Carnegie Mellon University

All Available

Presenter:
Vijay Vamsavardhana

Product Description

Introduction: Motivation

- One student on campus tries to find quiet study room and a seat in it to study alone
- A group of students may want to find a conference room to discuss about team project
- Faculties may want to book a room for their guests to give tech talk.
- ...

Possible Customer for our App

Students

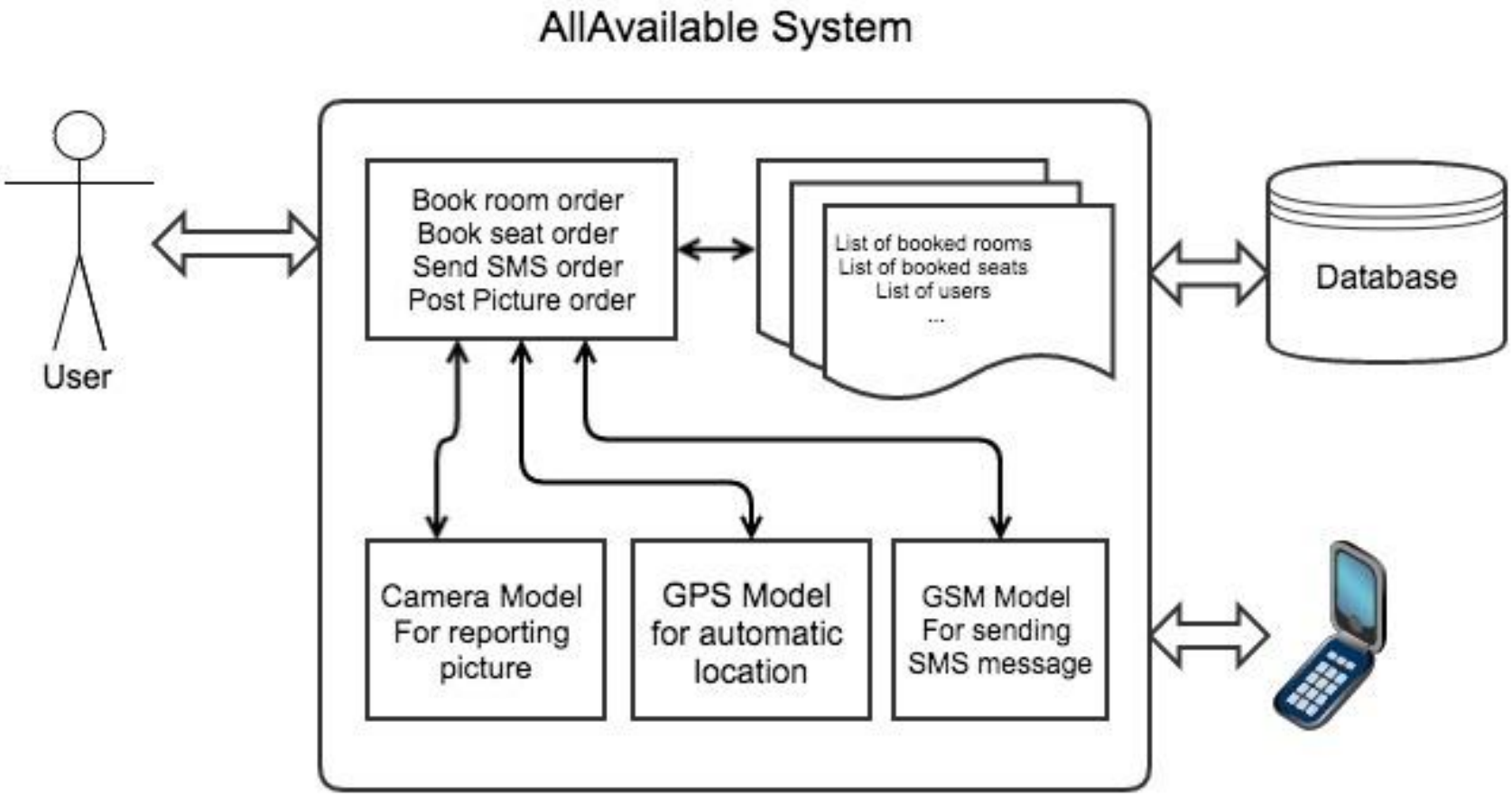
Teachers

Guest lecturers

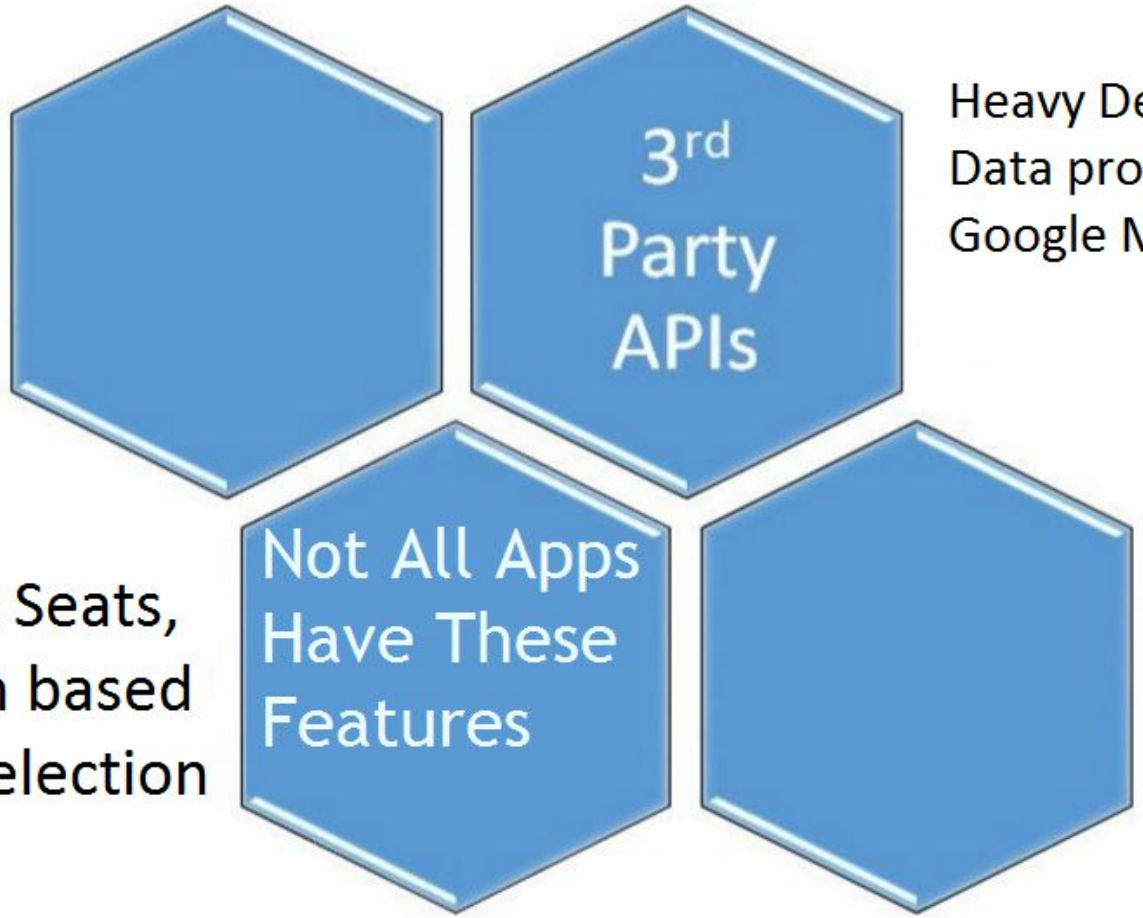
Introduction: All-Available

- All-available is an app which is used by the students, faculty members and all the guests that are visiting a particular university.
- It is used for booking rooms and seats across all the buildings belonging to the university.
- It serves as an alternative to the existing system that allows us to book rooms at Carnegie Mellon University Silicon Valley.
- The main idea behind it is to check if there are rooms and seats available for the students/faculties or not.

- Overview: Project architecture



Risk



Heavy Dependence on Data provided by Google Maps API

Booking Seats, Location based Room Selection etc.

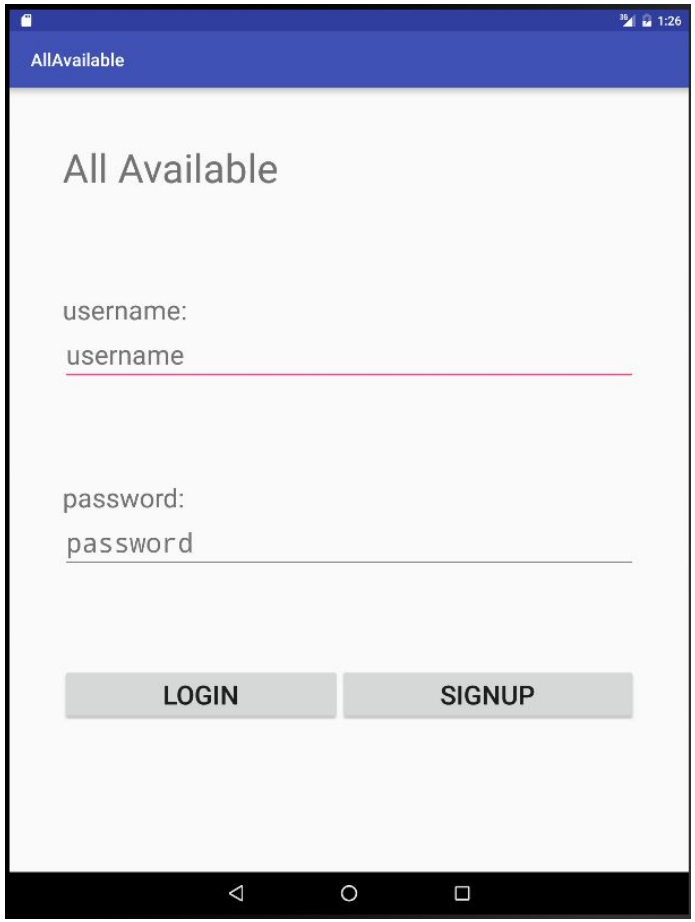
Product Walk Through

Use case 1- Login and Signup

There are two choices for each user:

- If you are a new user, you should signup first.
- If you are an old user, you should login.

