



## **ASE Project**

**Title: UMKC Hall Reservation**

**Team (11):**

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## **1. Project Goal and Objectives**

### **1.1. Motivation:**

As the students and faculties are facing difficulties in scheduling and reserving available conference rooms and auditorium for meetings and events respectively, as every time they need to consult required authorities for availability of rooms regularly to reserve rooms. Our application provides a better solution to book their room from their mobile which makes user conveniently in reserving room.

### **1.2. Significance:**

This application provides with seating capacity and pictures of the room before reserving the room. On acceptance, the user will book the room.

### **1.3. Objectives:**

To facilitate better room reservation system for students to held their meetings and events using their ANDROID gadgets which provides with good UI.

### **1.4. System Features:**

- Scheduling appointments with respective venues.
- Can reserve the room with selected start and end timings.
- Confirmation through mail or message.
- User may have different functionalities based on their designations i.e., students, faculties and room allotment staff.
- Users can cancel their reserved rooms.
- Users get notified reservation status if there were any changes.
- Rescheduling can be done.
- Layouts available.

## **2. Fourth Increment Report**

In this report, our team dealt with interface for the project, layouts and the entire booking functionality of our project using IONIC. The system is developed with the login page along with complete UI. After successful login user will be redirected to our home page where different halls are available for room booking. Once, the user selects his/her desired hall, it shows the list of available room. The user will have options to choose their required room. After the room is selected, the next page shows the details i.e., amenities, image view, capacity etc. And then, the user was directed to the page where they can opt their timings to reserve under. At the timings page, it shows date and time pickers where user selects the required time. The registered timings were saved in database under the userid. If another user wants to book at the same time at the same venue, it shows an error message where he/she cannot choose the slot. Can choose the other slots. After successful booking of the hall user will be notified (message/email) and to direct the user from his current location to the reserved hall we have incorporated google maps api also. Moreover, we have also provided a feature to check the booking history of the user.

### **2.1. Services/APIs:**

This project requires maps, Mongodb and calendar API as of the project designed.

#### **2.1.1. Used APIs:**

Google Maps API: this helps in finding distance from user location to desired location or venues. Based on that, the user can fix his/her decision to book the venue.

Calendar API: this api helps in identifying and selecting the dates.

#### **2.1.2. To be used:**

No APIs were remained.

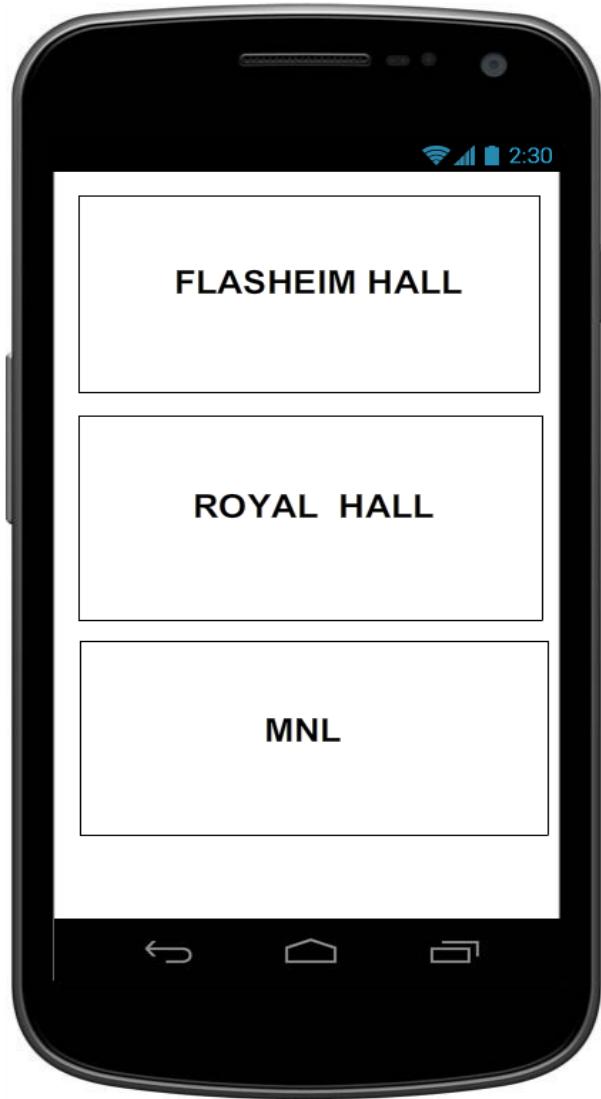
### **3. Detailed Design of features**

#### **3.1. Wireframes:**



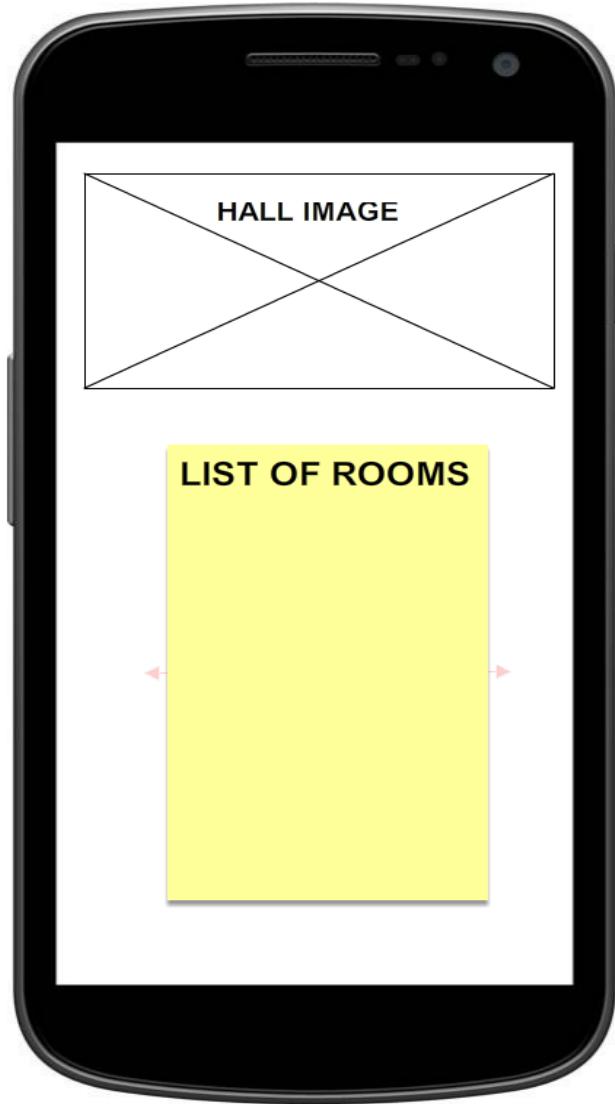
This is the home page where the user is requested to enter their login details to book their slot or look on to their account.

After logging into the application home page is displayed.



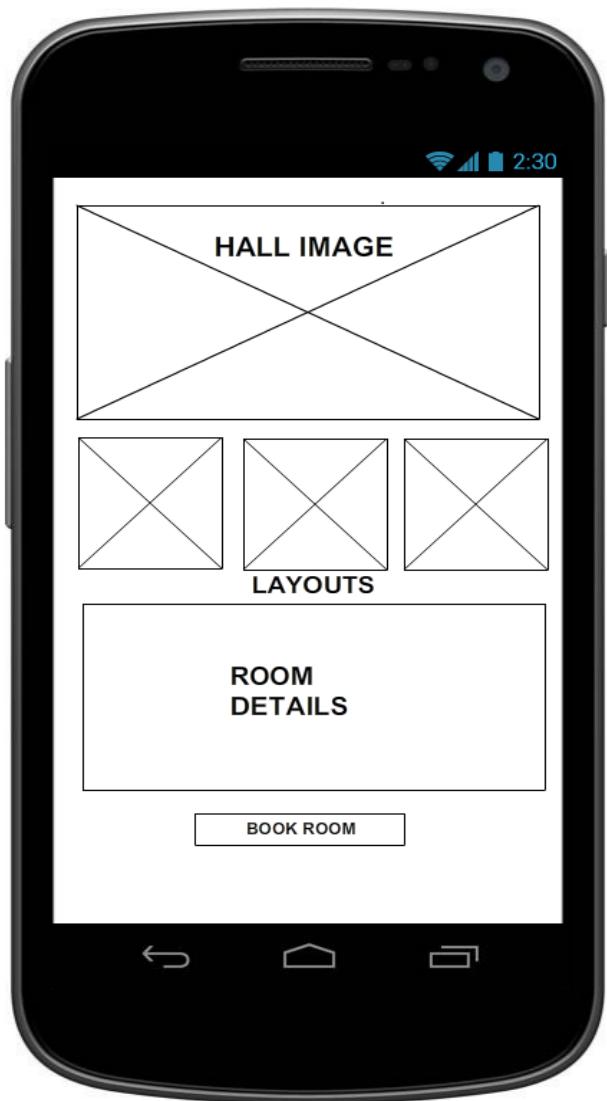
At this home page, different halls are available giving user different options to book their hall. They can conclude by considering distance from current location to respective hall.

On selection, the home page is directed to the respective venue page.



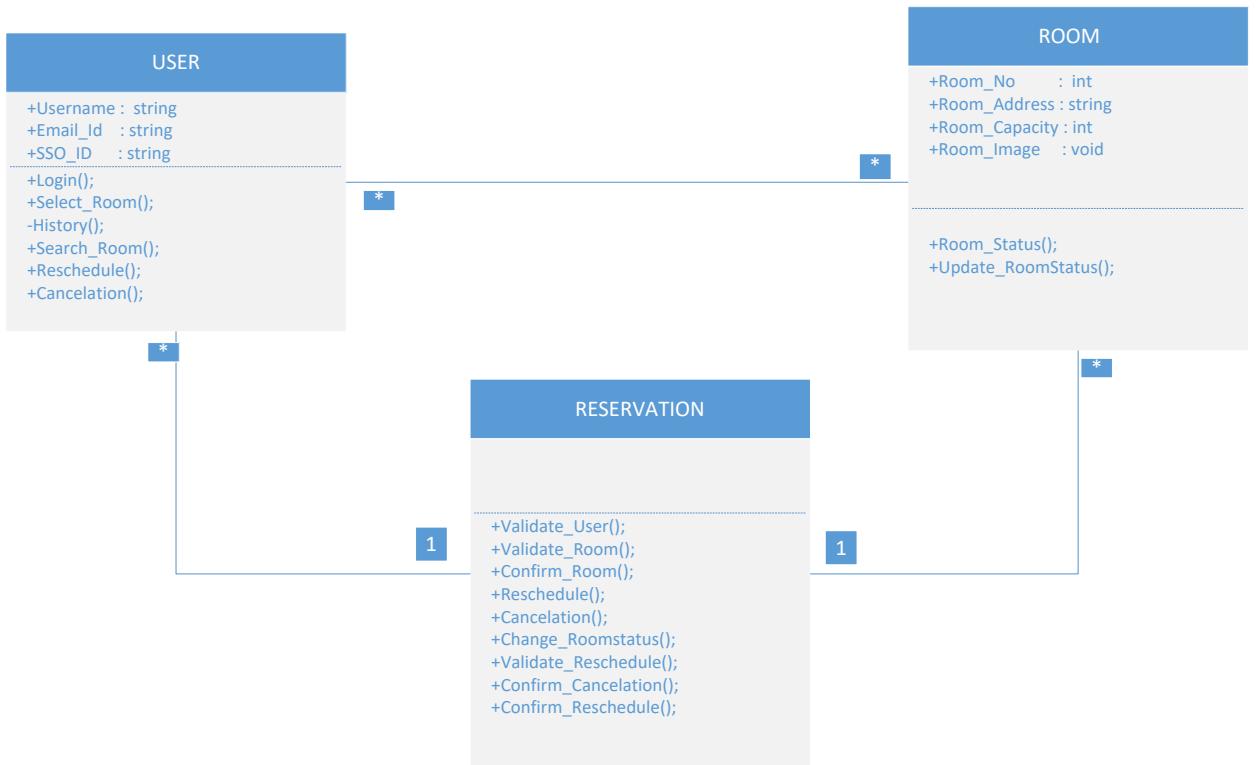
At this page, the user gets the details of the hall and its venues available which are available for registering.

