory	t6464	Dr. D. Vivekanandan	t6352	Dr. Sangeetha	t6480	Ms. P. Seethalakshmi	Delete

Fig 2M Admin Page: Allotment – Practical Subjects

### ALLOTING THE CLASSROOMS:

This page allows to select the classroom for the respective courses entered.

ADD TEACHERS
ADD SUBJECTS
ADD CLASSROOMS
ALLOTMENT
GENERATE TIMETABLE
LOGOUT

Select Course
Select Classroom
Allot

CLASSROOMS ALLOTMENT		
Classroom	Alloted To	Action
HARDWARE LAB	B.Tech 2nd Year	Delete
LHC 206	B.Tech 2nd Year	Delete
LHC 305	B.Tech 2nd Year	Delete
PROGRAMMING LAB	B.Tech 2nd Year	Delete

Fig 2N Admin Page: Allotment – Classrooms

**AFTER THE ALLOTMENT OF ALL THE SUBJECTS TO THE APPROPRIATE TEACHERS WITH CLASSROOMS:**

**GENRATION OF THE TIMETABLE PAGE:**

This page generates the timetable. By selecting the semester and clicking the generate button we can get the timetable for the entered semester.

ADD TEACHERS
ADD SUBJECTS
ADD CLASSROOMS
ALLOTMENT
GENERATE TIMETABLE
LOGOUT

GENERATE
Select Teacher
VIEW TIMETABLE
Select Semester
VIEW TIMETABLE

WEEKDAYS	8:00-8:50	8:55-9:45	9:50-10:40	10:45-11:35	11:40-12:30	12:30-1:30	1:30-4:00
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Fig 2O Admin Page- Generate Timetable

To generate the Timetable the following process should be done:

**AFTER CLICKING THE GENERATE BUTTON TIME TABLE GETS GENERATED:**

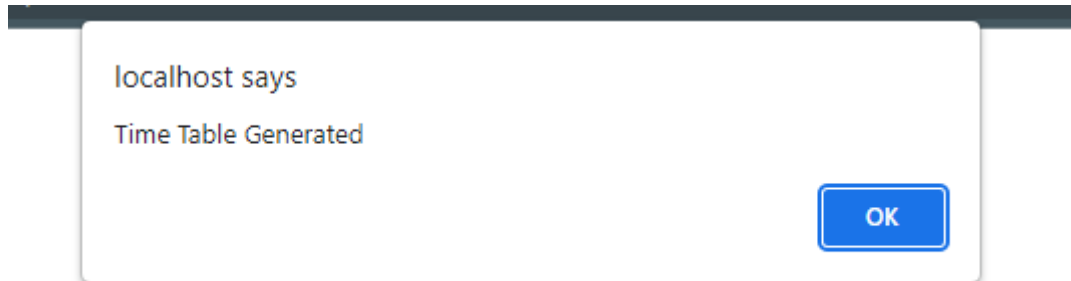


Fig 2P Admin Page – Generate Timetable

Successfully the time had been generated.

**AFTER THE SUCCESSFUL GENERATION OF THE TIMETABLE:**

**WE CAN GET THE TIMETABLE OF INDIVIDUAL STAFF BY CHOOSING THE STAFF:**

ADD TEACHERS   ADD SUBJECTS   ADD CLASSROOMS   ALLOTMENT   GENERATE TIMETABLE   LOGOUT							
Dr. Sangeetha							
WEEKDAYS	8:00-8:50	8:55-9:45	9:50-10:40	10:45-11:35	11:40-12:30	12:30-1:30	1:30-4:00
MONDAY	-	-	IT 301 PROJECT LAB	-	-	LUNCH	-
TUESDAY	-	-	-	-	-	LUNCH	-
WEDNESDAY	-	IT 301 PROJECT LAB	-	-	-	LUNCH	-
THURSDAY	IT 301 PROJECT LAB	-	-	-	-	LUNCH	-
FRIDAY	-	IT 301 PROJECT LAB	-	-	-	LUNCH	-
SATURDAY	-	-	-	-	-	LUNCH	-

IT 301: Database Management System

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Fig 2Q Admin page – Generate Timetable

## CHOOSING THE TIMETABLE FOR THE PARTICULAR SEMESTER:

BTECH., INFORMATION TECHNOLOGY SEMESTER 3 ( PROJECT LAB )							
WEEKDAYS	8:00-8:50	8:55-9:45	9:50-10:40	10:45-11:35	11:40-12:30	12:30-1:30	1:30-4:00
MONDAY	IT306 Sunil	IT303 RSK	- -	- -	- -	LUNCH	IT304 RSK, PJ, Arulalan
TUESDAY	IT305 Rajesh	IT 301 sangeetha	IT306 Sunil	- -	- -	LUNCH	IT302 Vivek, sangeetha, PS
WEDNESDAY	IT303 RSK	IT306 Sunil	IT305 Rajesh	- -	- -	LUNCH	IT304 RSK, PJ, Arulalan
THURSDAY	IT 301 sangeetha	IT305 Rajesh	IT303 RSK	- -	- -	LUNCH	IT302 Vivek, sangeetha, PS
FRIDAY	IT306 Sunil	IT303 RSK	IT 301 sangeetha	- -	- -	LUNCH	- -
SATURDAY	IT305 Rajesh	IT 301 sangeetha	- -	- -	- -	LUNCH	- -