First page of the app



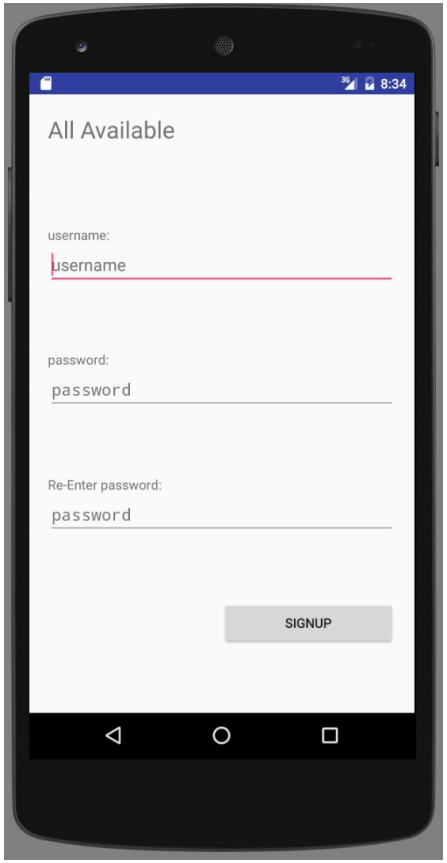
Use case 1- Login and Signup

- For new users:

Click on SIGNUP button and sign up!

  - Enter the username
  - Enter the password
  - Confirm the password
  - Click on “SIGNUP”
  - Signup is finished!

Signup page

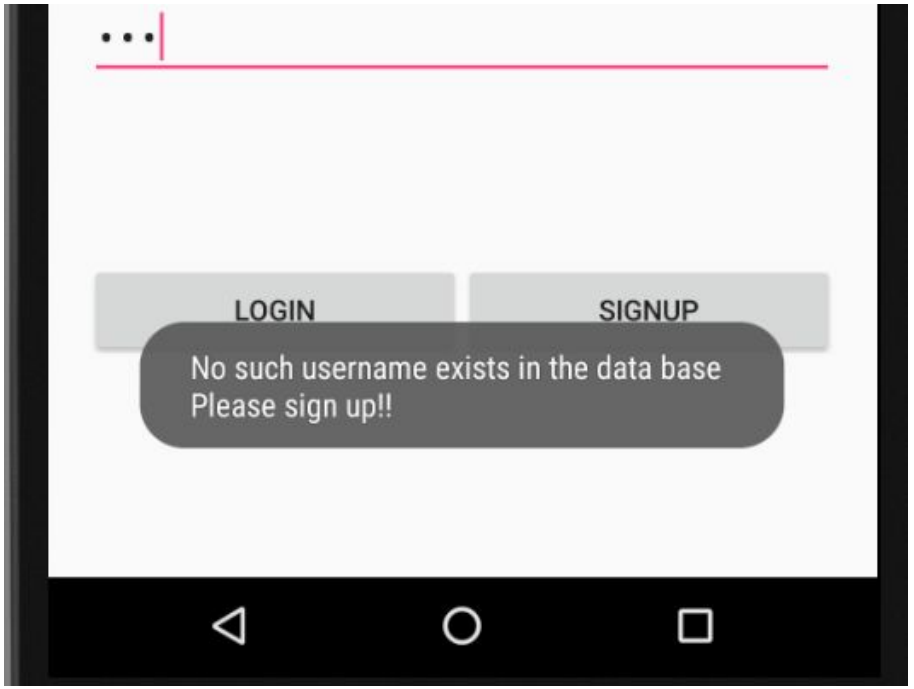


Use case 1- Login and Signup

- For new users:

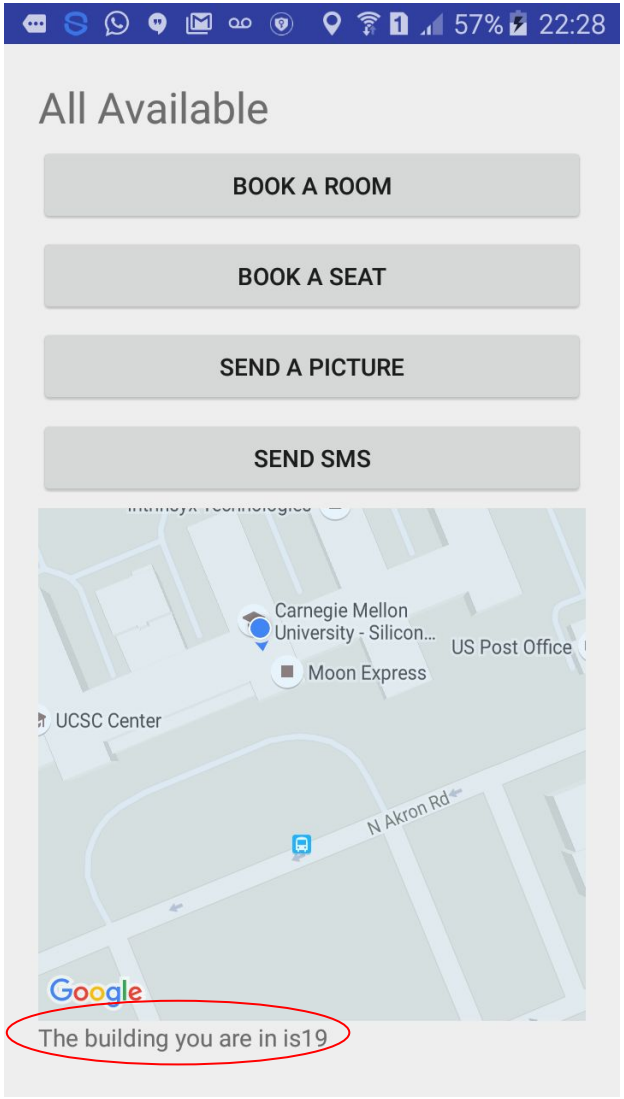
If a new user click on the LOGIN button **mistakenly**, then a warning will pop-up and guide the user to signup.

Pop-up Warning



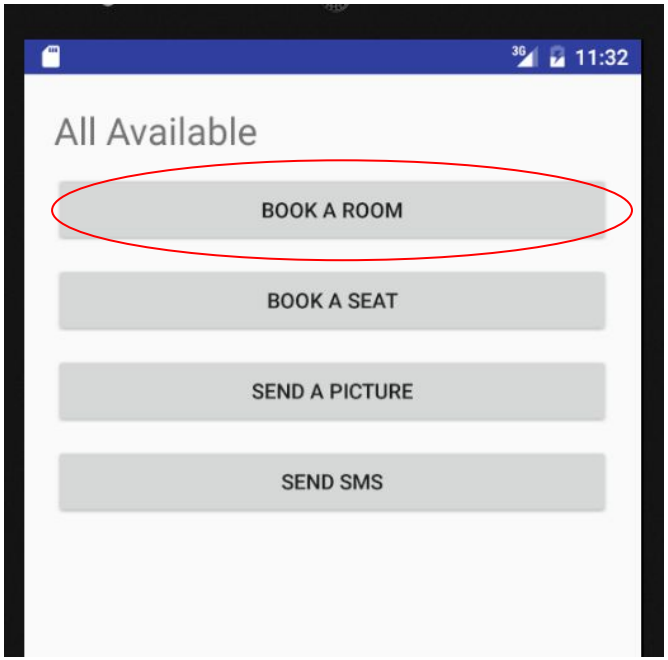
- # Use case 2- GPS location and building recognizing

  - Once you login or signup into the system, the selection page is showing and the current location of the user will be showing in a map.
  - System will recognize which building the user is currently in.



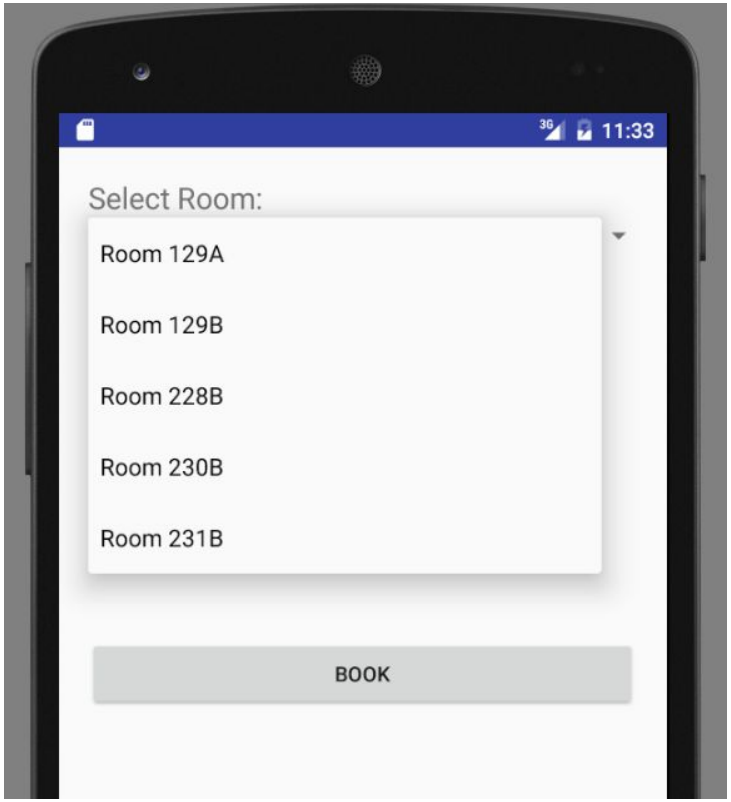
Use case 3 - Booking conference room

- BOOK A ROOM
  - Click on the button “BOOK A ROOM”
  - A List of conference rooms will show