After the room is selected, it shows all the details regarding room.

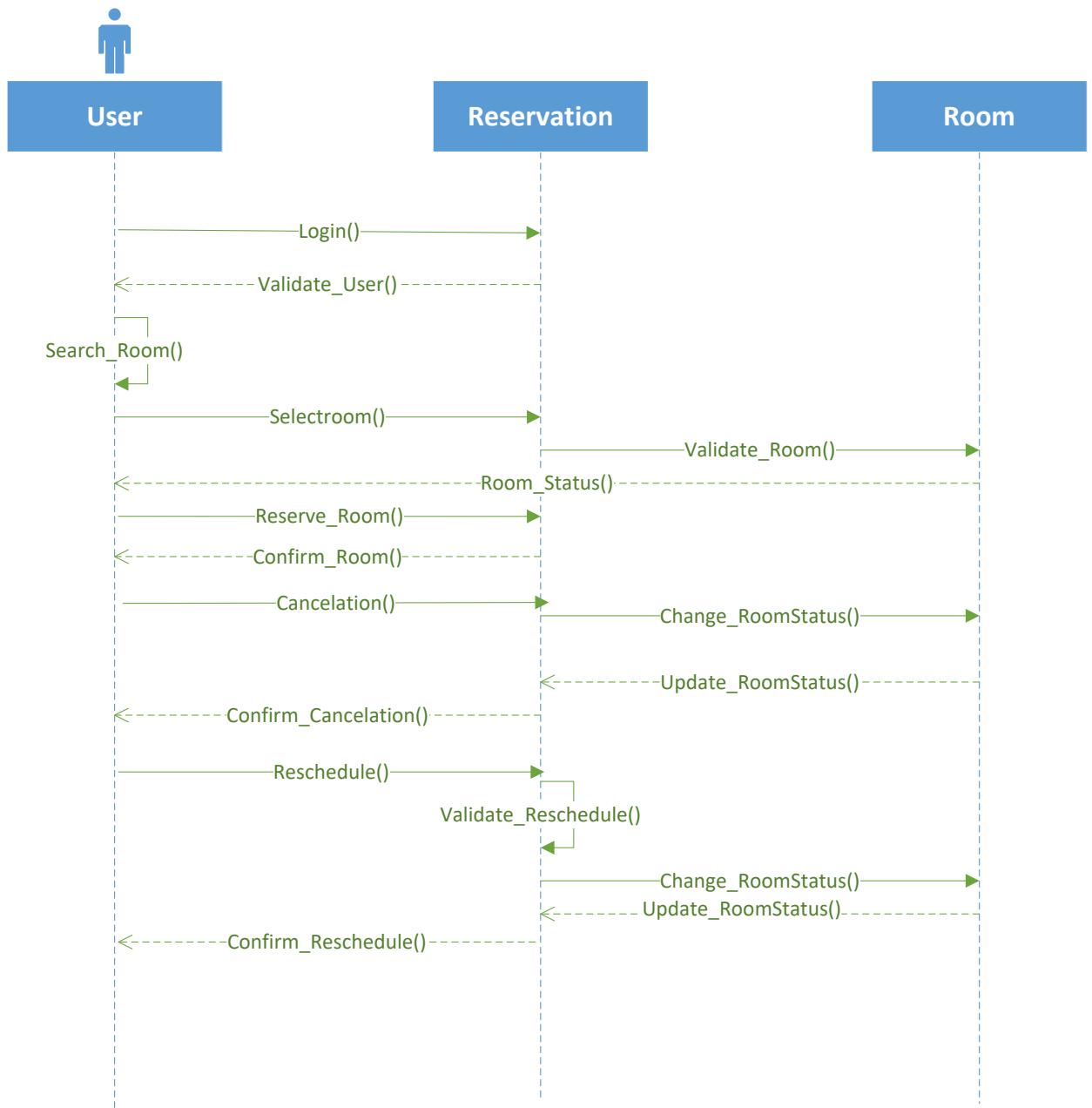


After the user selects the venue, the next page shows the room details which includes layouts, room details and the amenities available at the room.

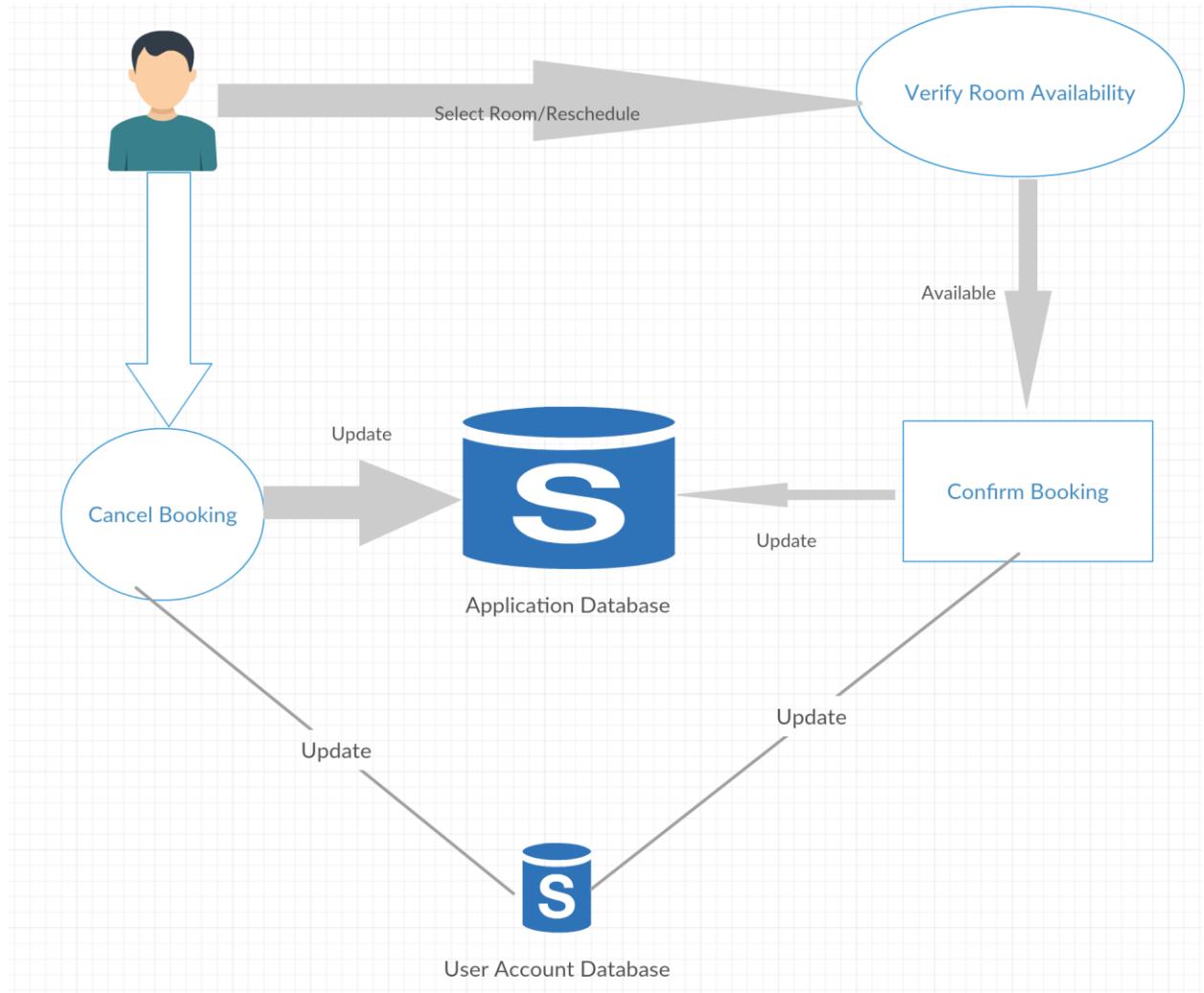
### 3.2. CLASS DIAGRAM:



### 3.3. SEQUENCE DIAGRAM:

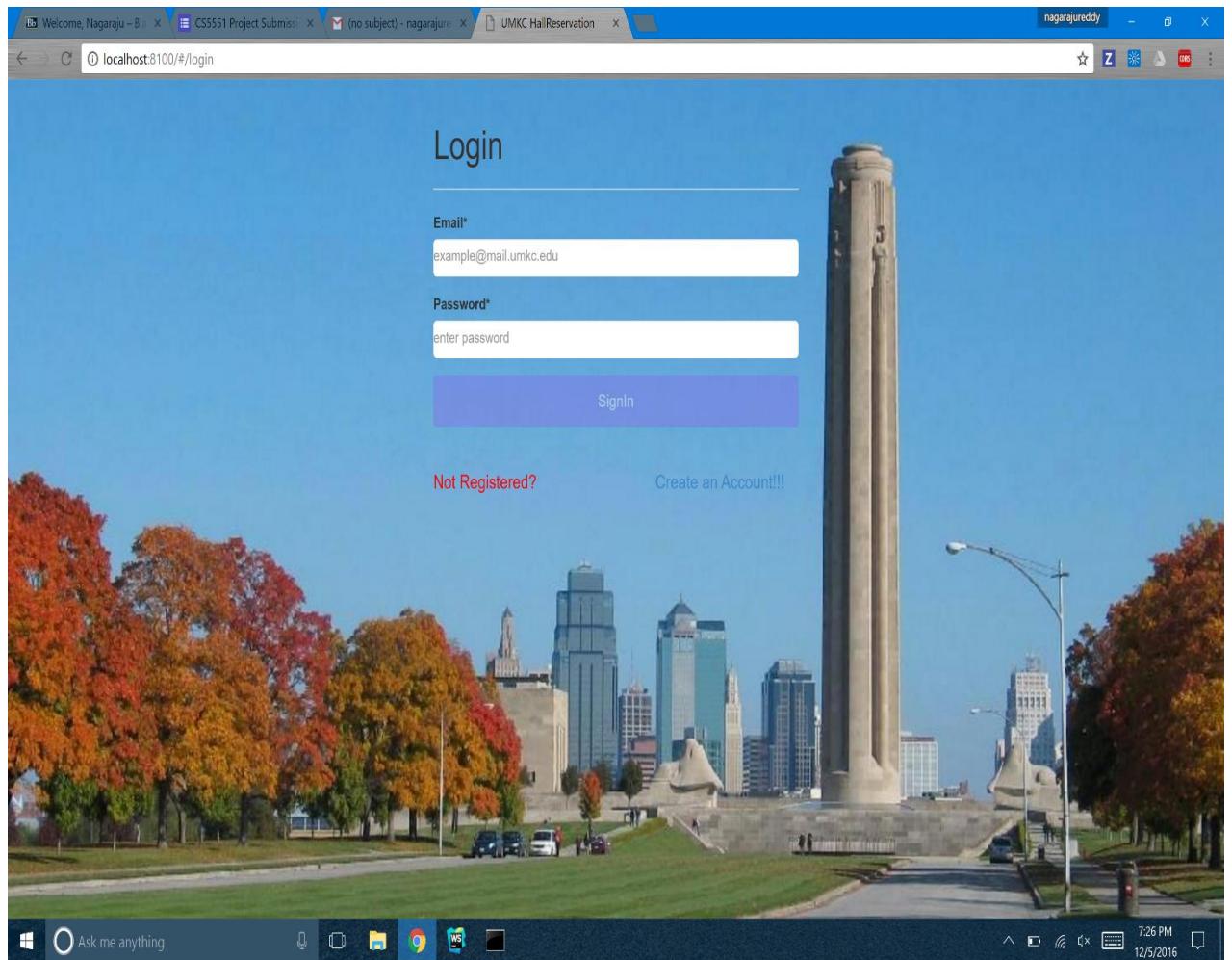


### 3.4. Architecture diagram:

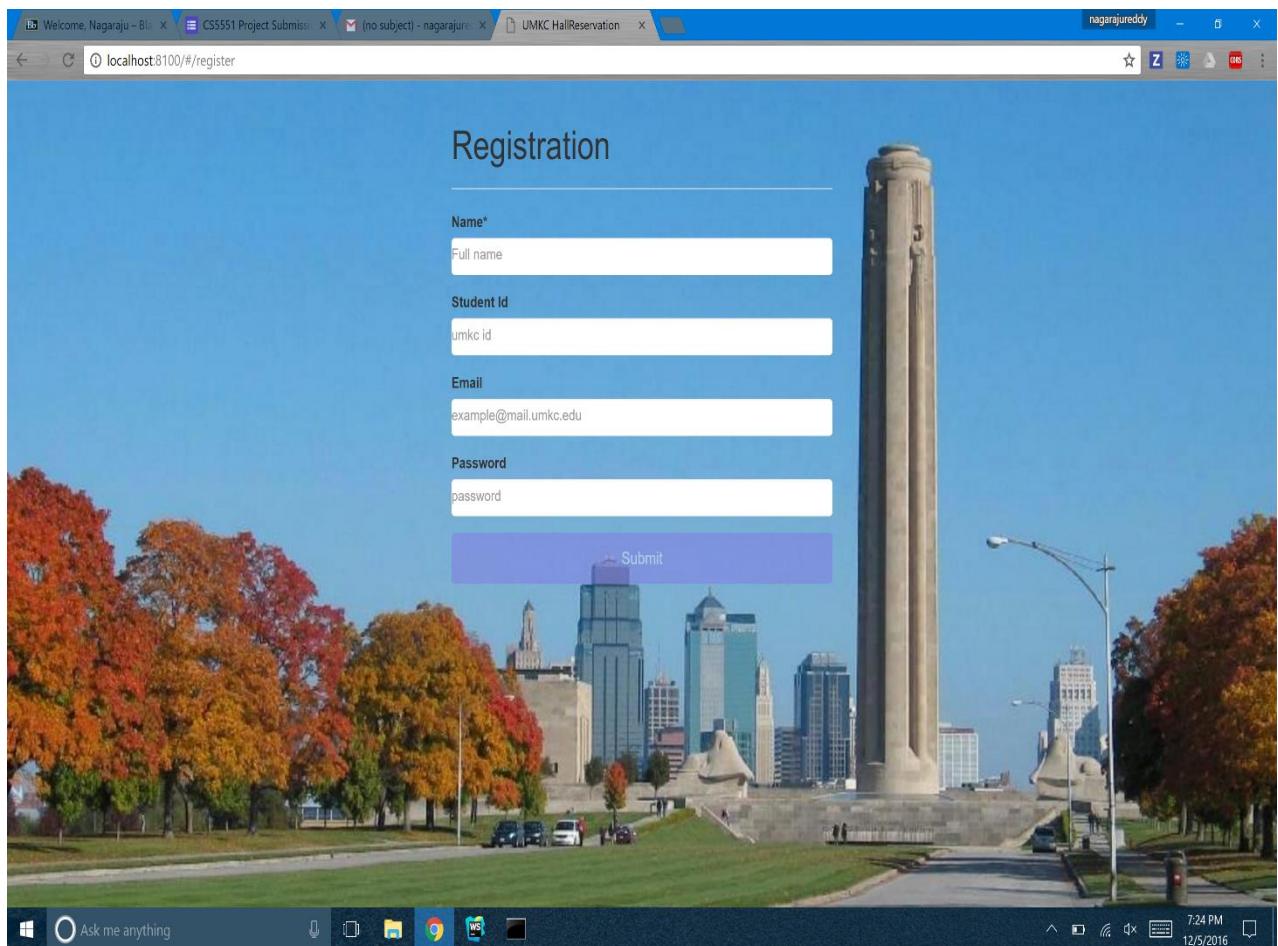


## 4.Implementation and Deployment

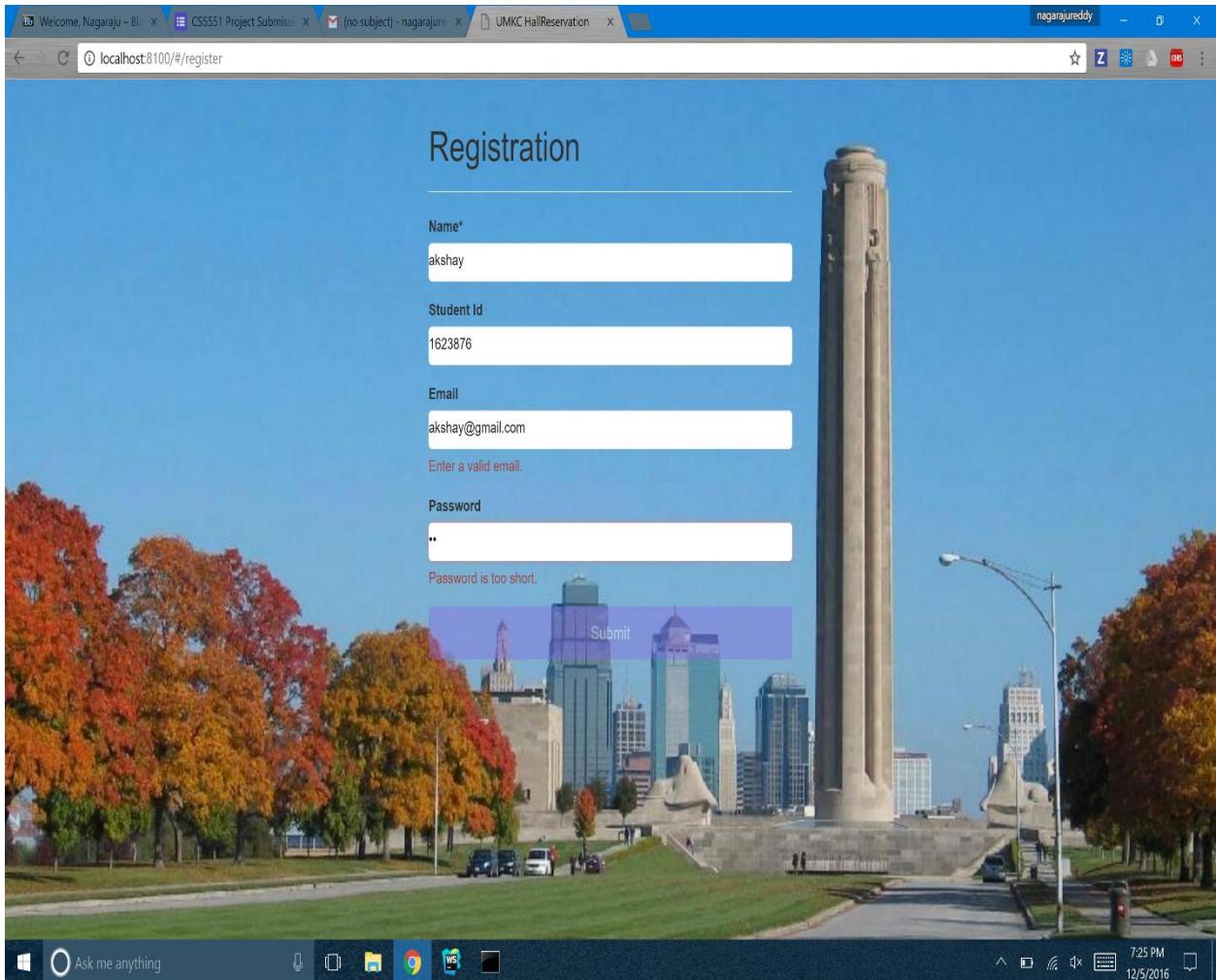
### Login Page:



This is our login page, when user enters login credentials his credentials are validated with our data base and when credentials matched with existing credentials in the database user will be given access to use our application and user will be redirected to our home page. And if user is new to our application he needs to register to our application or create account by filling his details.



New users need to create account to access our application and user need to fill out the above required fields like user



Here we are validating user input fields and our application is only for UMKC people, so user needs to enter his/her umkc email id to create an account to access our application.

Welcome, Nagaraju – Bl... CSS551 Project Submiss... (no subject) - nagaraju... UMKC HallReservation

