

THE INVIGILATOR

PROJECT REPORT

Submitted by

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(Software Engineering)*

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

**DEPARTMENT OF COMPUTER SCIENCE AND
ENGINEERING**

AMRITA SCHOOL OF ENGINEERING

1. PREVIEW OF THE PROJECT

ABSTRACT:

The aim of the project is to notify the faculty about the invigilation duties and details about the exam. The faculty can login and can check about the exam timings and the schedule. It helps the faculty in getting notified prior to the exam. If any changes are made in the schedule, through this application they can check the details.

1.1 Need:

The purpose of this project is to design an application that helps faculties to check their invigilation schedule and timings. Through this the faculty also gets notified about the invigilation duty before the exam. It makes it easier for faculty members to be updated frequently. The faculty members can view the University policies, procedures, rules and regulations for the conduction of examinations. The assisting faculty members are also assigned to help the chief invigilator.

1.2 Motivation:

It becomes very tough for the faculty if they don't know about their invigilation duties before the examination. And if any of the faculty is not available for the exam, it should be informed prior to the exam itself. To overcome all these problems, this application helps in notifying the faculty and we can make sure that if the faculty is available for the examination or not. And we also assign assisting faculty to help the chief invigilator. As a whole this is a very useful application for notifying faculty members about their invigilation duty allotment in an efficient way.

1.3 Tools and Technologies used:

- Visual Studio Code
- MySQL DB/php)
- Html, css, Javascript: Front-end
- Node js, Express: Back-end
- JIRA
- SonarQube: Static code testing
- Jest: Unit testing
- Selenium: UI Testing

2. Product Backlog

2.1. Report of your product backlog from JIRA

The screenshot shows the Jira Software interface with the following details:

- Header:** Jira Software, Dashboards, Projects, Issues, Boards, Create.
- Board:** CSEATI board, Backlog.
- Filters:** QUICK FILTERS: Only My Issues, Recently Updated.
- Sprint:** CSEATI Sprint 1, 16 issues, ACTIVE.
- Issues List:** A list of 24 issues (ESEATI-6 to ESEATI-24) with their descriptions and status. Each issue has a "Login" button and a "Sign up" button next to it.
- Issue Descriptions:**
 - ESEATI-6: As a faculty, respective username and password can be entered in textboxes to login.
 - ESEATI-7: As an admin user, I need to login with username and password.
 - ESEATI-8: As a faculty, if I forget my password, there should be a reset password option.
 - ESEATI-9: As a user, entered password is validated after hashing the entered password with the hashed password stored in database.
 - ESEATI-10: As a faculty, I want to use any third party softwares for log in.
 - ESEATI-11: As an invigilator, he sees a register button that redirects to homepage if validated successfully.
 - ESEATI-12: As an invigilator user, he sees five text boxes in the signup page.
 - ESEATI-13: As an invigilator user, the password should match with the constraints.
 - ESEATI-14: As an Invigilator user, the confirm password field should match the constraints and password entered above.
 - ESEATI-15: As an invigilator user, he gets an error alert pop up if not validated successfully.
 - ESEATI-16: Home page login.
 - ESEATI-20: As an admin user, I must see list of teachers displayed in the body of the webpage.
 - ESEATI-21: As an admin user, I should see a webpage with list of exams and examination rooms.
 - ESEATI-22: As an admin user, I must see header containing search box and navigation bar.
 - ESEATI-23: As an admin user, I can be able to see primary details of invigilators in card view.
 - ESEATI-24: As an admin user, If I click the assign button in a card, A new webpage is opened.
- Bottom Buttons:** Admin Homepage, Home.

CSEATI Sprint 2 15 issues ACTIVE

0 0 102 ...