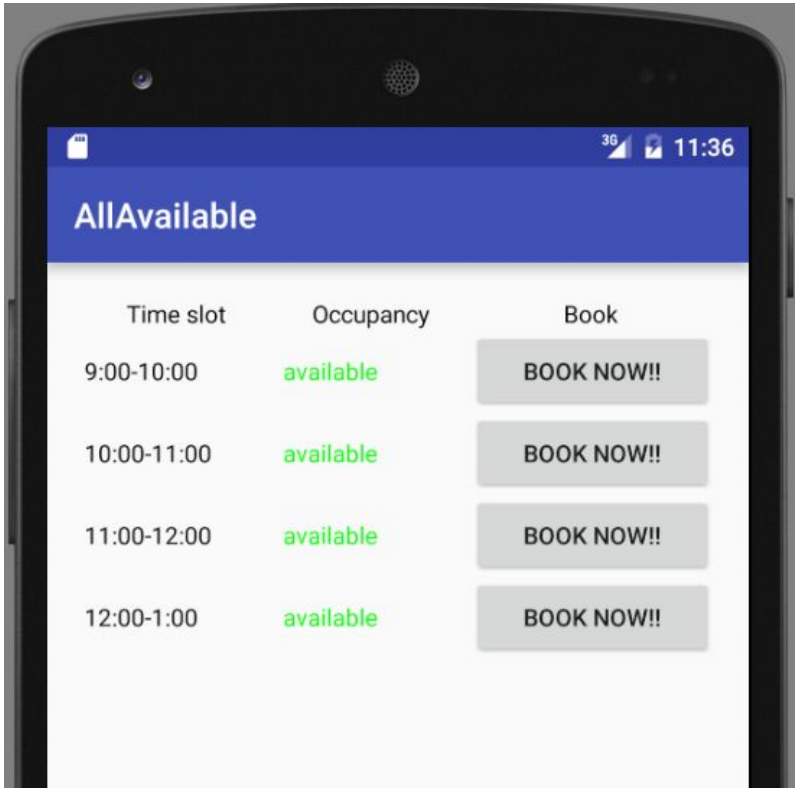
Use case 3 - Booking conference room

- BOOK A ROOM
  - Choose a prefered room number
  - Click on “BOOK” button
  - The conference room’s current booking status will be showing



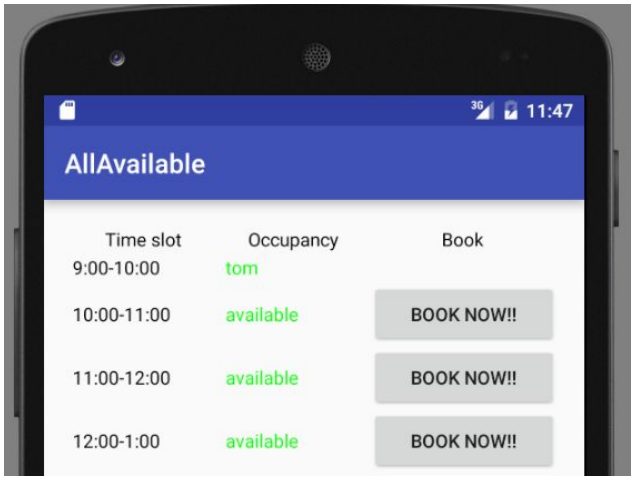
Use case 3 - Booking conference room

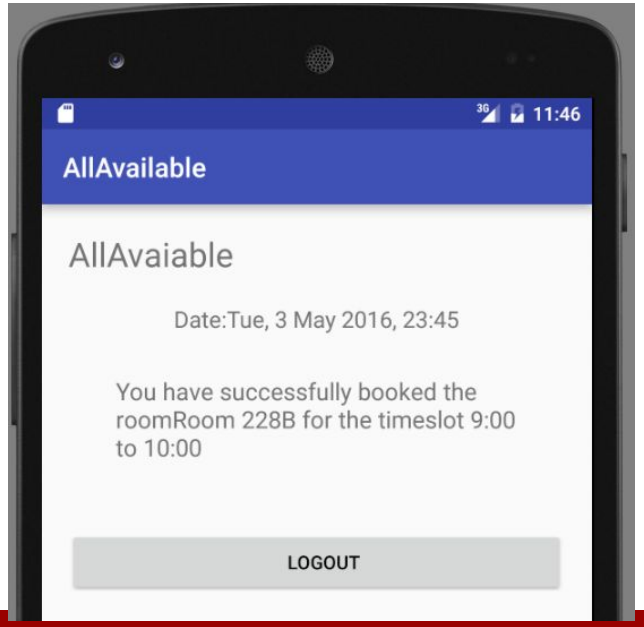
- BOOK A ROOM
  - Choose a prefered room number
  - Click on “BOOK” button
  - The conference room’s current booking status will be showing: “available”/ “user name”



Use case 3 - Booking conference room

- BOOK A ROOM
  - Choose a prefered and available time-slot of the room and click the button “BOOK NOW!!”
  - The the room in that time slot will be booked
  - And a notification will pop up to notify the student.





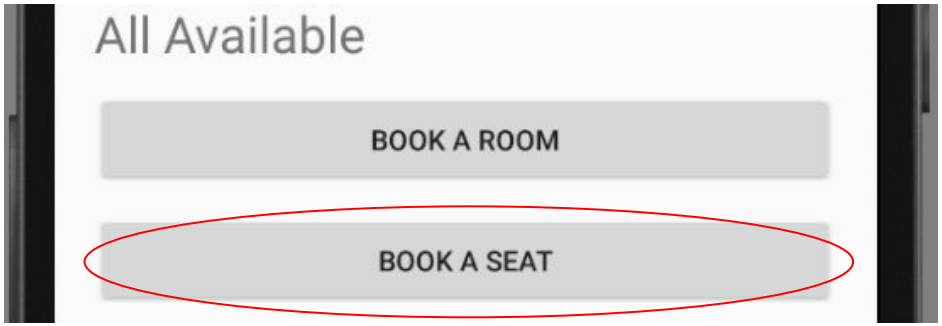
- Use case 4 - Booking seat in Study-room

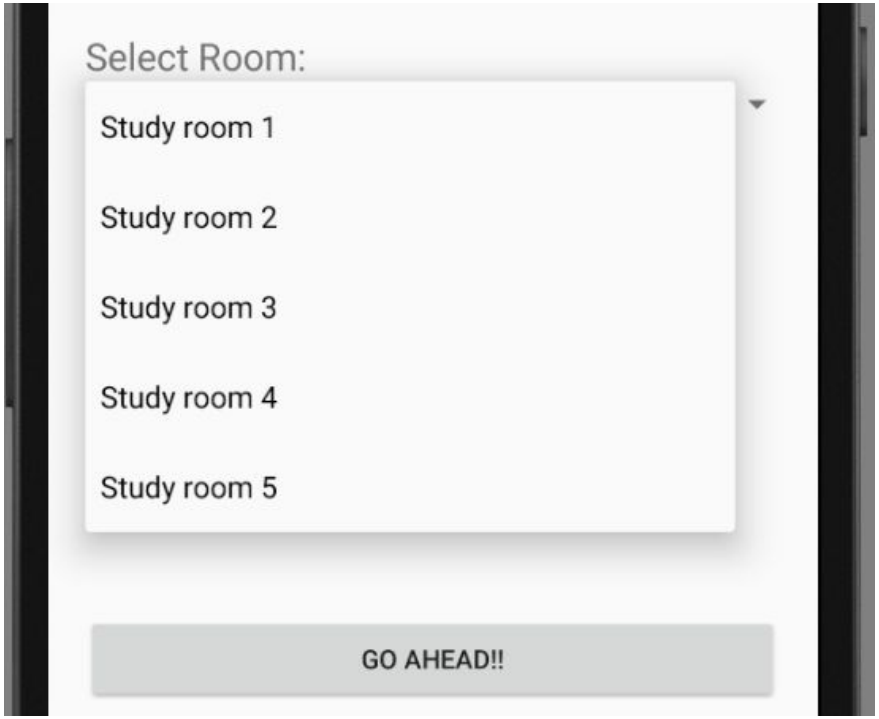
❖ BOOK A SEAT

➢ In the selection page, click “BOOK A SEAT” button

➢ A page containing a list of study rooms will show

➢ Select a prefered study room and click “GO AHEAD!!”