localhost:8100/#/register

## Registration

Name\*  
akshay

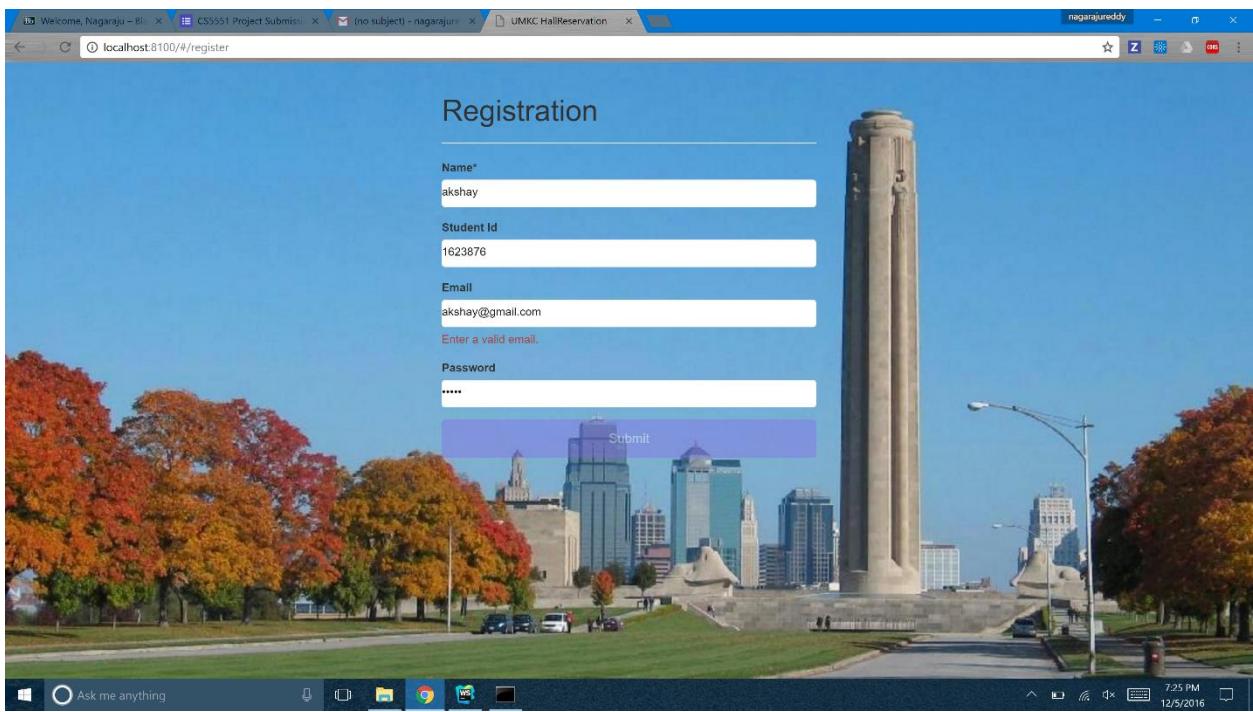
Student Id  
1623876

Email  
akshay@gmail.com

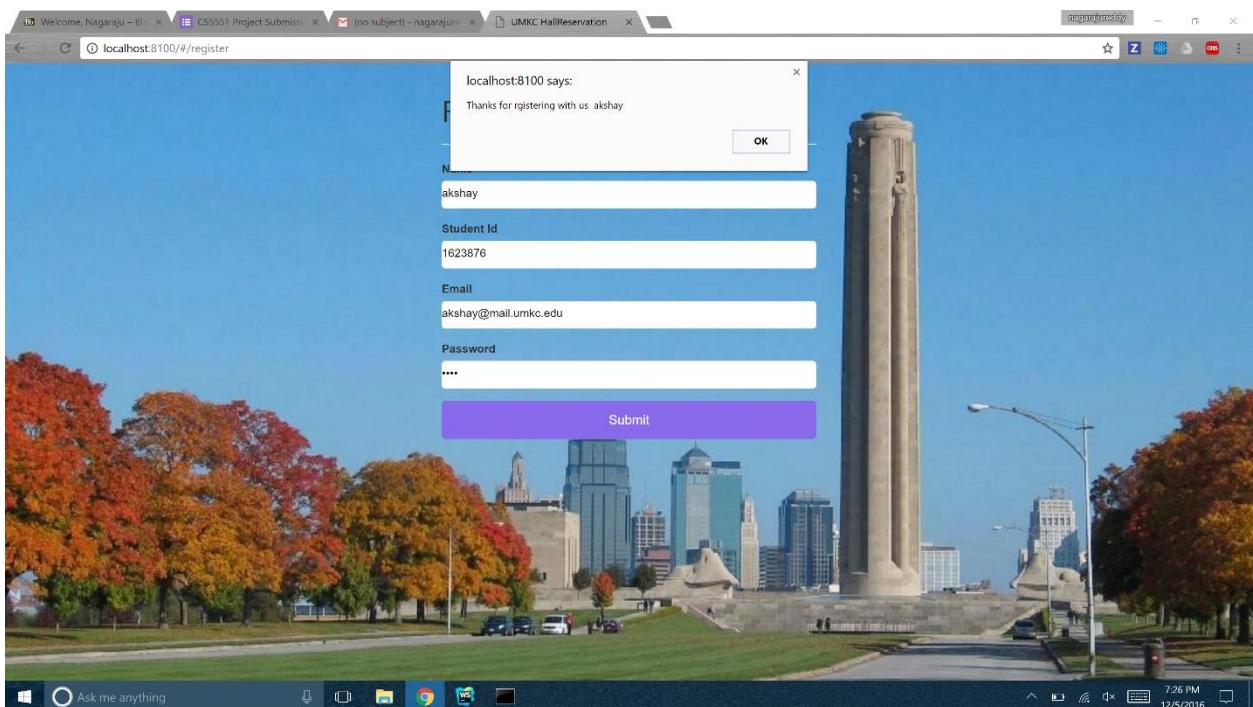
Enter a valid email.

Password  
\*\*\*\*

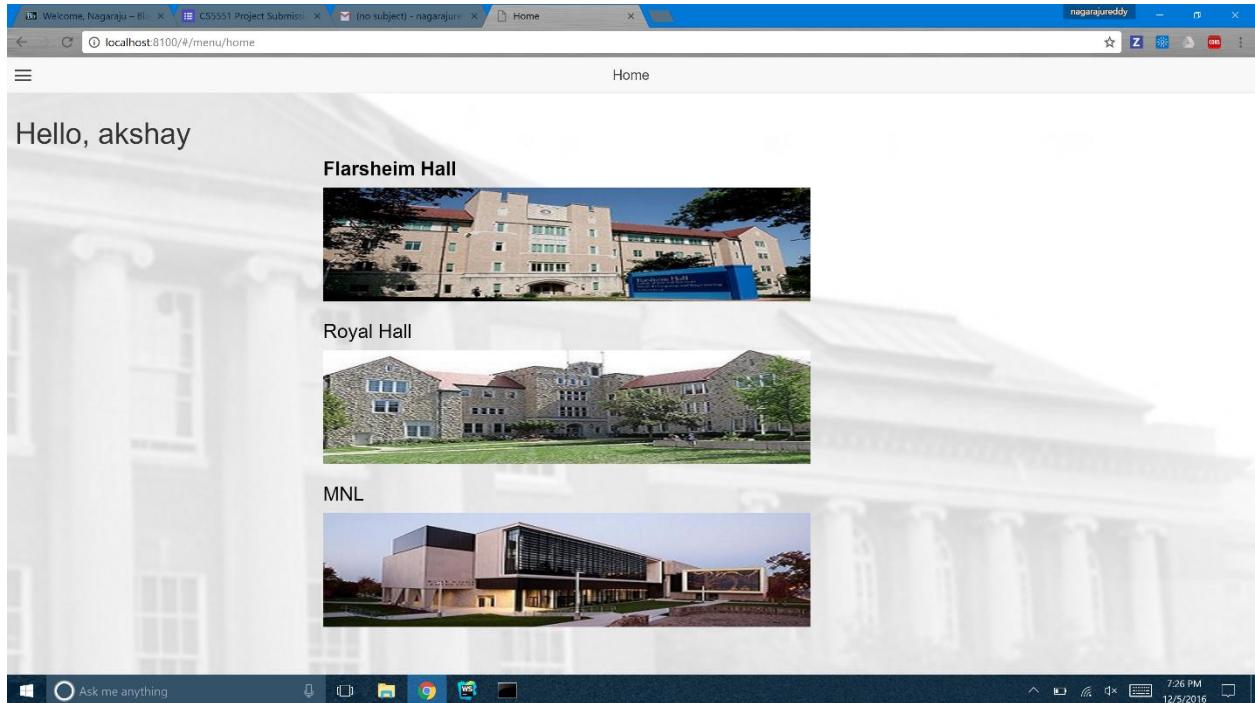
Submit



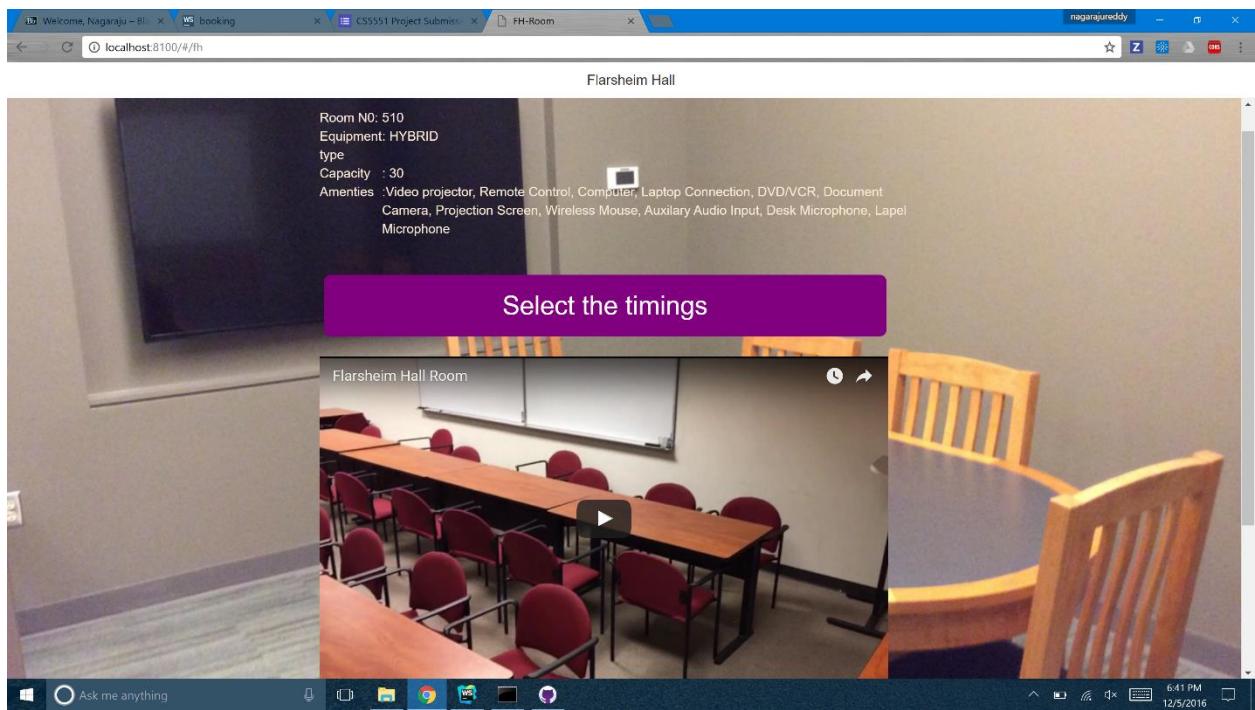
Ask me anything 7:25 PM 12/5/2016



When user details are validated and are true account will be created and user will be added to our database so that he accesses his account regularly. Alert will be displayed when user is created successfully.

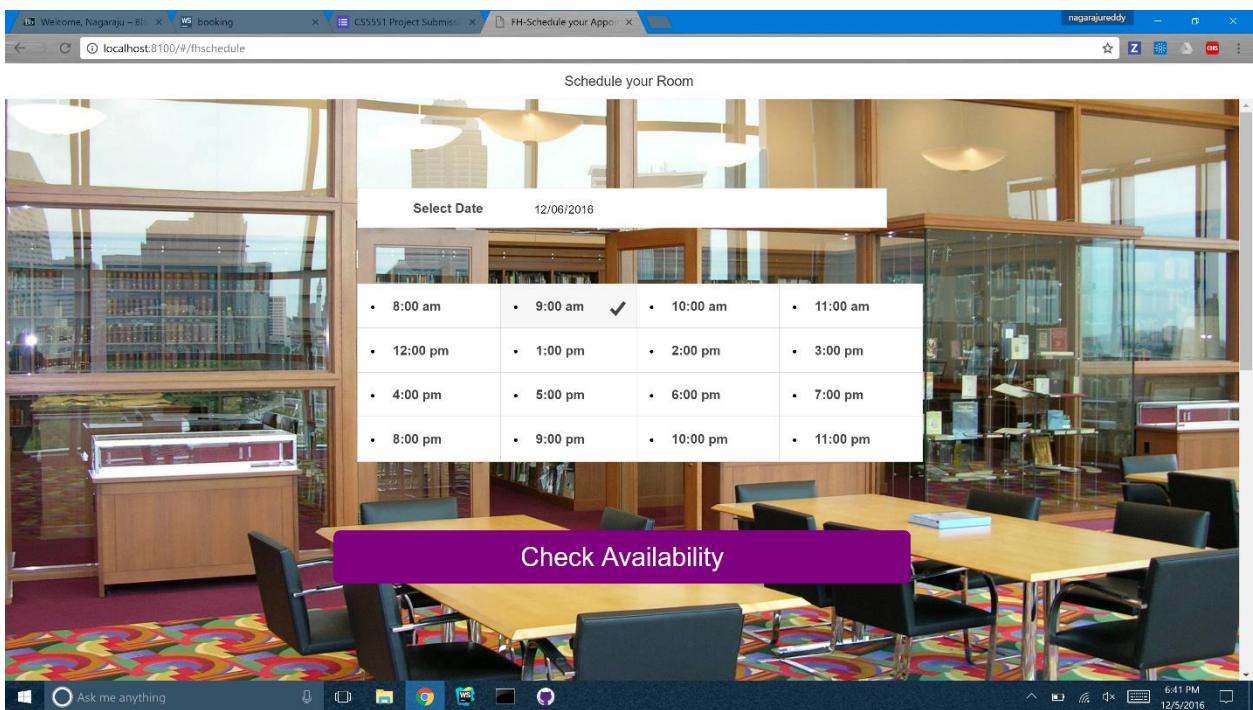
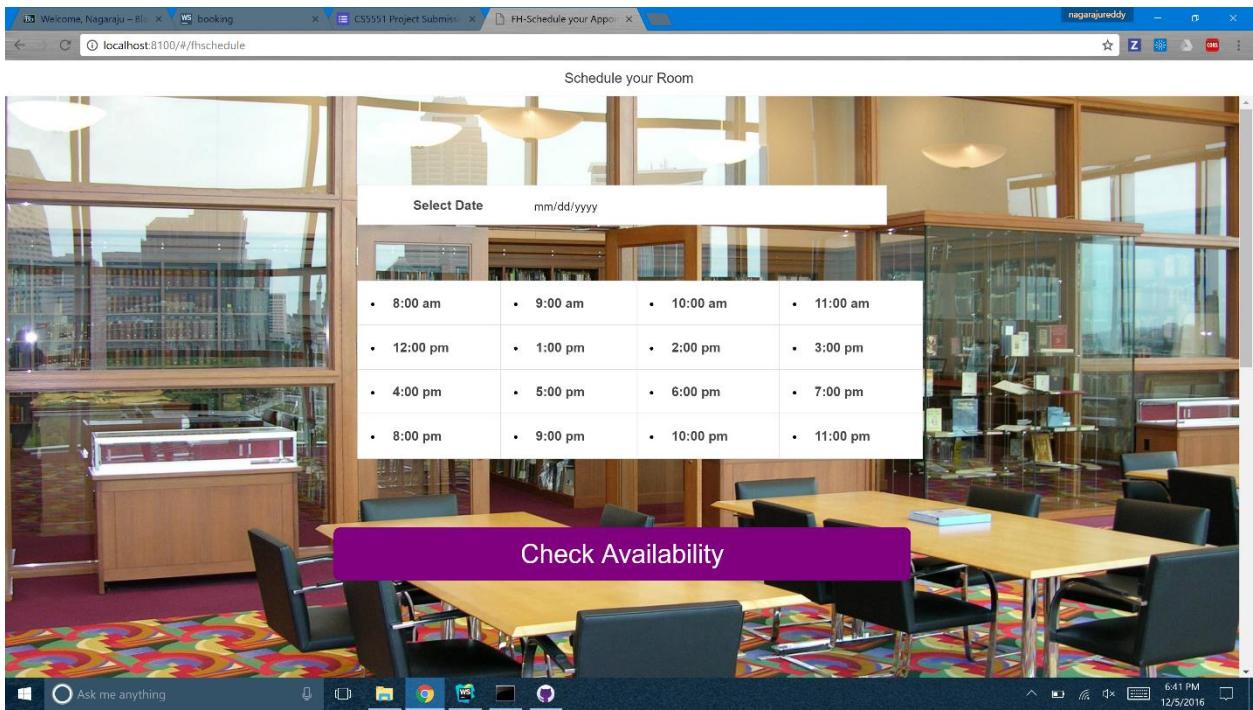