CSEATI-26 As an invigilator he can see details of his profile	Faculty Homepage	7
CSEATI-27 As an invigilator user, he sees a header containing Drop down with Status, Change password,Edit details and Logout	Faculty Homepage	7
CSEATI-28 As an invigilator, he can be able to see the academic calendar	Faculty Homepage	7
CSEATI-29 As an invigilator user, he sees a webpage with all the assigned duties	Faculty Homepage	8
CSEATI-30 As an invigilator, if he has any queries he can use the help option	Faculty Homepage	7
CSEATI-32 As a faculty, I need to get notified about venue and room number of the exam	Notification bar	7
CSEATI-33 As a faculty, I need to get notified about the exam slot timings	Notification bar	7
CSEATI-34 As a faculty, I need to get the list of students attending the exam	Notification bar	7
CSEATI-35 As a faculty, I need to get notified if any exam slot timings are changed	Notification bar	8
CSEATI-36 As a faculty, I need to get the list of assigned assisting faculty for the exam	Notification bar	7
CSEATI-39 Feedback form will be displayed	About us	6
CSEATI-41 Creators info will be displayed.	About us	6
CSEATI-38 Email and all other social media addresses will be displayed	About us	6
CSEATI-40 A help form will be always active in place to resolve faculty issues	About us	6
CSEATI-42 Security policies will be displayed.	About us	6

Product Backlog Sample:

Back to previous view

[CSEATI-41] Creators info will be displayed. Created: 01/Mar/21 Updated: 10/Jun/21 Resolved: 22/Apr/21					
Status:	Done				
Project:	1_CSE_A_2021_DV_G10_The_Invigilator				
Component/s:	None				
Affects Version/s:	None				
Fix Version/s:	None				
Type:	Story	Priority:	Medium		
Reporter:	V Ravi teja	Assignee:	Afluri sai Prateek		
Resolution:	Done	Votes:	0		
Labels:	None				
Σ Remaining Estimate:	Not Specified	Remaining Estimate:	Not Specified		
Σ Time Spent:	Not Specified	Time Spent:	Not Specified		
Σ Original Estimate:	Not Specified	Original Estimate:	Not Specified		
Attachments:	<input type="checkbox"/> aboutus.hbs <input type="checkbox"/> facedit.hbs <input type="checkbox"/> facedit.hbs <input type="checkbox"/> facroom.hbs <input type="checkbox"/> facultyhome.hbs <input type="checkbox"/> facultylogout.hbs <input type="checkbox"/> schedule.hbs <input type="checkbox"/> scheduleshow.hbs <input type="checkbox"/> shuduleexam.hbs <input type="checkbox"/> shedulestudent.hbs <input type="checkbox"/> showsh.hbs <input type="checkbox"/> showvt.hbs <input type="checkbox"/> signup.hbs <input type="checkbox"/> timetab.hbs				
Sub-Tasks:	Key	Summary	Type	Status	Assignee
	CSEATI-224	A UI will be created	Sub-task	Done	
	CSEATI-225	Information of the people, who contri...	Sub-task	Done	
Epic Link:	About us				
Sprint:	CSEATI Sprint 2				
Description	the information of creators will be displayed				
Generated at Thu Jun 10 01:34:46 IST 2021 by V Ravi teja using Jira 7.12.3#712004-sha1:5ef91d760d7124da5ebec5c16a948a4a807698df.					

Epic 1: Login

USER STORIES:

1) Faculty login

2) Admin login

- 3) Forgot Password
- 4) Password validation

Epic 2: Sign Up

USER STORIES:

- 1) Five text boxes appear in the signup page
- 2) Password constraints:
- 3) Confirm password
- 4) Error validation
- 5) Successful validation

Epic3: Admin Homepage

USER STORIES:

- 1) Faculty List
- 2) Exam List
- 3) Header for scheduler
- 4) Invigilator list
- 5) Assign option

Epic4: Invigilator Homepage

USER STORIES:

1. Profile display
2. Header
3. Calendar
4. Work duty
5. Help

Epic 5: Notifications bar

USER STORIES:

1. Venue
2. Exam timings
3. Student list
4. Change in schedule
5. Assisting faculty

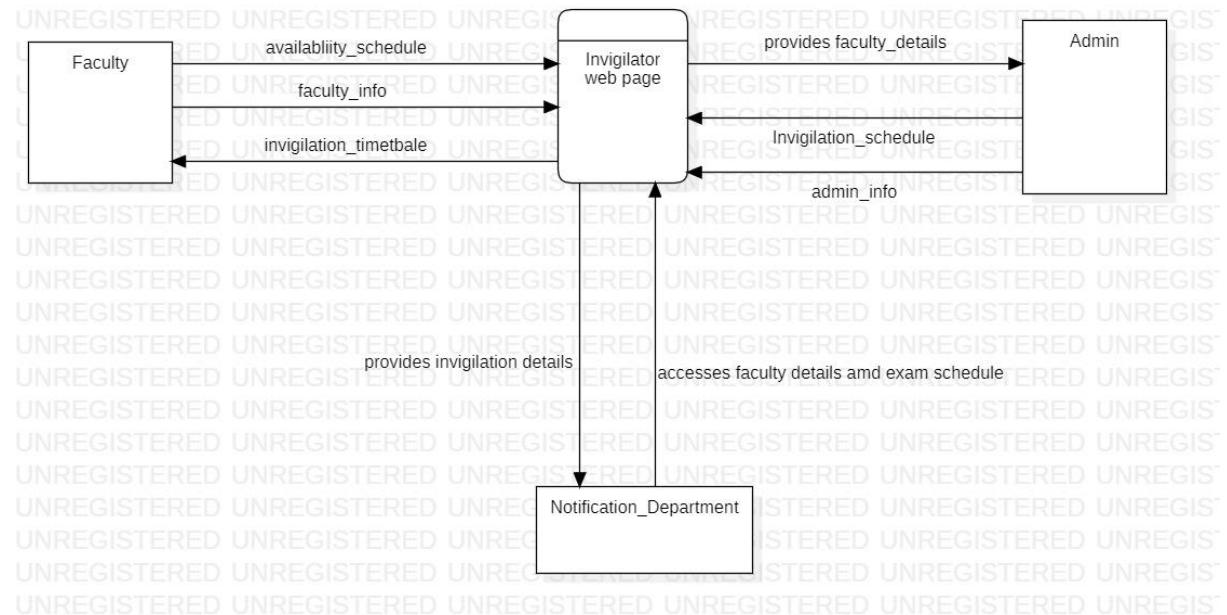
Epic 6:About us

USER STORIES:

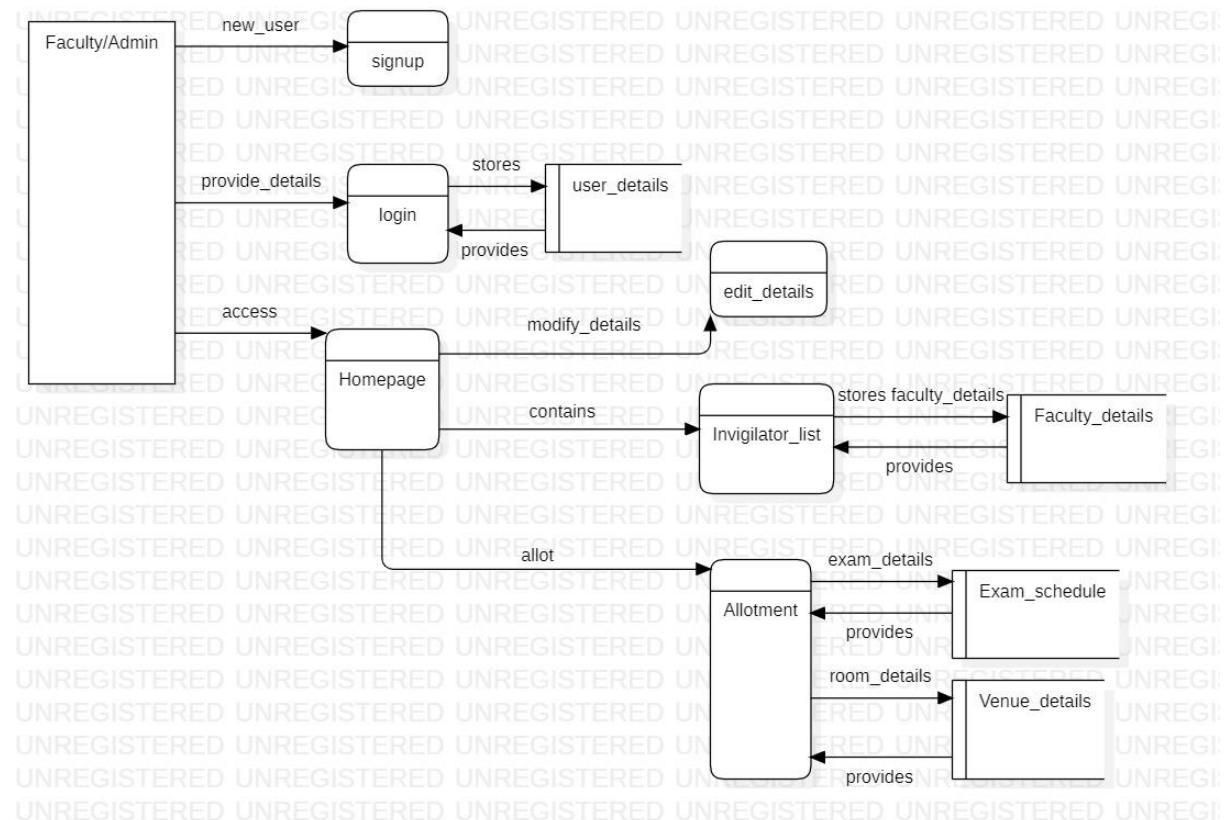
1. Addresses bar
2. Feedback form
3. Help desk
4. Creator info
5. Security Policies