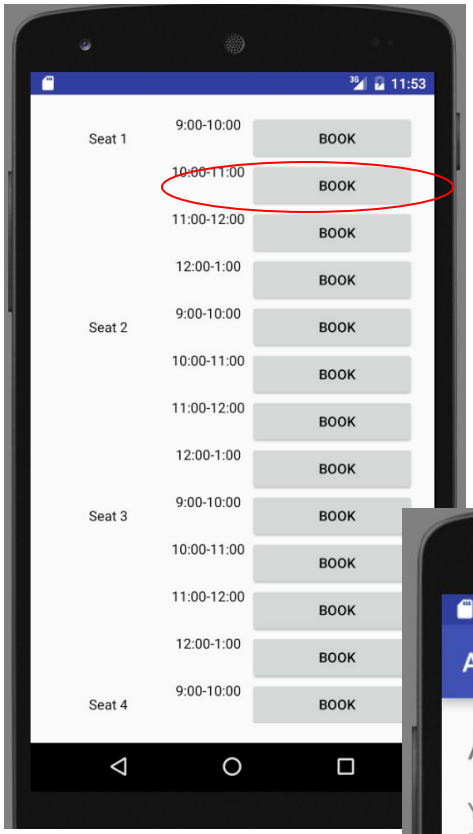


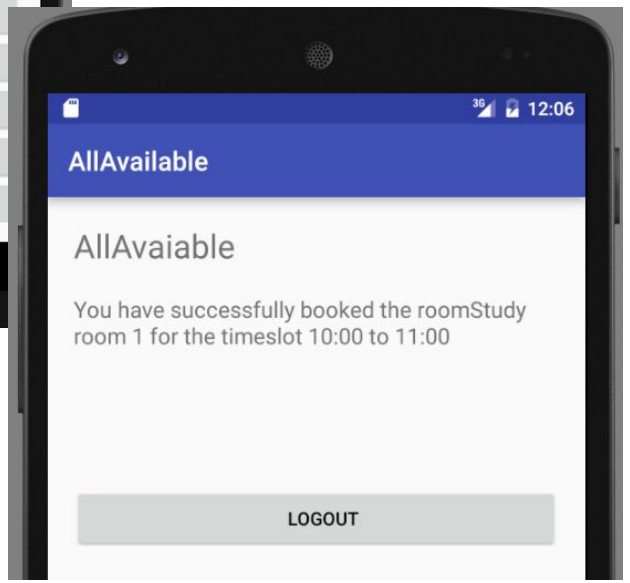


● Use case 4 - Booking seat in Study-room

❖ BOOK A SEAT

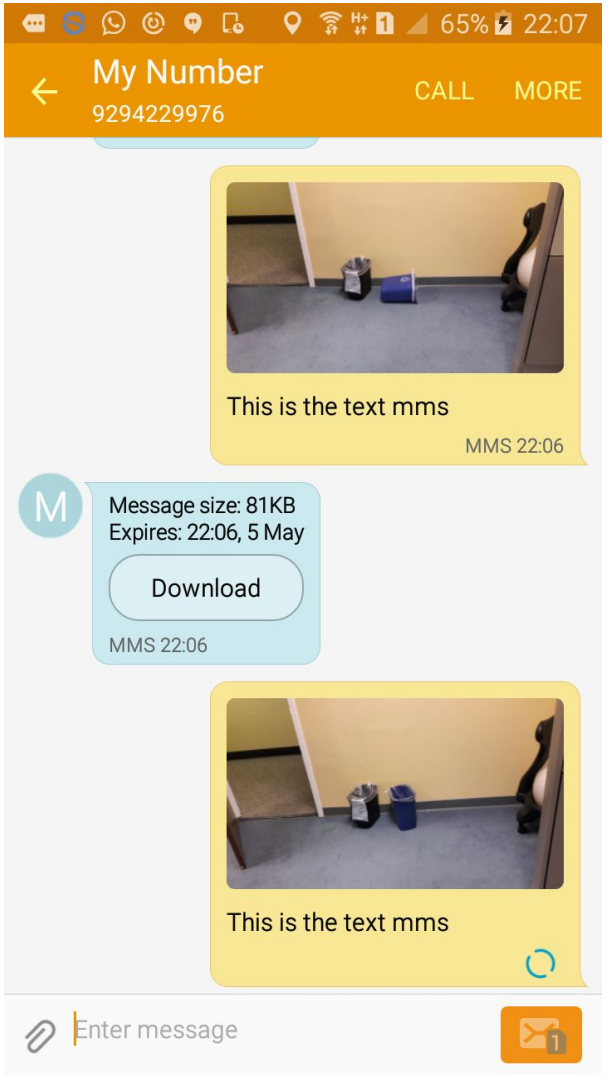
- ➢ All the seats booking status will show in the selected study room's page
- ➢ Choose a prefered time-slot and click the "BOOK" button
- ➢ The selected time-slot of the room will be booked and a notification will show





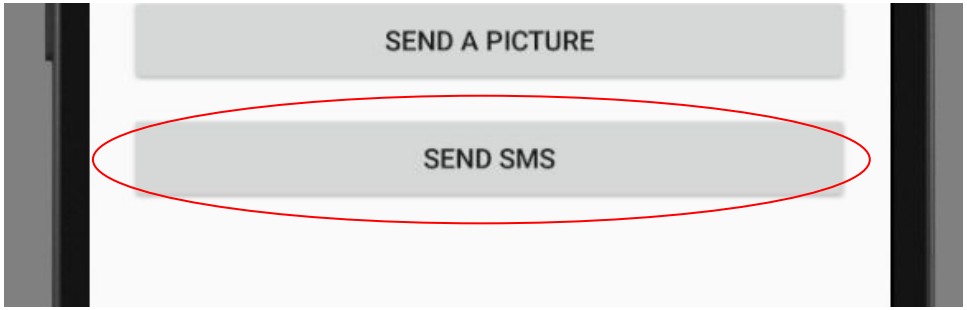
Use case 5 - Reporting damage

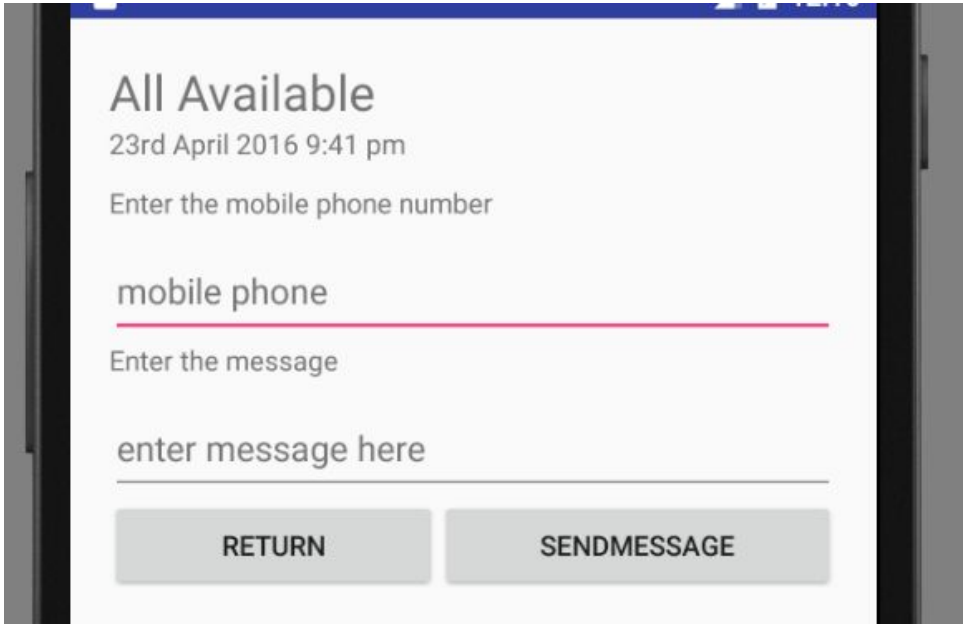
- Send picture to admin
  - On the selection page, click on “SEND A PICTURE”
  - The app will get into camera model and the user can take a picture in this model
  - After taking the picture, the picture will be send to the admin of the room by default.



Use case 6 - Sending SMS

- Send SMS to another student
  - Click on the “SEND SMS”
  - Sending SMS page will show and user can send any message to any cellphone number.





Product Design Review

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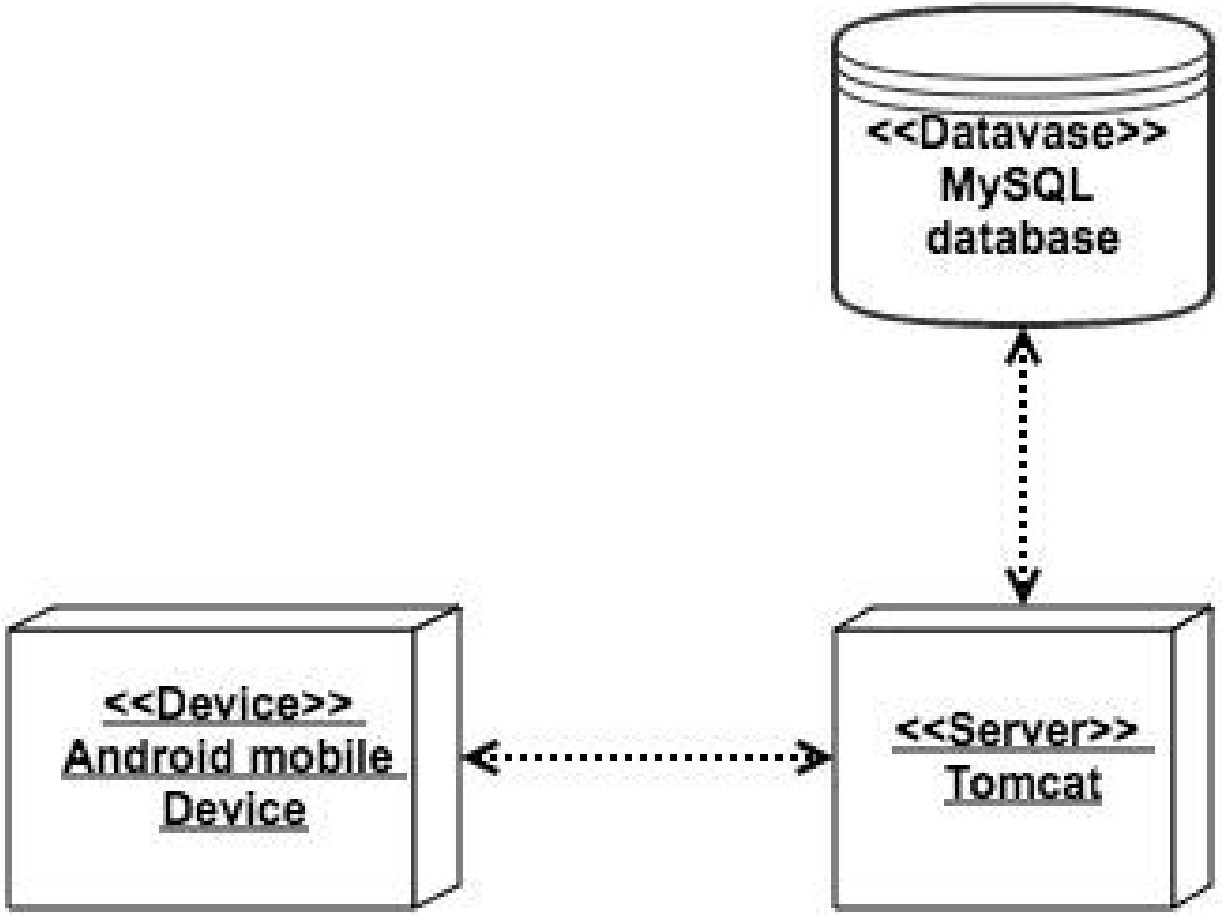
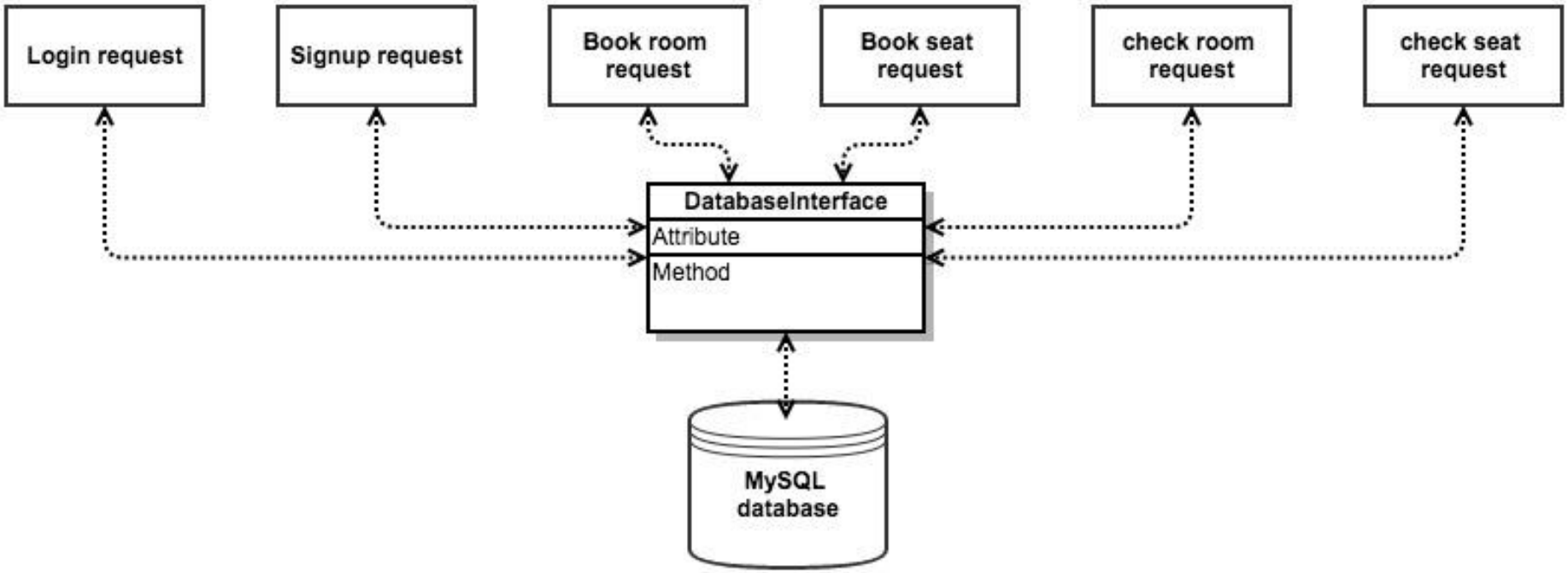
Application Structure