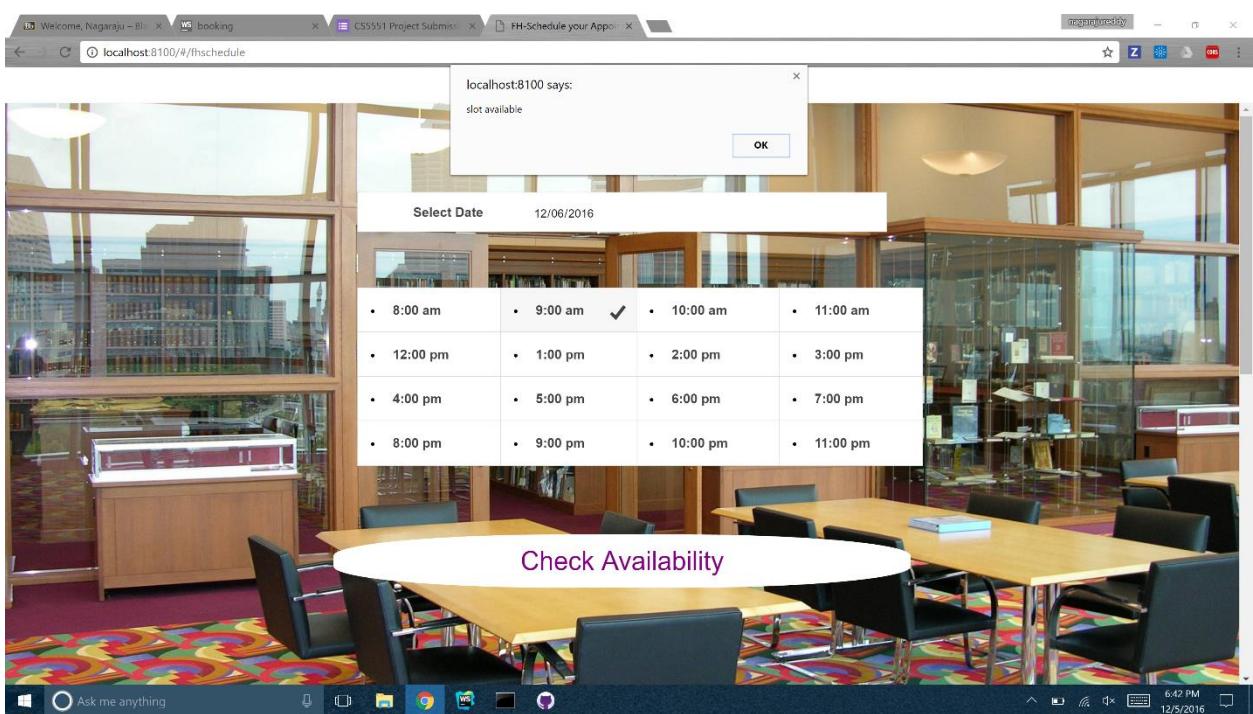
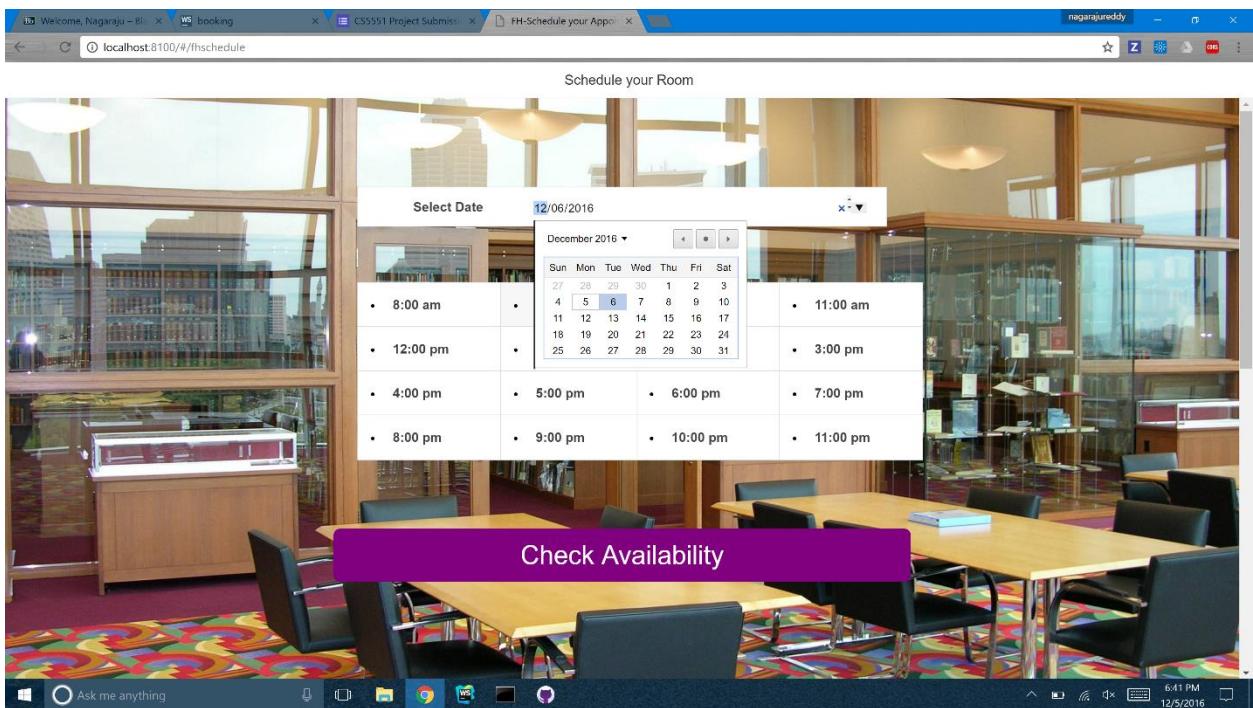
After successful login, user will be redirected to our home page where he can select the halls for reservation. On clicking the hall user will be redirected to the home page of the hall where hall details like infrastructure, seating arrangement, seating capacity and projector options will be displayed to the user and a preview video of the hall will also be displayed.

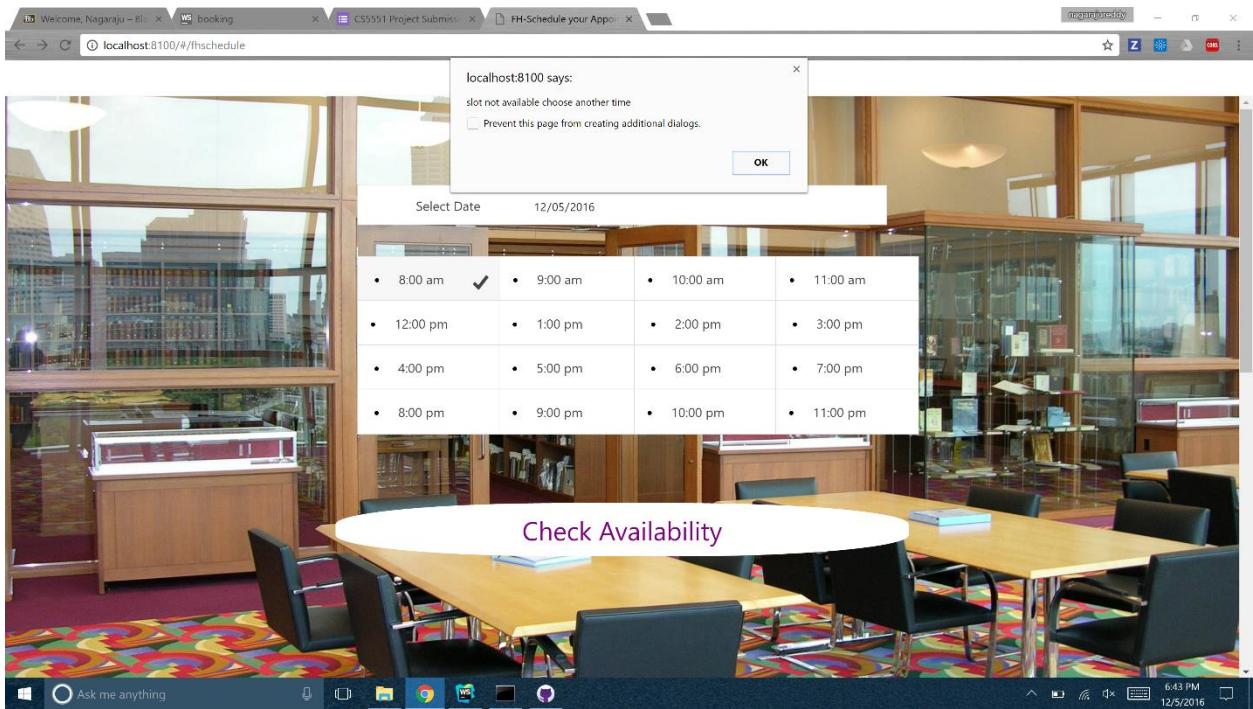
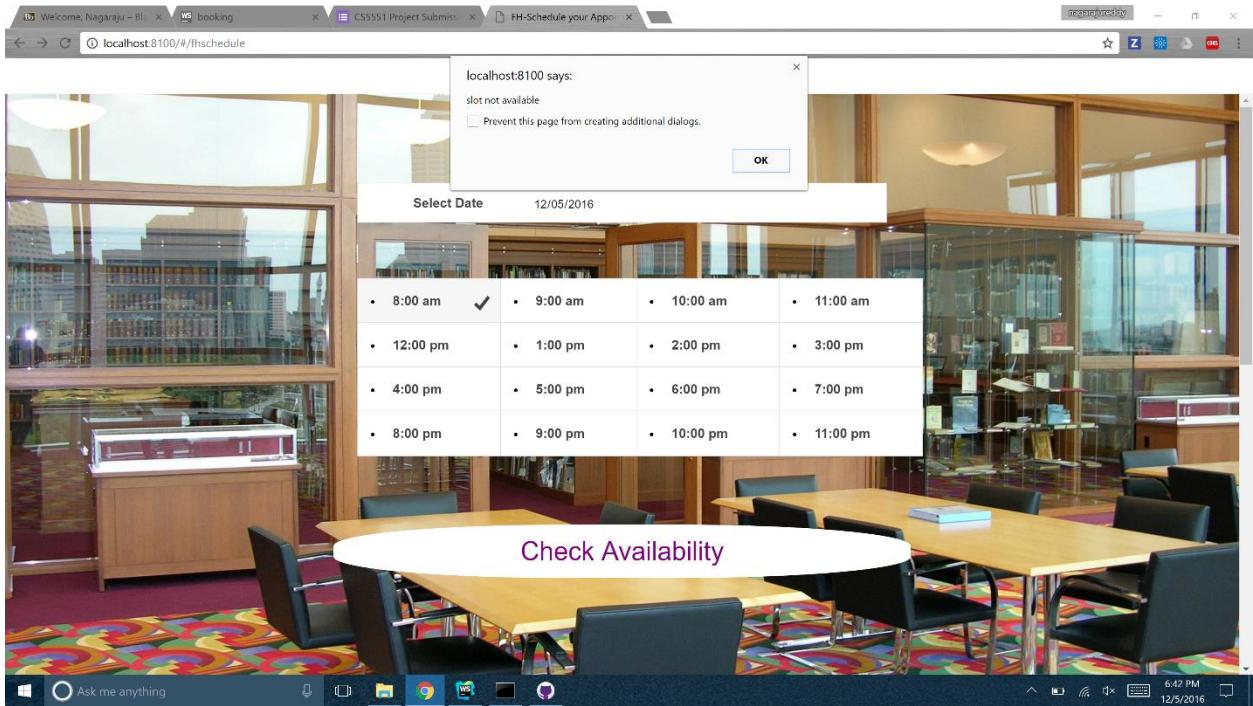


User can view the video of the hall to see the seating arrangement, hall size and seating capacity. If it matches to his requirements he can reserve the hall by checking the available timings.

