



Classroom Booking System

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Implementation Details

Implementation included Creation of the SQL Database, GUI of the project and coding of all the Java classes and Action events for the GUI.

Database Creation using input csv file

Creation of Static GUI Components

Creating all Java classes that were decided in UML and designing methods to fetch data from database to make the GUI interactive

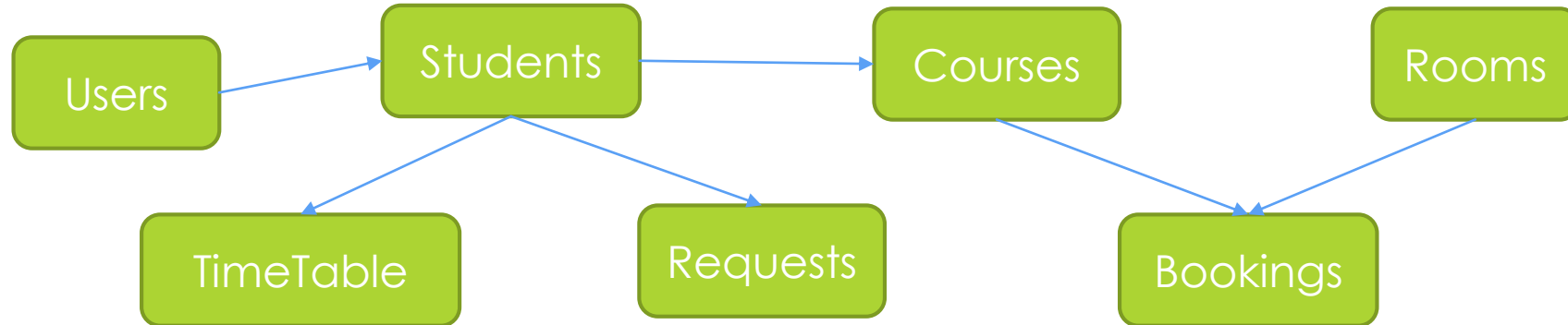
Putting it all together and Debugging

Some design patterns used were :

- **Singleton Design Pattern** : So that only one instance of a particular user is created after login.
- **Strategy Design Pattern** : Since this application involved a lot of inheritance, and a few functionalities, like 'View Room Bookings', were common to all users.
- **Chain Of Responsibility** Design Pattern : Functions call other functions to complete the responsibility on them.
- **Proxy Design Pattern** : used to query the database without modifying it.

Obstacles Encountered

- Database designing was the most important aspect of our project and it's schema is given below :



- We also encountered a few problems in logic during testing of our application.

Work Distribution

Pragya Prakash

- ▶ Designing of structure of Database
- ▶ Complete GUI Designing of all Faculty pages, all Admin pages
- ▶ Complete coding of User, Course, Request, TimeTable, Student, StudentPage java classes

Tanya Raj

- ▶ Making of csv File
- ▶ Complete GUI Design of Login Page, Signup Page, all Student pages
- ▶ Complete coding of Admin, Faculty, AdminPage, FacultyPage, Bookings, Classroom, Login java classes

Above shown is the broad distribution of work, however most of it is a result of collective effort.

Bonus Aspects

- ▶ Admin has a “**Manage Rooms**” page too, where he can check the details of any classroom and update them. Also, the admin has the functionality to Add a new room, (say a new building has been made and now more new rooms are available) and also Delete some room, (say, if some room is to be made unavailable).
- ▶ Moreover, a Student has an added functionality of **Dropping a selected course**, provided it is not a Mandatory course for his/her ongoing semester.