Deployment Diagram



Architecture - Backend



Presentation Tier

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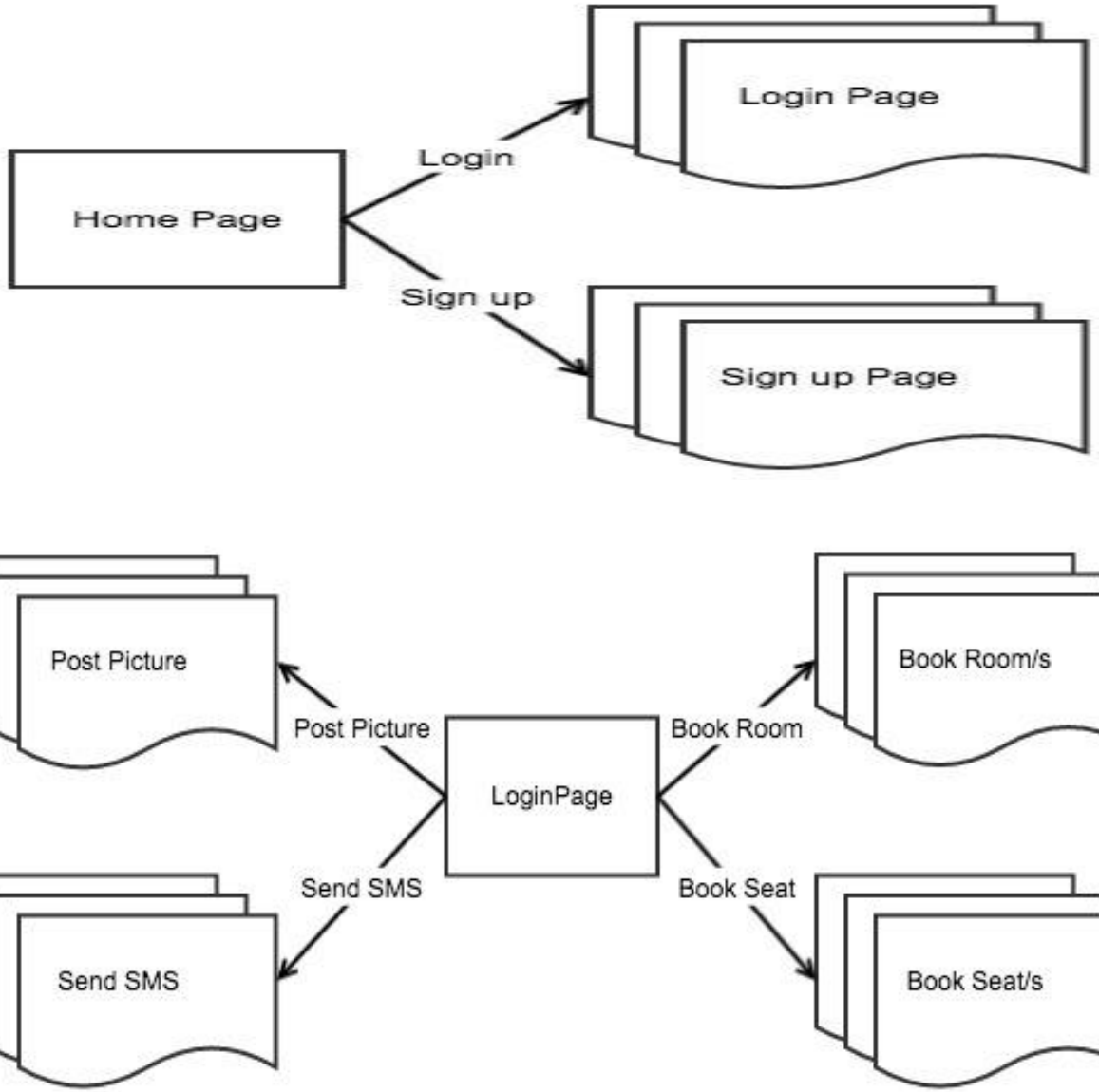
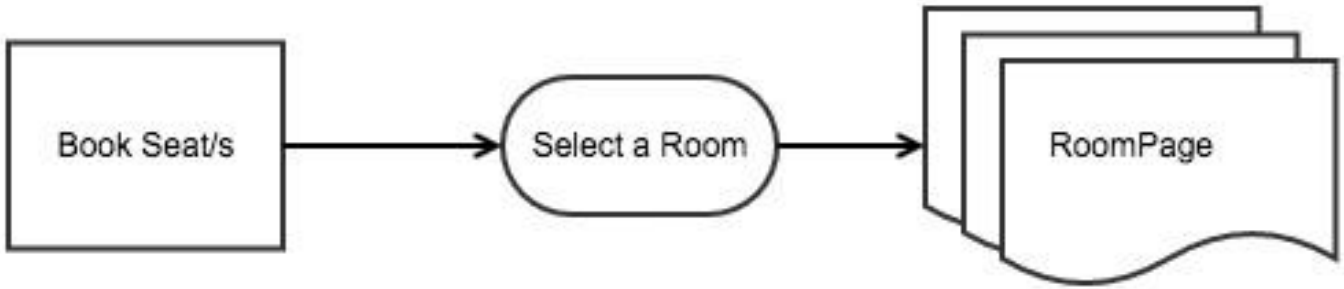
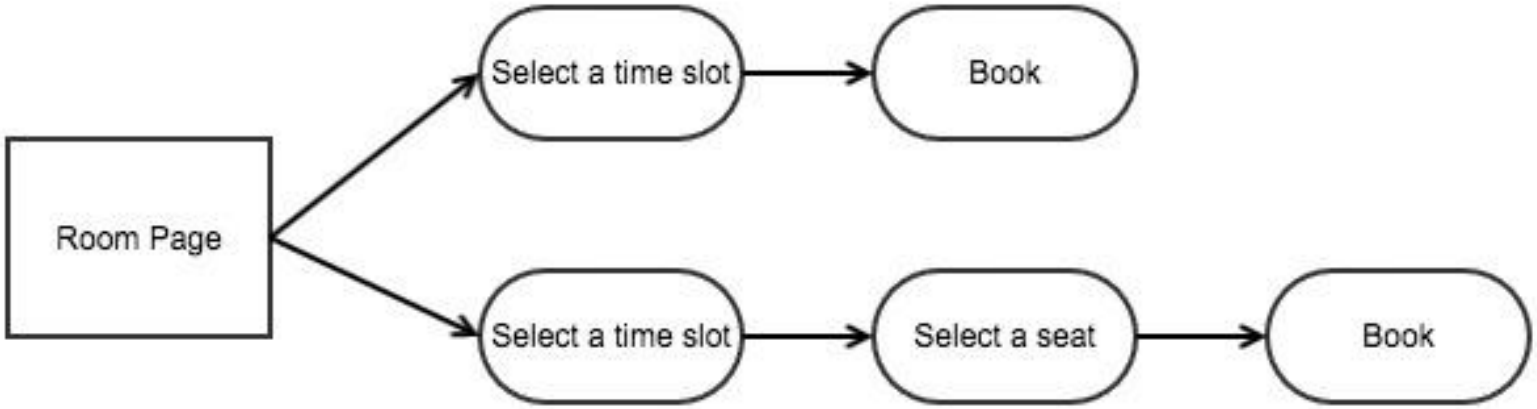
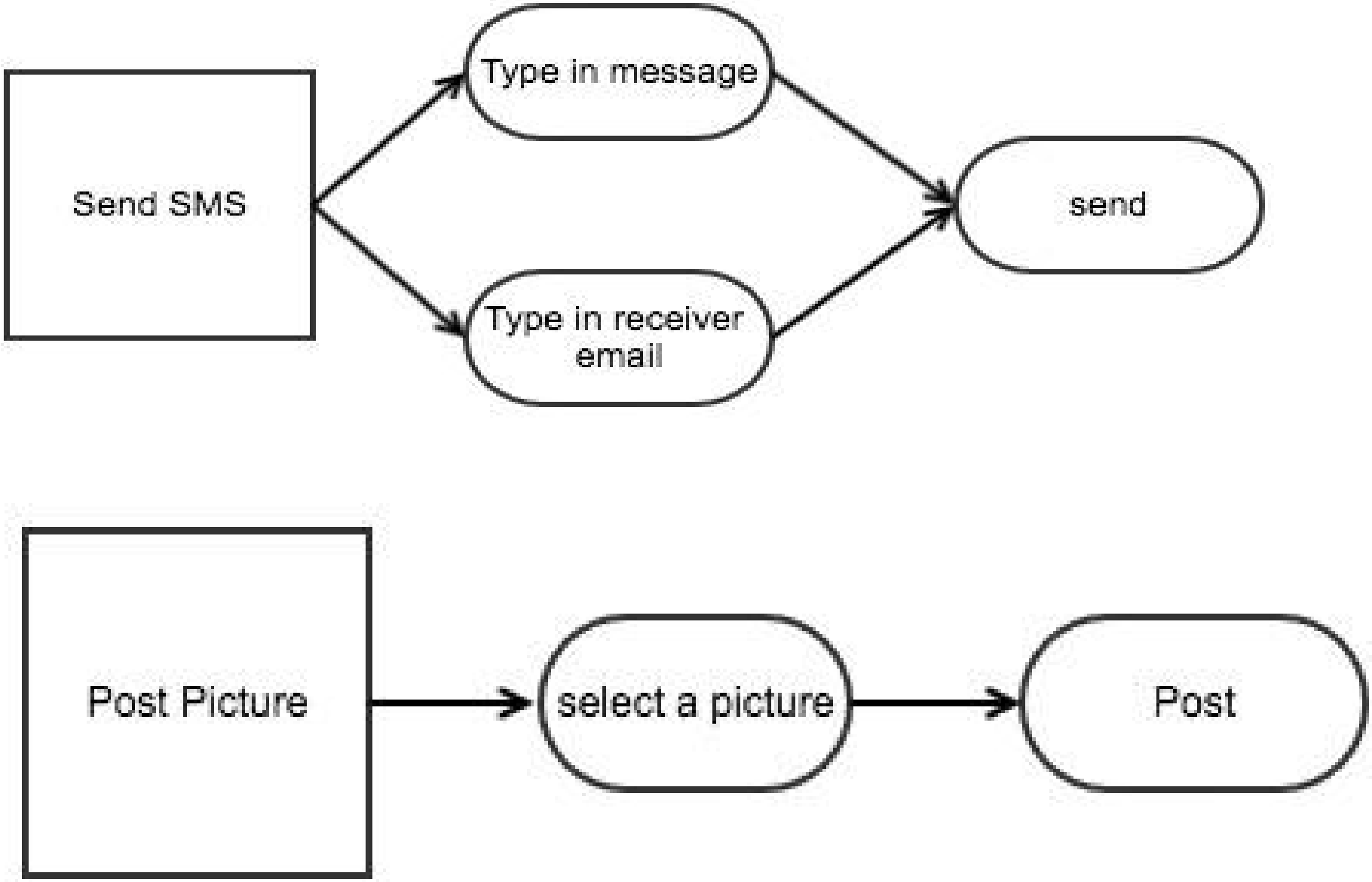
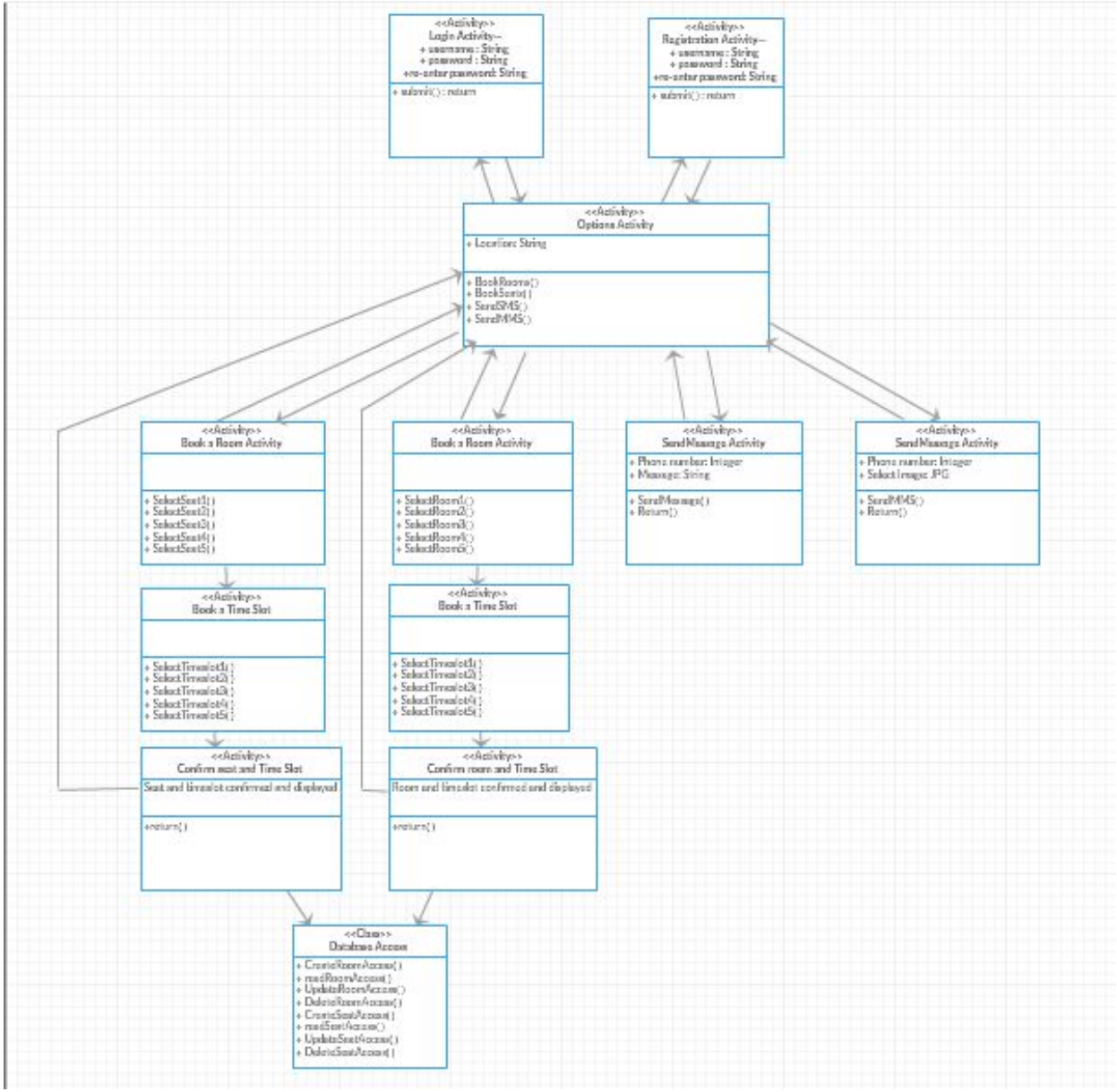