3.1 Data Flow Diagram

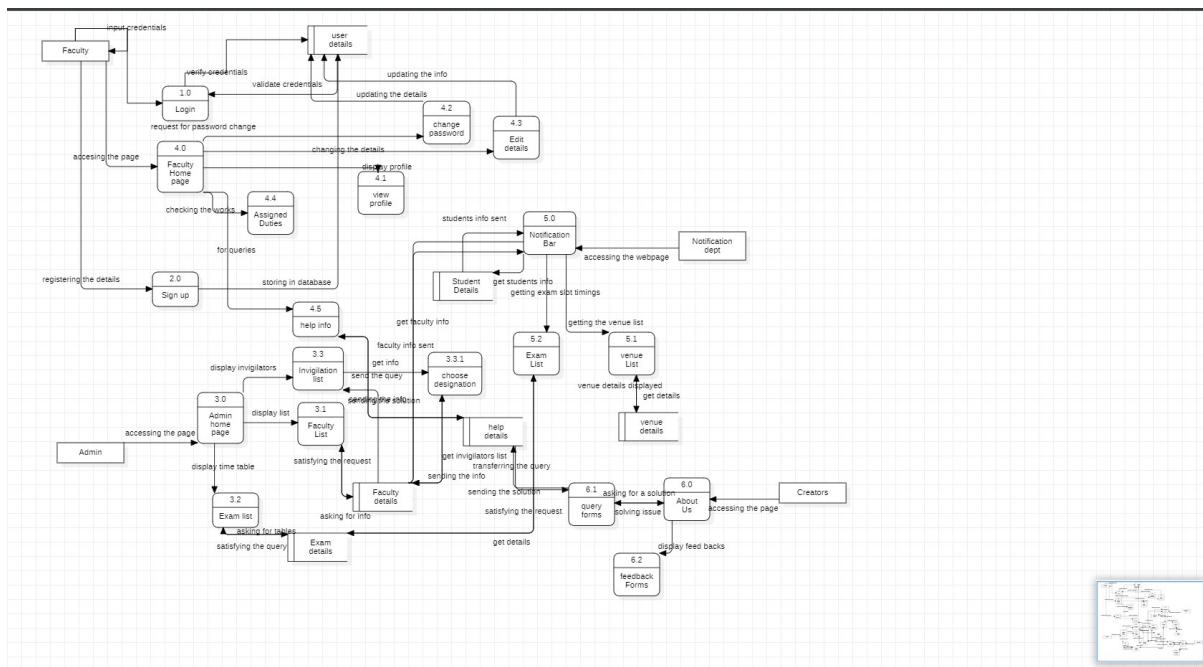
LEVEL 0:



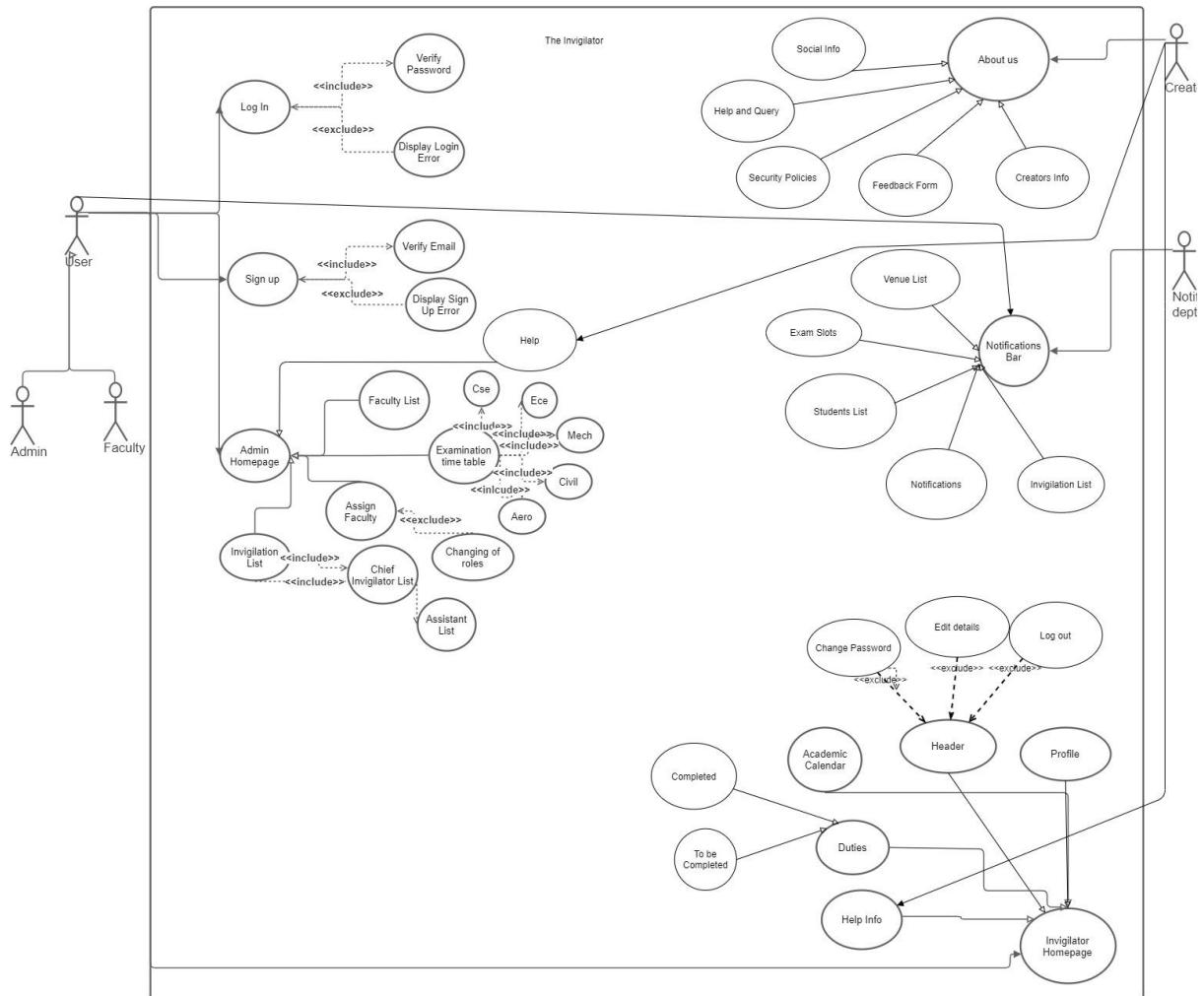
LEVEL 1:



LEVEL 2:



3.2 Use Case Diagram



4. Scrum activities

4.1. Sprint 1 backlog

The screenshot shows the Jira Software interface for the 'CSEATI' project. The backlog view displays 16 issues under the 'CSEATI Sprint 1' iteration. Each issue is represented by a row with a green icon, a number (ESEATI-6 to ESEATI-24), a brief description, and several status indicators (Priority, Assignee, Due Date). The interface includes a top navigation bar with links for Dashboards, Projects, Issues, Boards, and Create, as well as filters for 'Only My Issues' and 'Recently Updated'.

4.2. Sprint 1 standup notes

DATE	TIME	MODE	DESCRIPTION
24/2/2021	6pm-7 pm	Teams	Discussed on the flow of the implementation and sprint 0
01/03/2021	2pm-4 pm	Teams	Finalised on the flow of the implementation for sprint 1 and correction made from sprint 0 meeting.

04/03/2021	7pm-9 pm	Teams	Discussed on the implementation and getting the doubts cleared by the group.
08/03/2021	3pm-5 pm	Teams	Discussed on the implementation and getting the doubts cleared by the group.
11/03/2021	7pm-8 pm	Teams	Discussed on the implementation and getting the doubts cleared by the group.
15/03/2021	2pm-4 pm	Teams	Discussed on the implementation and getting the doubts

4.3 Sprint 1 retrospective notes

SI N O	START	CONTI NUE	STOP
1	UPDA TION OF JIRA ACCO UNT	HAVI N G S C R U	HAVING SCRUM MEETIN G IN THE TEAMS

	REGULARLY	M M E E T I N G S TWICE A WEEK	
2	UPDATING JIRA REGULARLY	NOTING THE NUMBER OF STORY POINTS COMPLETED	DOING TESTING AFTER ALL COMPONENTS ARE INTEGRATED
3	DOING TESTING REGULARLY AFTER EVERY COMPONENT IS IMPLEMENTED	WORKING WITH THE SAME TEAM SPIRIT	STOP IRREGULAR STANDUPS

	MENTE D		
4	DRAWIN G DIAGRA MS FOR THE PROJEC T	DO IN G INTEG RATION AS AND WHEN A COMPO NENT IS IMPLEM ENTED	COMMU NICATIO N GAP BETWE EN TEAMM ATES

5	STICK ING TO DEA DLIN ES	EXECU TING THE PROJE CT AS PER WEEK LY PLAN	MAKIN G FREQ UENT CHAN GES IN PLAN
---	---	---	---

4.4 Sprint 2 backlog

The screenshot shows a Jira backlog board for 'CSEATI Sprint 2'. There are 15 issues listed, each with a checkmark icon and a title. The issues are categorized into three columns:

- Faculty Homepage:** Contains issues CSEATI-26 through CSEATI-30.
- Notification bar:** Contains issues CSEATI-32 through CSEATI-36.
- About us:** Contains issues CSEATI-39 through CSEATI-42.

Each issue row includes a 'Details' link and a 'View' button. The top right corner of the board shows status indicators: 0 (issues), 0 (changes), and 102 (work).

Category	Issue ID	Description	Status
Faculty Homepage	CSEATI-26	As an invigilator he can see details of his profile	Not Started
	CSEATI-27	As an invigilator user, he sees a header containing Drop down with Status, Change password,Edit details and Logout	Not Started
	CSEATI-28	As an invigilator, he can be able to see the academic calendar	Not Started
	CSEATI-29	As an invigilator user, he sees a webpage with all the assigned duties	Not Started
	CSEATI-30	As an invigilator, if he has any queries he can use the help option	Not Started
Notification bar	CSEATI-32	As a faculty, I need to get notified about venue and room number of the exam	Not Started
	CSEATI-33	As a faculty, I need to get notified about the exam slot timings	Not Started
	CSEATI-34	As a faculty,I need to get the list of students attending the exam	Not Started
	CSEATI-35	As a faculty,I need to get notified if any exam slot timings are changed	Not Started
	CSEATI-36	As a faculty, I need to get the list of assigned assisting faculty for the exam	Not Started
About us	CSEATI-39	Feedback form will be displayed	Not Started
	CSEATI-41	Creators info will be displayed.	Not Started
	CSEATI-38	Email and all other social media addresses will be displayed	Not Started
	CSEATI-40	A help form will be always active in place to resolve faculty issues	Not Started
	CSEATI-42	Security policies will be displayed.	Not Started