Fig 2R Admin Page – Generate Timetable

IT306: Digital Logic and Design, Sunil: Dr. Sunil Retmin Raj  
 IT305: Software Engineering, Rajesh: Dr. G. Rajesh  
 IT304: Programming and Data Structures Laboratory, RSK: Dr. Radha Senthil Kumar , PJ: Ms. P. Jayanthi, Arulalan: Mr. V. Arulalan  
 IT303: Programming and Data Structures, RSK: Dr. Radha Senthil Kumar  
 IT302: Database Management System - Laboratory , Vivek: Dr. D. Vivekanandan , sangeetha: Dr. Sangeetha, PS: Ms. P. Seethalakshmi  
 IT 301: Database Management System, sangeetha: Dr. Sangeetha

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Thus the timetable generation has been successfully completed by the process.

## AFTER LOGGING OUT OF THE ADMIN:

DEPARTMENT OF INFORMATION TECHNOLOGY, AU-MIT

DEPARTMENT  
OF  
INFORMATION TECHNOLOGY  
ADMINISTRATIVE BLOCK

TEACHER LOGIN
ADMIN LOGIN

Select Semester

Download

Fig 3A Home Page

## NOW LOGGING TO THE TEACHER LOGIN:


DEPARTMENT OF INFORMATION TECHNOLOGY, AU-MIT

Faculty Login

Faculty No.  
Faculty No. .... LOGIN

Select Semester  
Download

CORE FACULTIES



## ENTERING THE FACULTY ID:

We can get the faculty with her details.

Hello Ms. P. Seethalakshmi LOGOUT

Ms. P. Seethalakshmi

WEEKDAYS	8:00-8:50	8:55-9:45	9:50-10:40	10:45-11:35	11:40-12:30	12:30-1:30	1:30-4:00
MONDAY	-	-	-	-	-	LUNCH	-
TUESDAY	-	-	-	-	-	LUNCH	-
WEDNESDAY	-	-	-	-	-	LUNCH	-
THURSDAY	-	-	-	-	-	LUNCH	-
FRIDAY	-	-	-	-	-	LUNCH	-
SATURDAY	-	-	-	-	-	LUNCH	-

IT302: Database Management System - Laboratory

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After logging out of the teacher login:

DEPARTMENT OF INFORMATION TECHNOLOGY, AU-MIT

DEPARTMENT OF INFORMATION TECHNOLOGY ADMINISTRATIVE BLOCK

TEACHER LOGIN
ADMIN LOGIN

Select Semester

Download

ALSO WE CAN DOWNLOAD THE TIMETABLE OF THE PARTICULAR SEMESTER WITH THE OPTION GIVEN IN THE HOME PAGE:

BTECH INFORMATION TECHNOLOGY - SEMESTER 3 ( PROJECT LAB )							
WEEKDAYS	8:00-8:50	8:55-9:45	9:50-10:40	10:45-11:35	11:40-12:30	12:30-1:30	1:30-4:00
MONDAY	IT308 Sunil	IT303 RSK	-	-	-	LUNCH	IT304 RSK, P.J, Anulalan
TUESDAY	IT305 Rajesh	IT 301 sangeetha	IT306 Sunil	-	-	LUNCH	IT302 Vivek, sangeetha, PS
WEDNESDAY	IT303 RSK	IT306 Sunil	IT305 Rajesh	-	-	LUNCH	IT304 RSK, P.J, Anulalan
THURSDAY	IT 301 sangeetha	IT305 Rajesh	IT303 RSK	-	-	LUNCH	IT302 Vivek, sangeetha, PS
FRIDAY	IT306 Sunil	IT303 RSK	IT 301 sangeetha	-	-	LUNCH	-
SATURDAY	IT305 Rajesh	IT 301 sangeetha	-	-	-	LUNCH	-

IT305: Digital Logic and Design Sunil; Dr. Sunil Ratnin Raj  
IT305: Software Engineering Rajesh; Dr. G. Rajesh  
IT304: Programming and Data Structures Laboratory RSK; Dr. Radha Senthil Kumar , P.J; Ms. P. Jayanthi, Anulalan; Mr. V. Anulalan  
IT303: Programming and Data Structures RSK; Dr. Radha Senthil Kumar  
IT302: Database Management System - Laboratory Vivek; Dr. D. Vivekanandan , sangeetha; Dr. Sangeetha, PS; Ms. P. Seethalakshmi  
IT 301: Database Management System sangeetha; Dr. Sangeetha

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## RESULT:

Thus the total working of the project has been explained above. Thus the timetable has been successfully generated.