Home Page
Login
Login Page
Sign up
Sign up Page
Post Picture
Post Picture
LoginPage
Book Room
Book Room/s
Send SMS
Send SMS
Book Seat
Book Seat/s


Book Seat/s
Select a Room
RoomPage

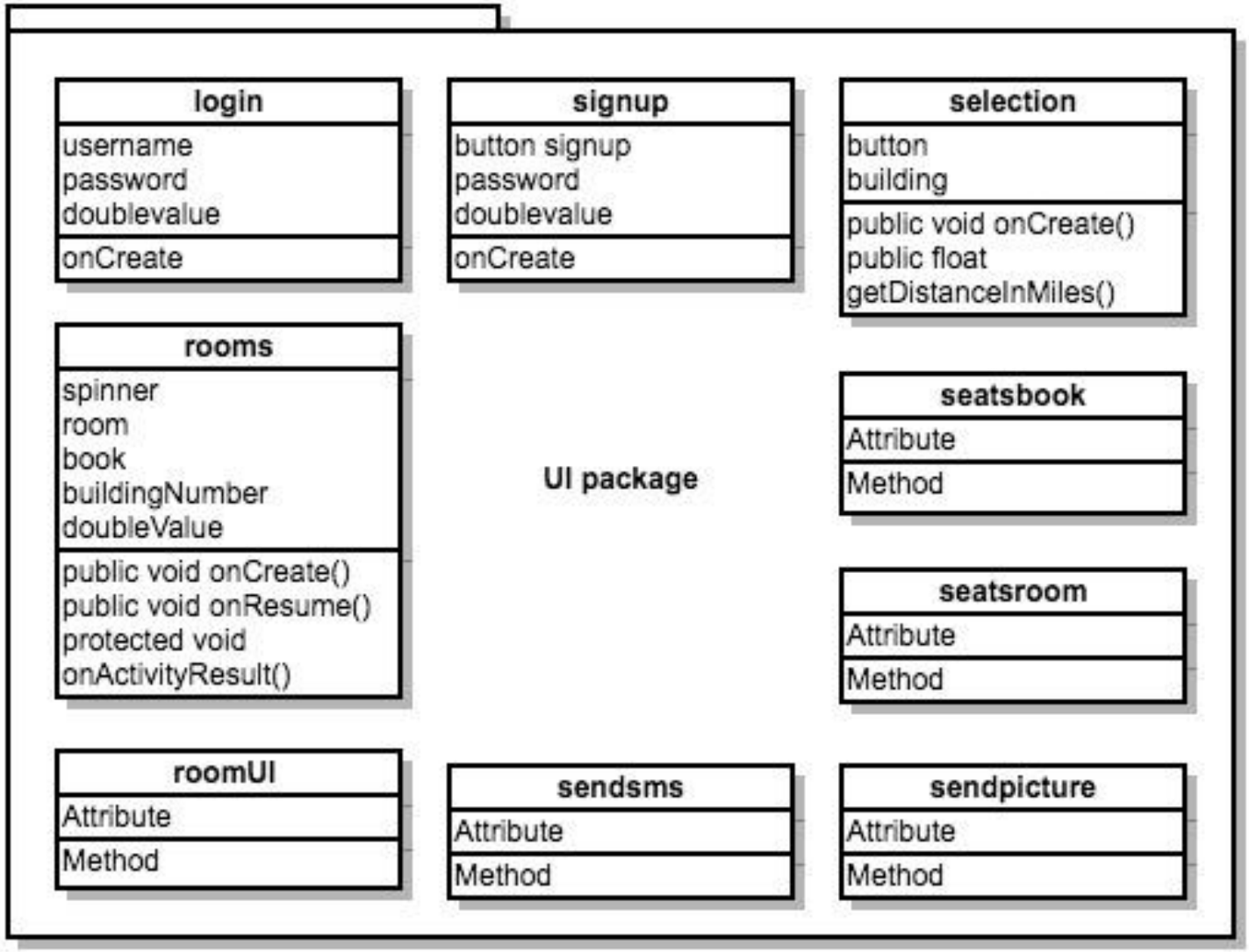

Room Page
Select a time slot
Book
Select a time slot
Select a seat
Book


Send SMS
Type in message
Type in receiver email
send
Post Picture
select a picture
Post