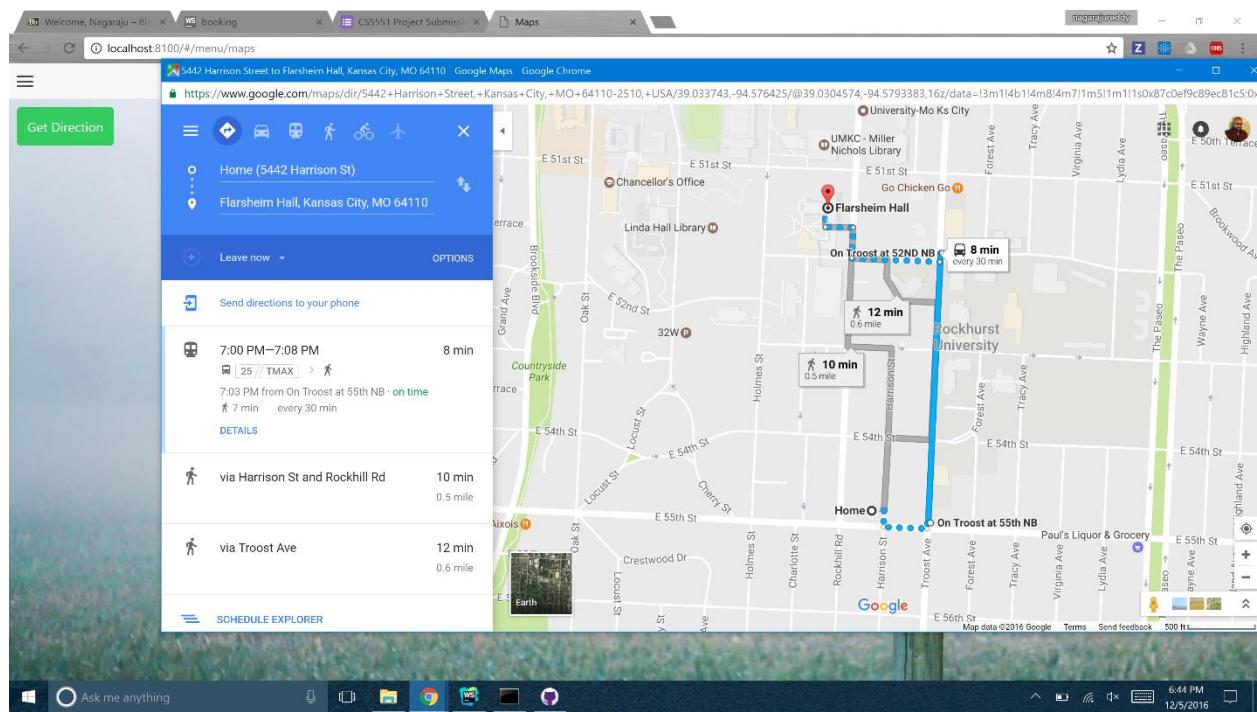
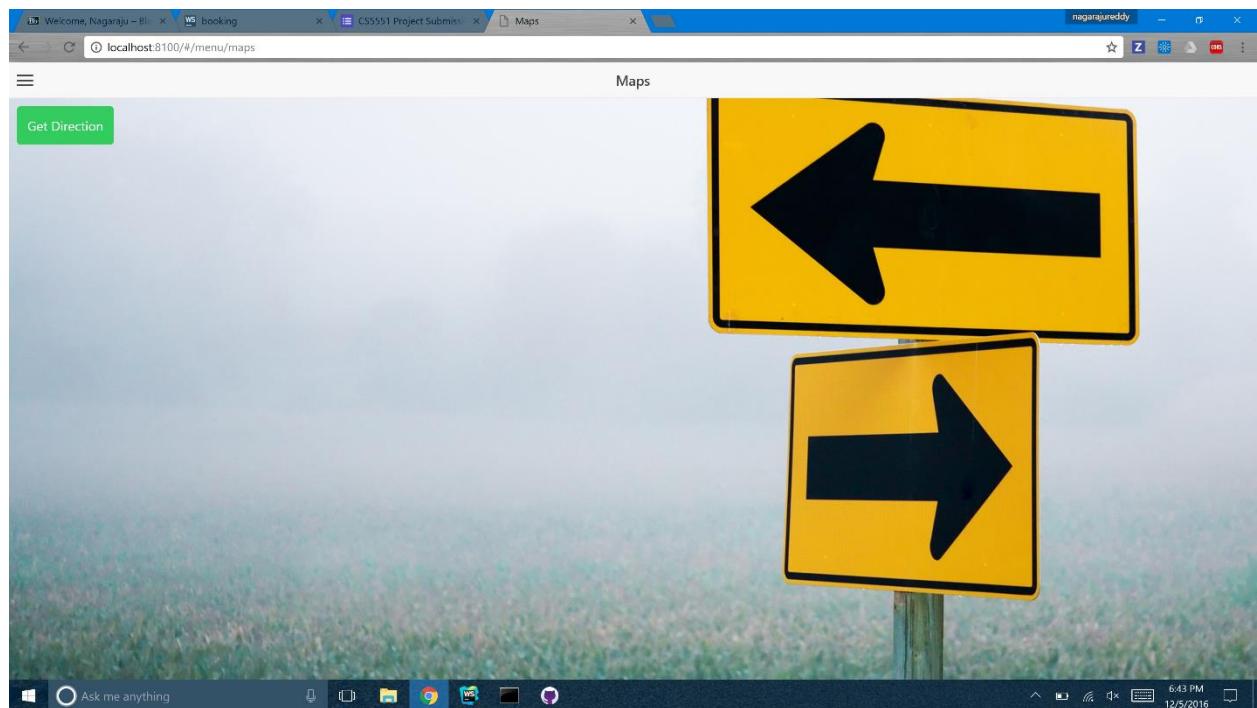
User can see the available dates and timings to reserve the hall. By selecting the available time user will be able to book the hall.

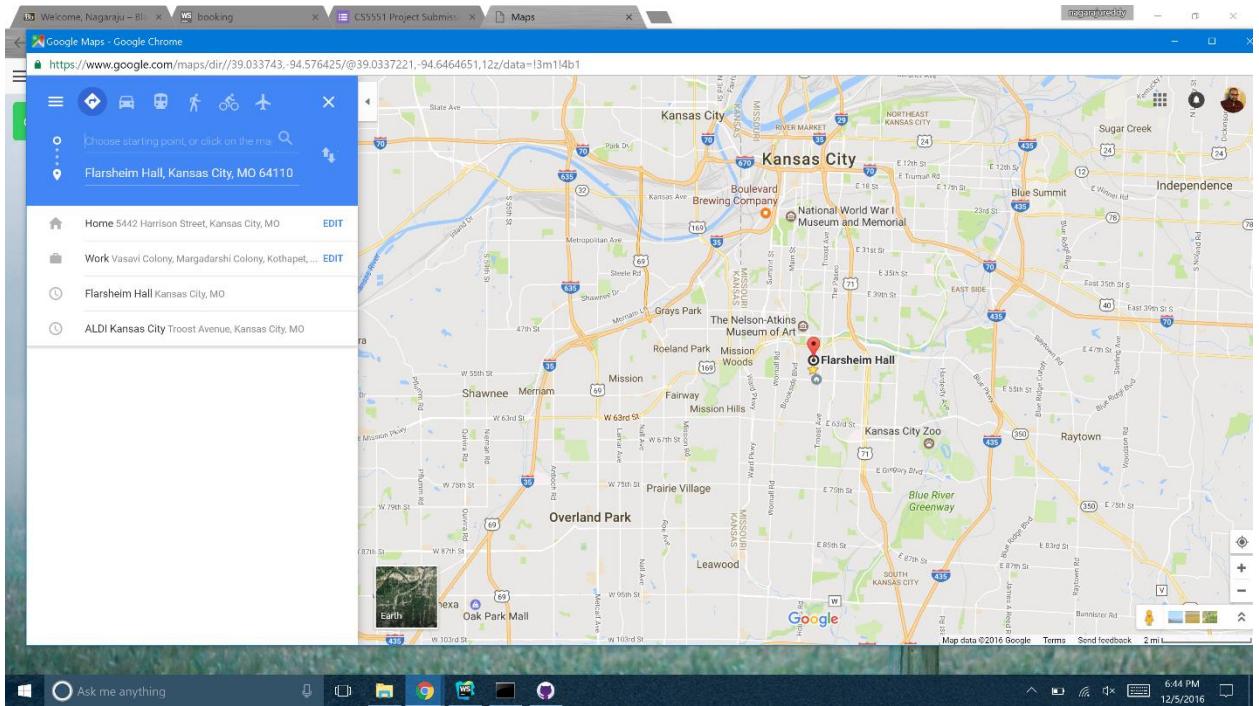






After successfully booking the hall user can check the route from his current location to the destination i.e. selected hall.





We have provided a feature to check the booking history of the user, by clicking on the booking history button user past booking history will be retrieved from the database and will be displayed.

A screenshot of a web application titled "Booking History". The page has a dark background with a chalkboard texture. At the top, it says "your bookings". Below that, there are five entries, each consisting of a time and date. To the right of the entries, there is a stack of old books. The entries are: 1. Time : 12pm Date : Dec 05 2016 2. Time : 8am Date : Dec 05 2016 3. Time : 8am Date : Dec 05 2016 4. Time : 9am Date : Dec 05 2016 5. Time : 8am Date : Dec 07 2016 6. Time : 8am Date : Dec 10 2016

We are also provided admin login where admin able to see all the who are done with bookings and time with hall name.

The image shows two screenshots of a web application interface. The top screenshot displays a 'Login' page with fields for Email\* (admin@mail.umkc.edu) and Password\*. Below these are 'SignIn' and 'SignIn as Admin' buttons. The background of the login page features a scenic view of a city skyline with a prominent tall building and autumn-colored trees. The bottom screenshot shows an 'admin' dashboard titled 'Rooms booked'. It lists four booking entries:

- Student\_id : 16230289  
Time : 5pm  
Date : Dec 16 2016  
Hall : fh
- Student\_id : 16230289  
Time : 9am  
Date : Dec 08 2016  
Hall : fh
- Student\_id : 16234444  
Time : 8am  
Date : Dec 07 2016  
Hall : fh
- Student\_id : 16235555  
Time : 8am

The dashboard has a dark background with a stack of books on the right side. Navigation tabs at the top include 'CS5551 - 2016 Fall - Go!', 'CS5551-FinalProject-2016', 'My Account', 'CS5551 Project Submission', and 'UMKC HallReservation'. The bottom navigation bar includes links for 'Booking History' and 'Logout'.

**Android Deployment:**



UMKC HallReservation

# Login

Email\*

example@mail.umkc.edu

Password\*

enter password

**SignIn**

**Not Registered?**

[Create an Account!!!](#)



37° 20:46



Home

## Flarsheim Hall



## Royal Hall

[Logout](#)



## MNL





37° 20:46

Menu



Ho

Home

Flarshe



Maps

Booking History

Update Profile

Logout

Royal T



MNL





⌚ 37° 20:49

## Flarsheim Hall

Room N0: 510

Equipment: HYBRID

type

Capacity : 30

Amenties :Video projector, Remote Control,  
Computer, Laptop Connection,  
DVD/VCR, Document Camera,  
Projection Screen, Wireless Mouse,  
Auxilary Audio Input, Desk  
Microphone, Lapel Microphone

Select  
the  
timings





37° 20:54

## Schedule your Room

2016

Wed, Dec 7

&lt; December 2016 &gt;

S M T W T F S

1 2 3

4 5 6 7 8 9 10

11 12 13 14 15 16 17

18 19 20 21 22 23 24

25 26 27 28 29 30 31

CLEAR

CANCEL

SET

Availability



36 20:54

## Schedule your Room

Select Date 12/07/2016

- 8:00 am
- 9:00 am

### Alert

slot not available choose another time

OK

Check  
Availability



36° 20:54

## Schedule your Room

Select Date 12/30/2016

- 8:00 am
- 9:00 am

### Alert

slot available

OK

Check  
Availability

## 5. Project Plan

### 5.1. Zenhub Screenshot:

For the increment-2, we have dealt with some issues which are shown below.

The screenshot shows the Zenhub interface for the repository 'harshasaranam / ASE\_FINAL'. The top navigation bar includes links for Code, Issues (6), Pull requests (0), Boards, Reports, Projects (1), Wiki, and a dropdown menu. On the right, there are buttons for Watch (0), Star (0), Fork (0), and a New issue button. Below the navigation, there are filters for Labels and Milestones, and a search bar with the query 'is:issue is:open'. The main list displays 6 open issues:

- email setup** (8) - #13 opened a minute ago by harshasaranam, Increment-3, New Issues
- Documentation** - #12 opened 9 days ago by nagarajureddymyaka, Increment-3, New Issues
- Input fields validation** (20) - #11 opened 19 days ago by nagarajureddymyaka, Increment-3, New Issues
- Calender synchronization** (21) - #10 opened 19 days ago by nagarajureddymyaka, Increment-3, In Progress
- database connectivity** (20) - #5 opened on Oct 8 by harshasaranam, Increment-3, In Progress
- email notification** (20) - #4 opened on Oct 8 by harshasaranam, Increment-2, In Progress

## 5.2. Project Timelines, Members, Task Responsibility

The issues at different stages (in progress, review, done and closed) of our implementation is shown below:

The screenshot shows a GitHub project board for the repository "harshasaranan / ASE\_FINAL". The board is divided into five columns representing different stages of issue status:

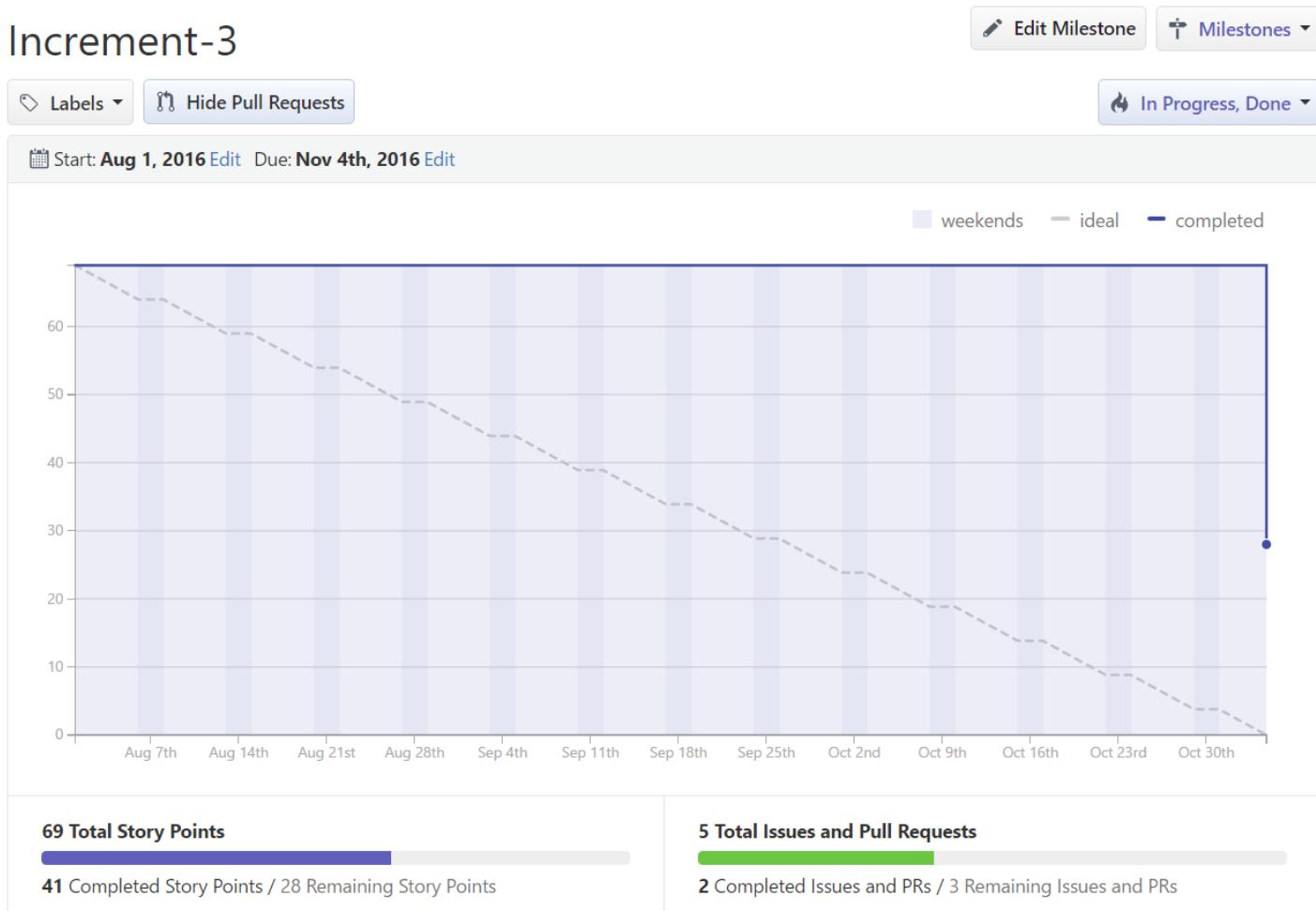
- New Issues**: Contains 20 items, including ASE\_FINAL #11 (Input fields validation, Increment-3) and ASE\_FINAL #12 (Documentation, Increment-3).
- In Progress**: Contains 61 items, including ASE\_FINAL #4 (email notification, Increment-2), ASE\_FINAL #5 (database connectivity, Increment-3), ASE\_FINAL #10 (Calender synchronization, Increment-3), and ASE\_FINAL #21.
- Review/QA**: Contains 0 items.
- Done**: Contains 0 items.
- Closed**: Contains 58 items, including ASE\_FINAL #6 (UML diagrams, Increment-1), ASE\_FINAL #9 (documentation, Increment-2), ASE\_FINAL #3 (Maps, Increment-2), ASE\_FINAL #2 (IONIC interface, Increment-2), and ASE\_FINAL #7 (Architecture diagram and wireframes, Increment-1).

The top navigation bar includes links for Pull requests, Issues, Gist, ToDo, Watch (0), Star (0), Fork (0), and a search bar.

### 5.3. Work breakdown structure (Burn-down chart):

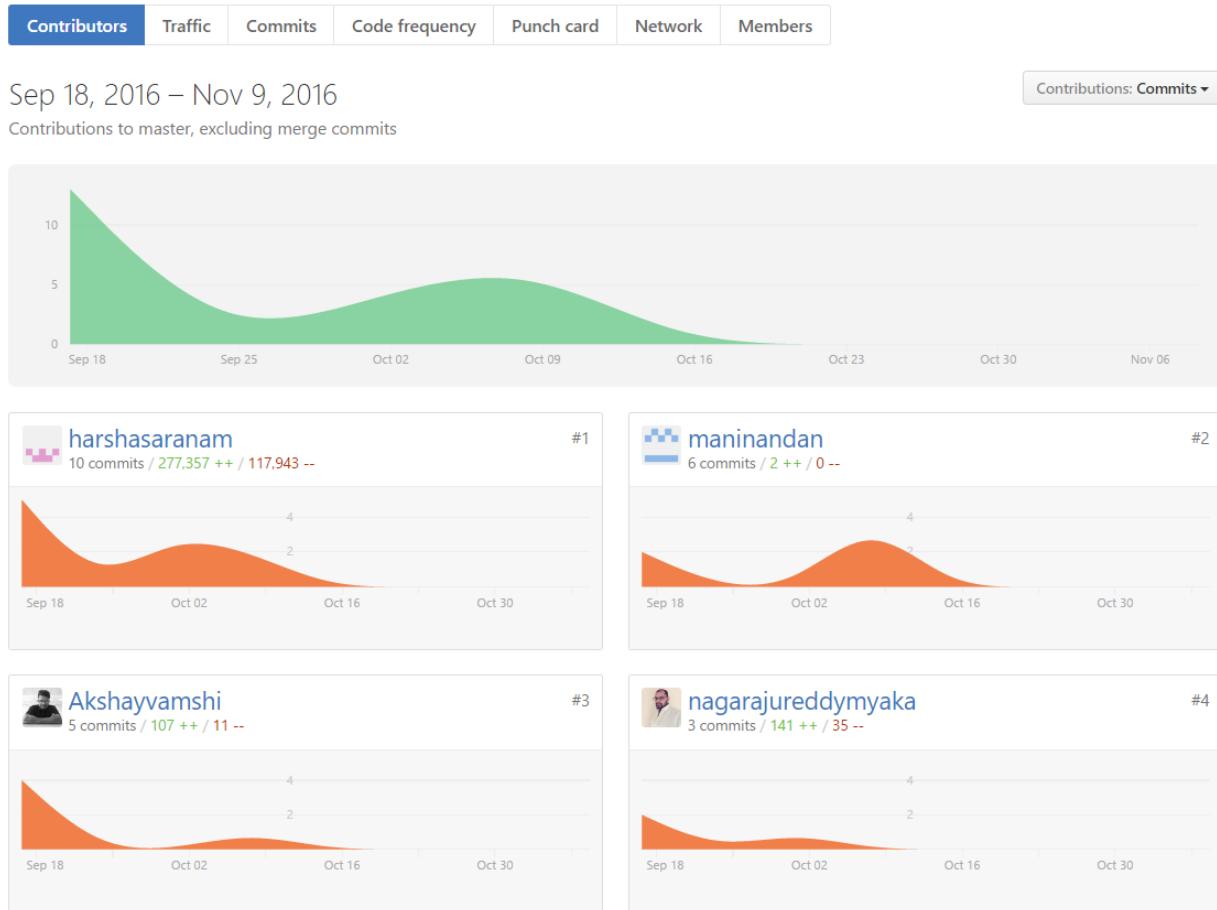
The burn-down for the above issues is displayed below.

#### Increment-3



This phase deals with maps and calendar issues as major ones, which are under process.