Intent Diagram



Package structure



Application Tier

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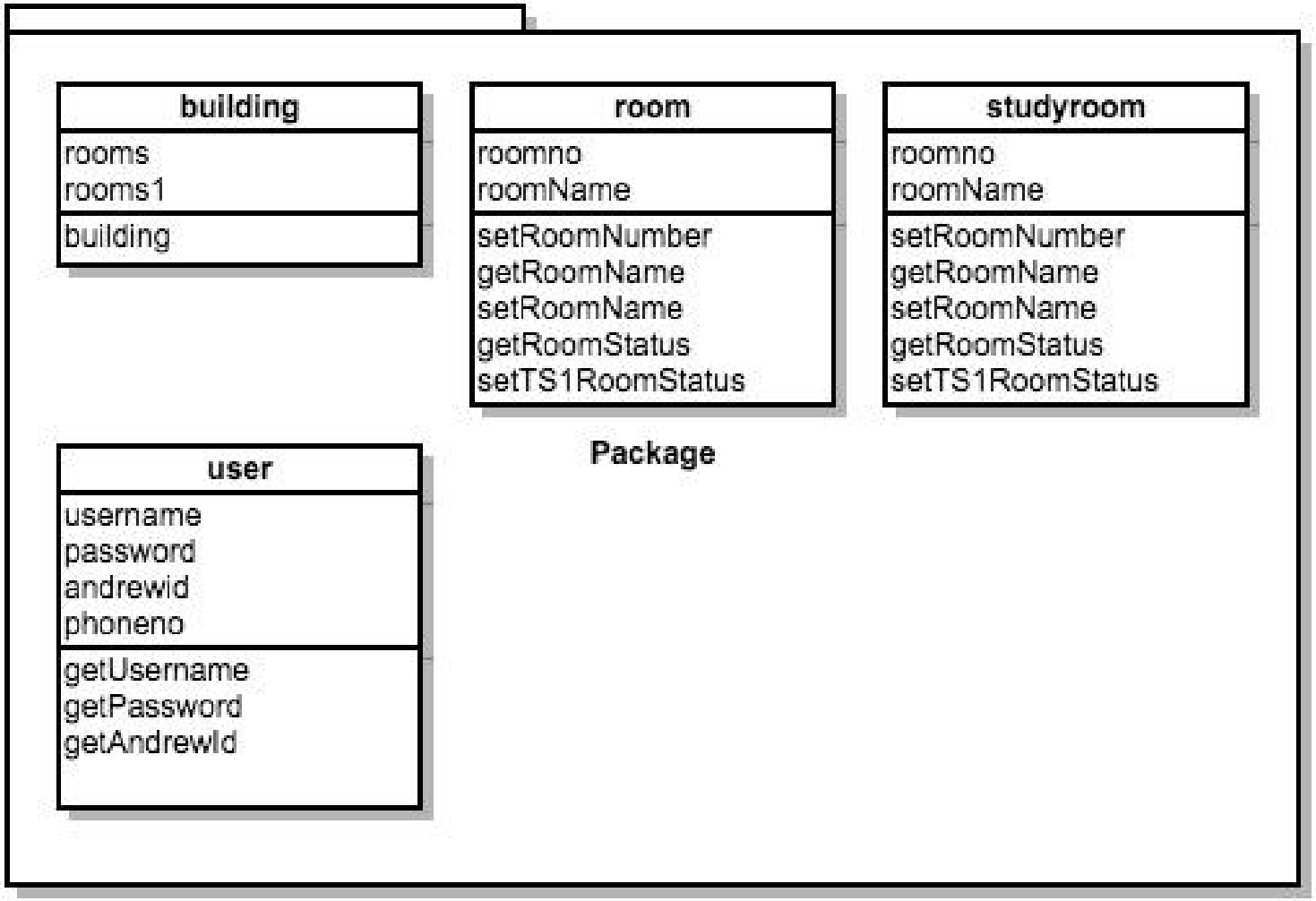
Package structure



Service Tier

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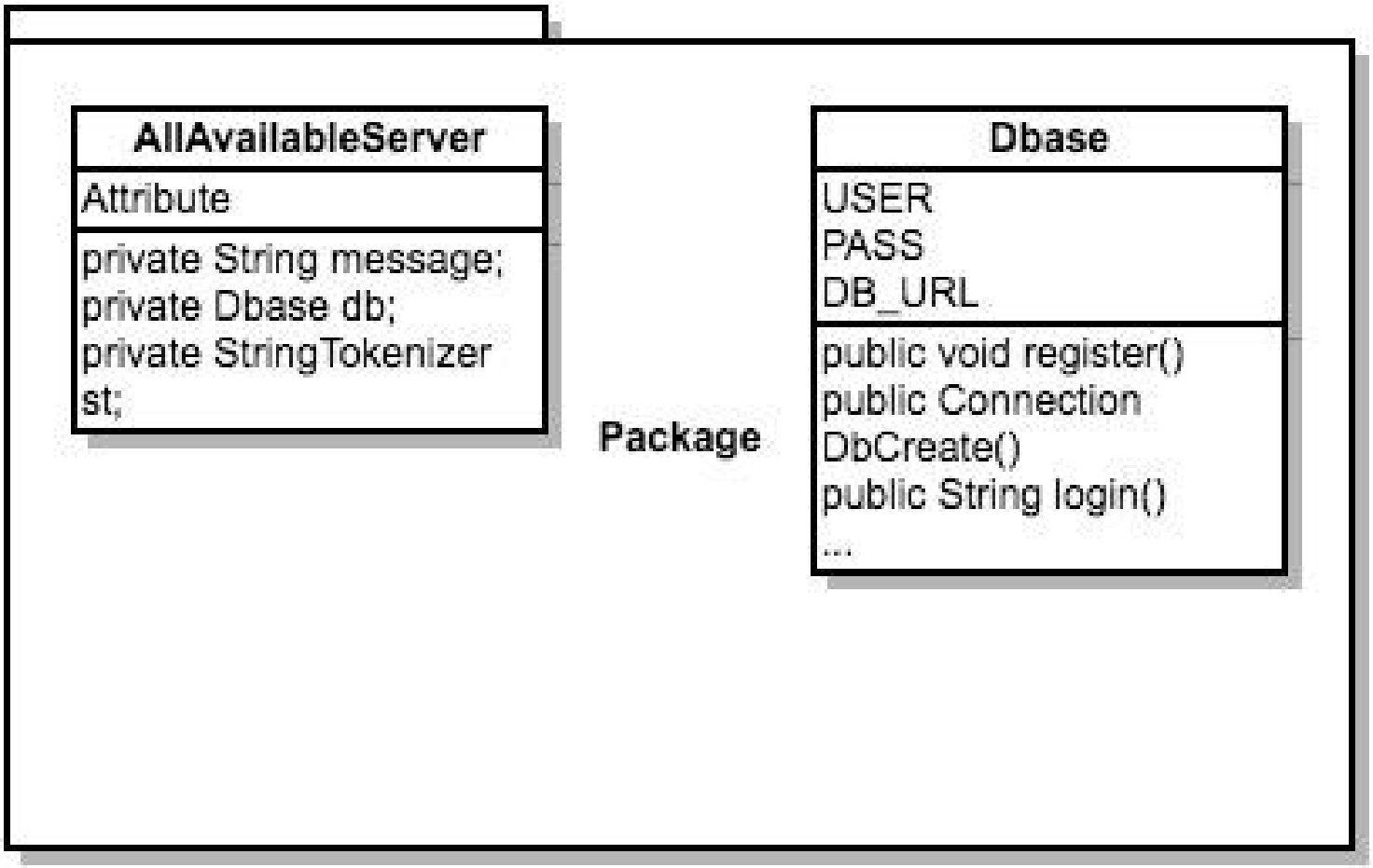
Package structure



Database Tier

Tables:

- user:

Contains each user's name, password, ID, email, phone-number, booking info and etc.

- room:

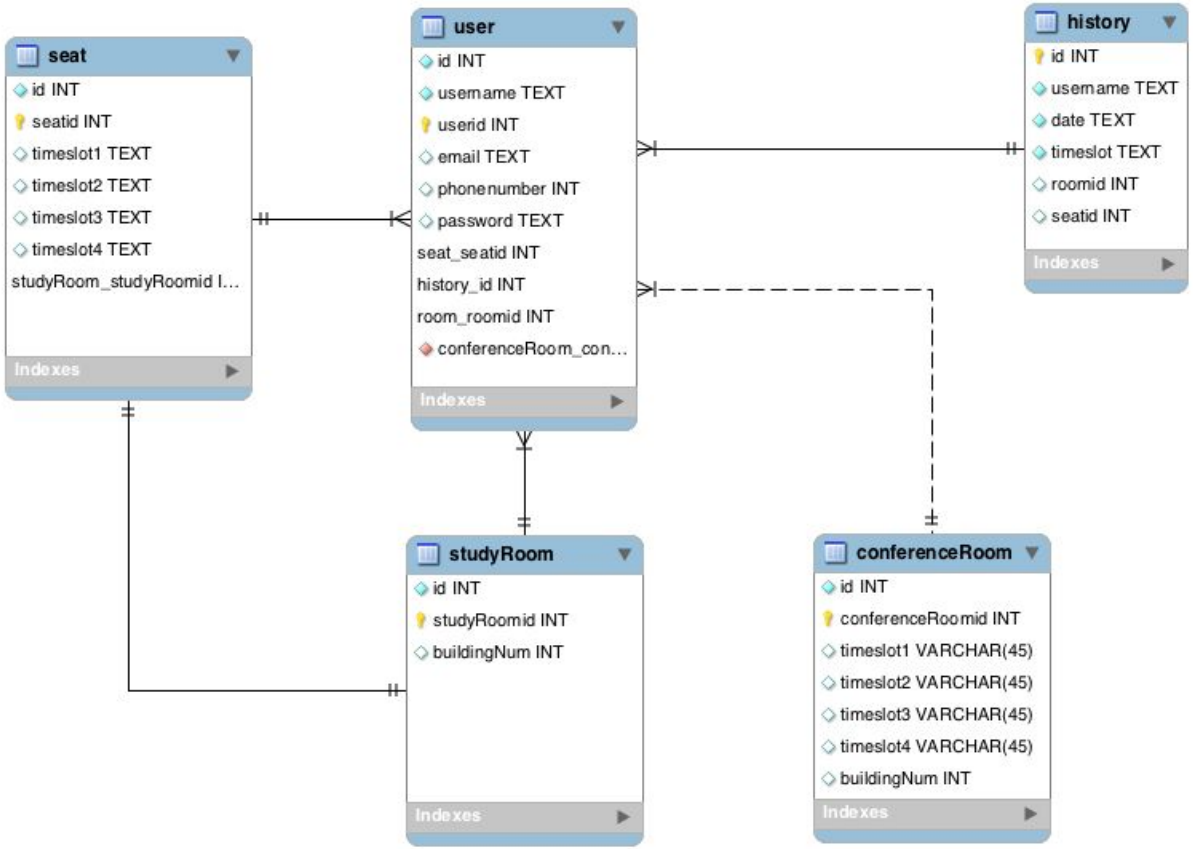
Contains room's ID, seat id and booking status for each timeslot

- seat:

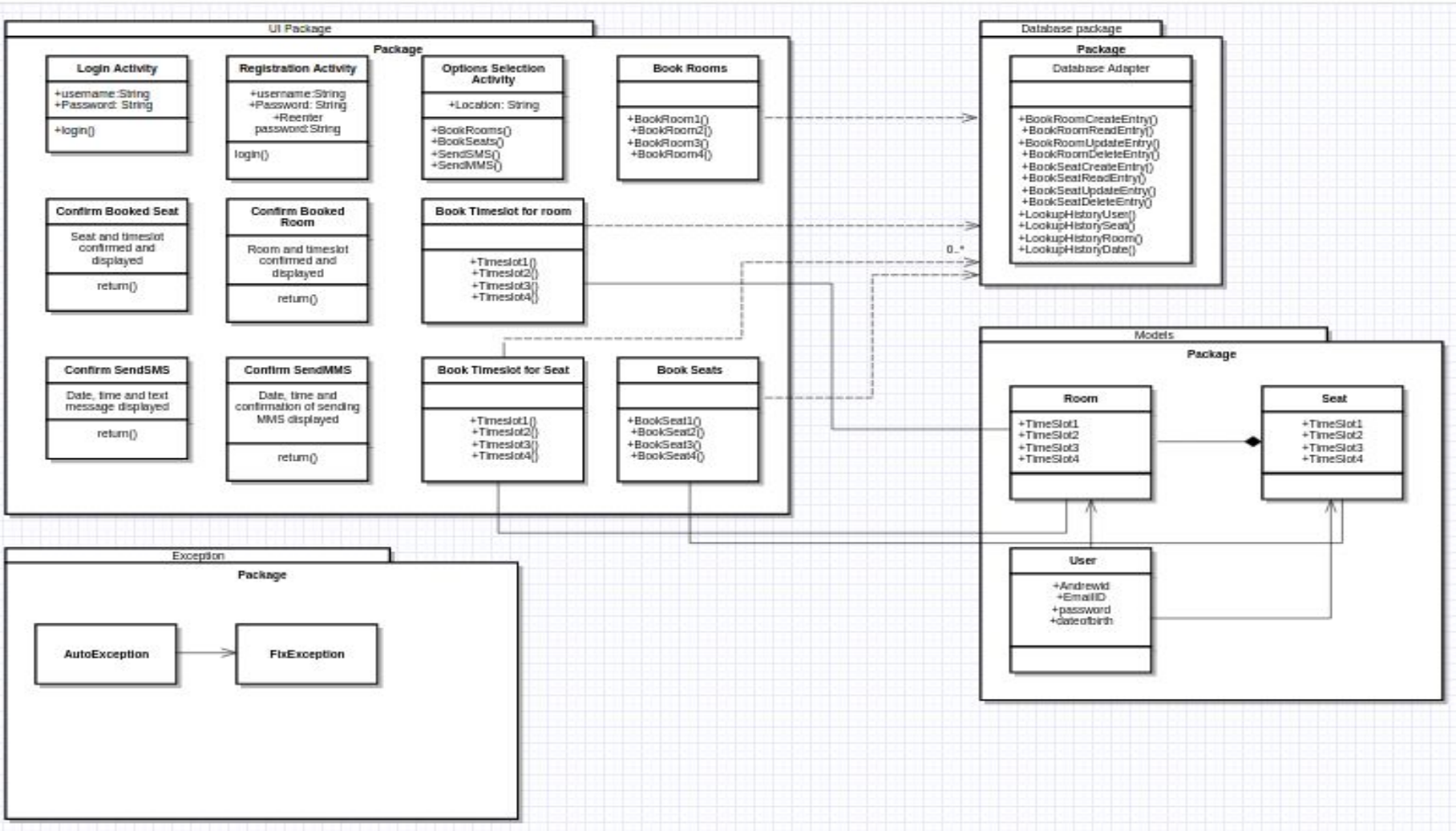
Contains seat ID and booking info for each timeslot

- History:

Contains usename, and booking info

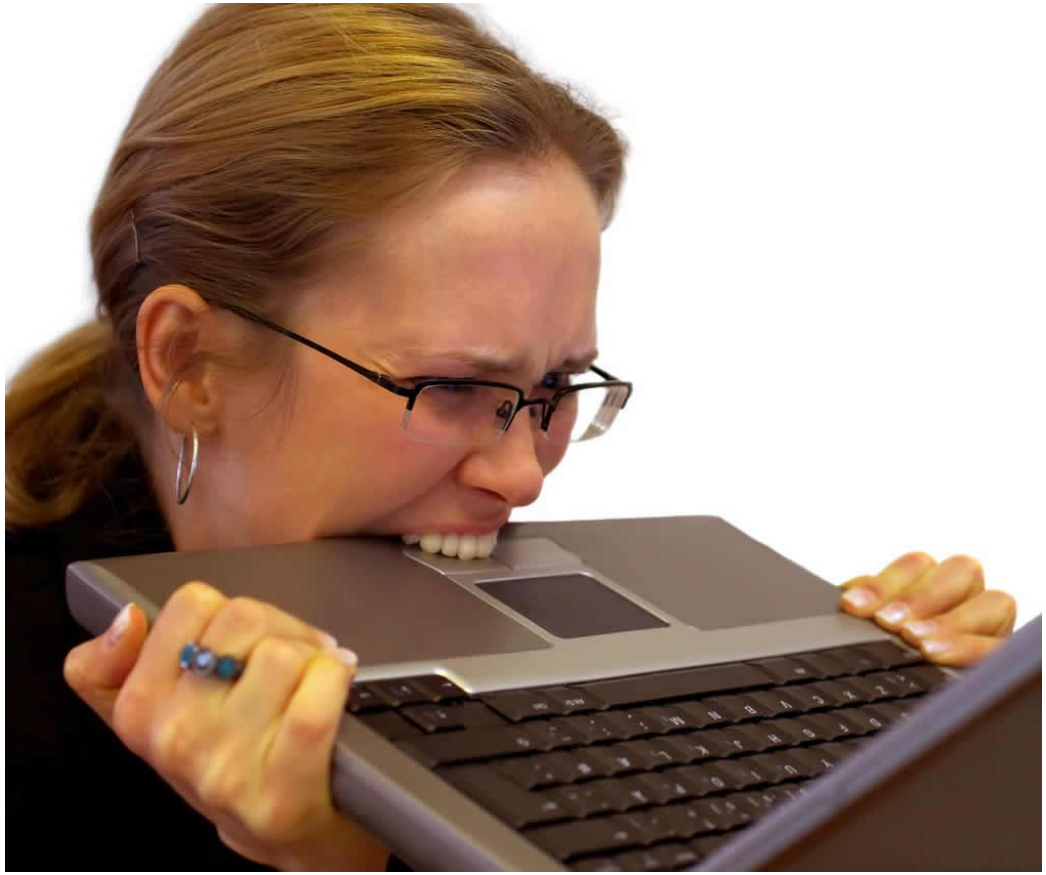


Class Diagram



Are You Frustrated?

Are all the Rooms Booked?



Thanks to All-Available

You can now Book seats… Isn't it great you have All-Available app?

Number of U.S. Colleges and Universities and Degrees Awarded, 2005

	Number	Enrollment
Public 4-year institutions	629	6,837,605
Private 4-year institutions	1,845	4,161,815
Public 2-year institutions	1,070	6,184,229
Private 2-year institutions	596	303,826
Total	**4,140**	**17,487,475**
Undergraduate		14,473,884
Graduate		2,097,511
Professional		329,076

And these are institutes only in the United States and on an average each university has 20 buildings. Number of Enrolled students and number of faculty members and staff also indicate that the market for this app is huge.

Our detailed business model:

The Business Model Canvas

Designed for: AllAvailable app | Designed by: Fei Xu, Nidhish Sompura , Vamsavardhana Vijay | Date: 04/04/2016 | Version: 1.0

Key Partners

The University for which the Application is build.

All the Students and Infrastructure management system of the University.

Students and Faculty play a major role in co-operating with the Room Booking System and its rules.

Key Activities

-Booking certain seat or room at a certain available time slot

-Remind the booker for the time and location

-If booking the seat or room for another person, SMS him/her

Key Resources

Hardwares provided by andriod:
- GPS
- GSM
- Camera
- Bluetooth

Value Propositions

Help student quickly and easily find a seat and a proper time slot and book it for studying alone on campus.

Help students or teachers who want to hold a meeting or discussion to book a room.

Help the client easily remember the booking seat and time slot by reminder and also

Customer Relationships

Dealing with faculties and students

Provide a universal platform for the users to cooperatively book rooms and send notifications to the corresponding users.

Channels

University newsletter

University Specific Application for small to medium universities

Customer Segments

University students

University teachers

Guests who attend lectures at the university

Guests who take lectures at the university

Cost Structure

Administrators have to manage the room booking system

Re-directed Staff time

Revenue Streams

CMU

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DESIGNED BY: Strategyzer AG
The makers of Business Model Generation and Strategyzer

Strategyzer
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Lessons Learned

- **Web Servlets**
- **Exceptions Handling**
- **Self-Healing**
- **My SQL database**
- **Fragments**
- **GPS, SMS**
- **Object Oriented Programming**
- **Data Structures**
- **Activity Life Cycle**
- **Inner class for Asynchronous class**

Thank You!!!!