## 5.4. Contributions:

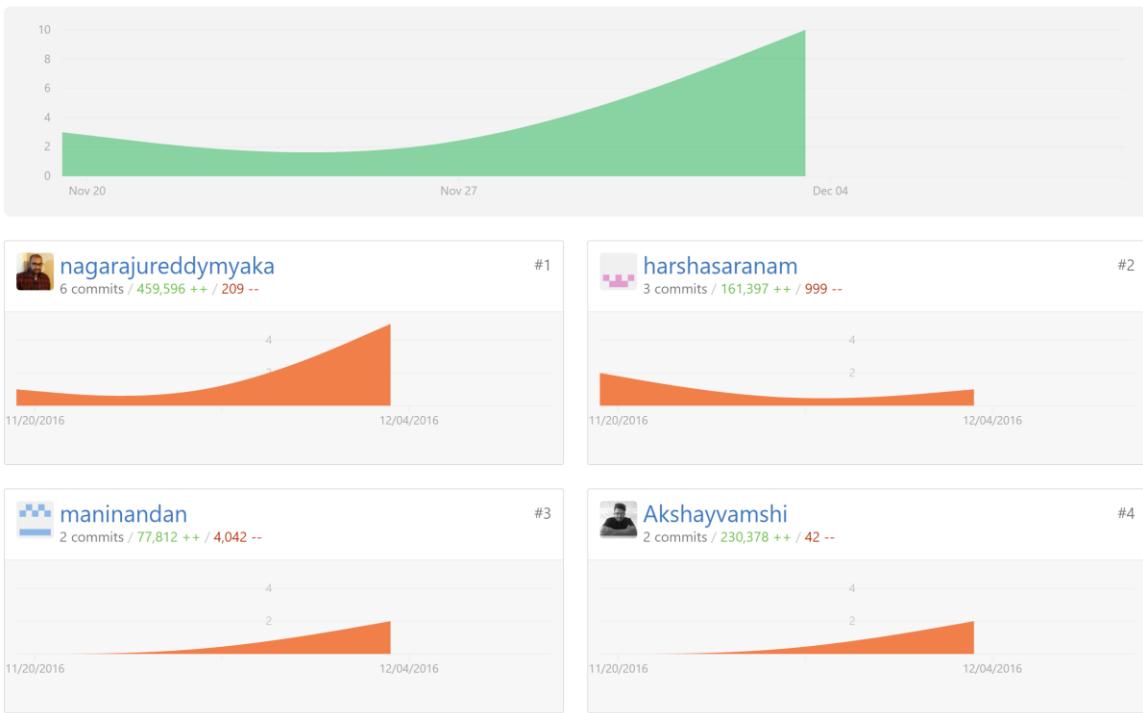


we created another repository due to some issues (we are unable to commit the changes. So, TA asked for submission through new repository)

Nov 20, 2016 – Dec 10, 2016

Contributions to master, excluding merge commits

Contributions: **Commits** ▾



## **6. Progress by phases:**

### **6.1. Increment-1:**

For the first increment, we have planned to develop our application in android environment. As a part of first increment we have developed user interface of our application like we designed our login page, user registration page and home page of our application. We have also drafted about our features like including maps into our application, designing our database implementation and booking history.

We have validated user details like student id, email, name. After successful login user, will be redirected to our home page where all halls available for booking are displayed. And all the details related to halls are also displayed on clicking the hall. On clicking the selected hall details of the hall like infrastructure available in the hall like seating arrangements, projector and seating capacity of the hall will be displayed. In the next phase, we planned to implement other features like displaying the preview video of the hall, displaying the booking history of user.



## 6.2. Increment-2:

In this phase, we developed our entire application in IONIC instead of completing in android studio since ionic has many advantages like our application can be developed, implemented, deployed both in mobile devices(android/IOS) and in web. By using IONIC we could develop both web and mobile (android) application successfully.

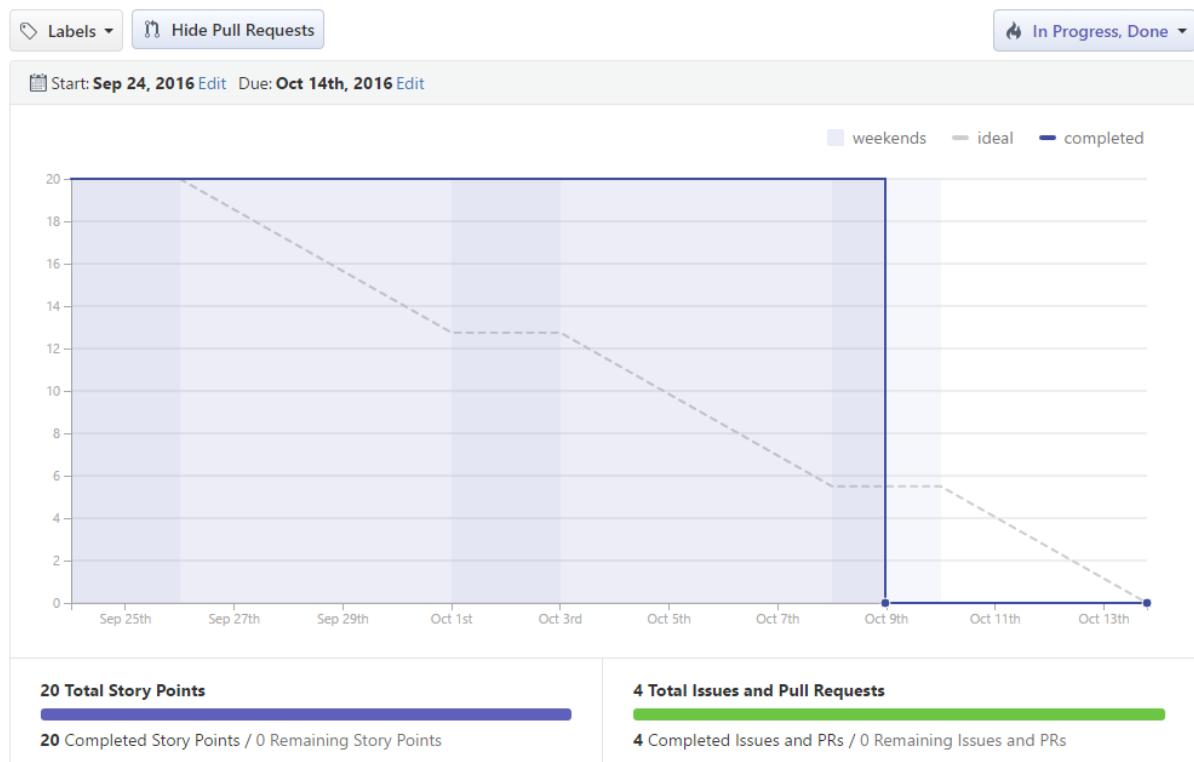
In this phase, we redesigned our entire application UI design in IONIC. We have developed user login page, registration page, home page, and remaining pages as required for our application and, we have validated login, registration

pages. Later we have set up our database, we have used mongodb api to implement our database. And we also implemented google maps api to direct the user from his current location to the desired hall where he booked the hall.

## Increment-2

[Edit Milestone](#) [Milestones ▾](#)

in this phase we have changed entire configuration fro android to ionic. At the end of phase, we try to complete maps, email notification and database connectivity



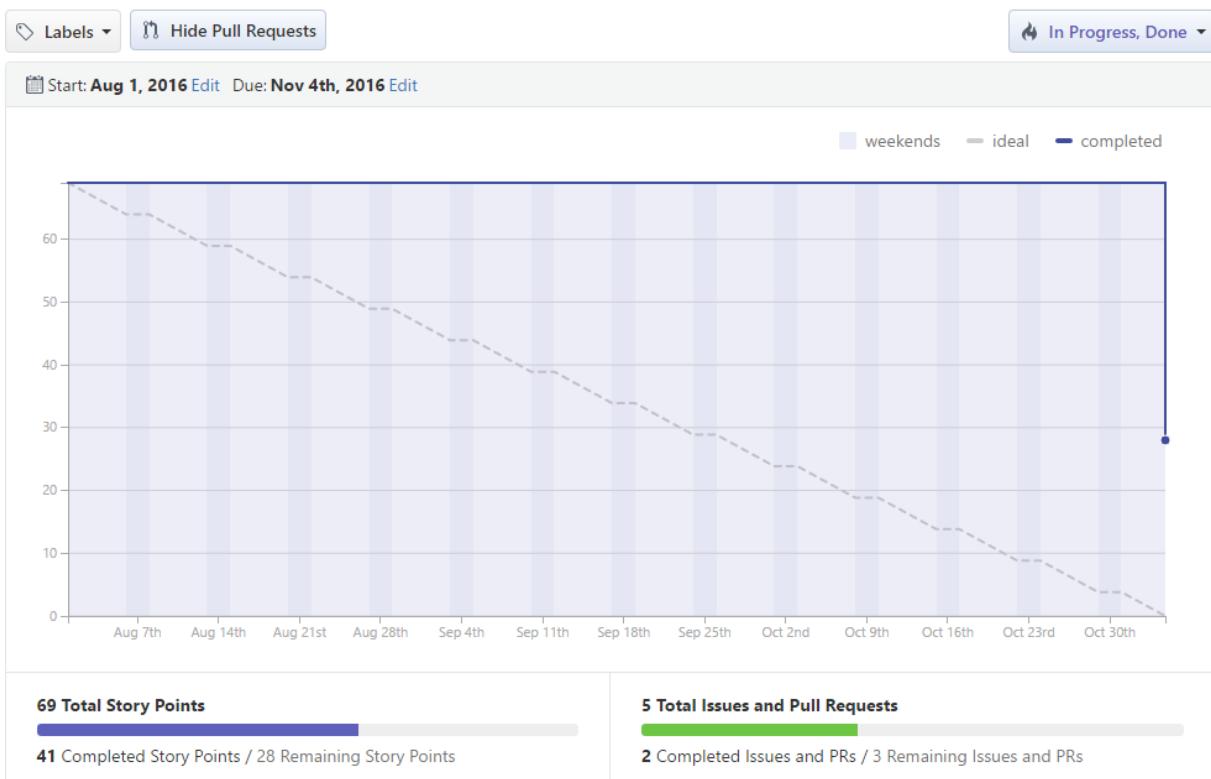
### **6.3. Increment-3:**

In this phase, we implemented full functionality of our application. We could implement the hall booking functionality successfully, users could login to our application and there could select the desired hall for reservation and after selecting their desired hall users were asked for confirmation to book the selected hall, after user's confirmation to select the hall, hall will be booked successfully on the user Id.

After booking the desired hall users were also guided to hall location using the maps implemented in our application. When user clicks the map button map will be popped in his/her devices and route from his current location to the reserved/booked hall will be displayed so that user will be able to reach the destination successfully.

## Increment-3

[Edit Milestone](#) [Milestones](#)



## 6.4. Increment-4:

In this increment, we completed full functionality of our application by incorporating booking history available to the users and we also included video such that user can preview the hall, user will be able to see available amenities, infrastructure related to their desired halls. After selecting their desired hall user will be redirected to the hall page where description of the hall such as seating capacity of the hall, seating arrangement, projector availability will be clearly mentioned. If user wants to select the hall user needs to click on the check availability button. On clicking check availability button user will be redirected to the page where available time slots to book the hall will be displayed. Later, selecting the desired available slot user will be asked for booking confirmation. On confirming the booking, slot will be booked on the user id (student Id) and a confirmation alert(message/email) will be sent to user registered phone/email.

We have also included a feature to retrieve user booking history, where user can be able to see his previous booking history. And to direct the user from his current location to hall maps are imbibed into our application. On clicking maps user will be directed from his current location to the reserved hall.

#### Increment-4



## 7. Bibliography:

- [www.developers.google.com](http://www.developers.google.com)
- [www.stackoverflow.com](http://www.stackoverflow.com)
- [www.tutorialspoint.com](http://www.tutorialspoint.com)

**GitHub URL:** [https://github.com/harshasaranam/ASE\\_FINAL\\_PROJECT](https://github.com/harshasaranam/ASE_FINAL_PROJECT)

**Youtube URL:** <https://www.youtube.com/watch?v=xEILiD9crW4&feature=youtu.be&hd=1>

**Presentation Slides:** <https://www.dropbox.com/s/dmo7y1hgdd3d9zw/ASE-FinalPpt.pptx?dl=0>