4.5 Sprint 2 standup notes

DATE	TIME	MODE	DESCRIPTION
2/5/2021	6pm-7pm	Teams	Discussed on the flow of the implementation and sprint 0
4/05/2021	2pm-4pm	Teams	Finalised on the flow of the implementation for sprint 1 and correction made from sprint 0 meeting.
06/05/2021	7pm-9pm	Teams	Discussed on the implementation and getting the doubts cleared by the group.

08/05/2021	3pm-5pm	Teams	Discussed on the implementation and getting the doubts cleared by the group.
11/05/2021	7pm-8pm	Teams	Discussed on the implementation and getting the doubts cleared by the group.
15/05/2021	2pm-4pm	Teams	Discussed on the implementation and getting the doubts cleared by the group.
21/05/2021	2pm-4pm	Teams	Discussed on the implementation and getting the doubts cleared by the group.
23/05/2021	2pm-4pm	Teams	Discussed on the implementation and getting the doubts cleared by the group.
8/06/2021	7pm-8pm	Teams	Discussed the final presentation and sprint 1.

5. Implementation

The Invigilator is an efficient app, which helps the faculty to attend their invigilation duties without any delay and to be on time. They can check their daily duties and queries will be resolved in a faster and better way.

We are using Handlebars, CSS, Javascript as front end and Node.js using express and MySql as back-end. The main purpose of handlebars is to be fast, scalable, and simple, and we are using MySql because it provides a real-time database.

We are using Github for project management, issue tracking, and repository hosting to make it easier to plan and manage our project.

Then we start the implementation of every task by creating an directories in Github and assigning them to developers, within a particular time limit.

Once the issue is solved the developer will create a merge request and the merge request will be reviewed by the scrum master and the team (if needed).

The changes are committed after the confirmation from all team mates.

6. Sample Code

1)Homepage

```
<!DOCTYPE html>

<html>

<head>

    <meta charset="utf-8">

    <meta name="viewport" content="width=device-width">

    <title>JS Bin</title>

    <style>

        * {

            margin:0;

            padding:0;

            font-family: sans-serif;

        }

        html,body{

            width: 100%;

            height: 100%;

        }

        body {

            margin: 0;

            background-color: rgb(86, 199, 86);

        }

        a{

            text-decoration:none;

        }

    
```

```
nav{  
background: white;  
display: flex;  
justify-content: space-between;  
box-shadow: 0 8px 16px rgb(95, 95, 95);  
padding: 30px 60px;  
}  
  
nav h1{  
border-bottom: 4px solid green;  
}  
  
nav ul{  
justify-content: space-around;  
display: flex;  
align-items: center;  
}  
  
nav li{  
list-style: none;  
padding-right: 30px;  
}  
  
nav a{  
color: green;
```

```
text-decoration: none;

font-weight: bold;

padding: 5px 8px;

}

nav a:hover{

color: rgb(0, 0, 0);

border-bottom:4px solid green;

}

.fac{

height: 80px;

width:800px;

background-color: white;

box-shadow:0 8px 16px rgb(95, 95, 95);

border-radius: 300px;

position: absolute;

top:50%;

left:50%;

transform: translate(-50%,-50%) ;

margin-top: 20px;

}

.fa{

position: fixed;

top:50%;
```

```
    left:50%;

    transform: translate(-50%,-50%);

    justify-content: space-between;

    height: 500pxs;

}

</style>

</head>

<body>

<nav>

<h1>Amrita University</h1>

<ul>

<li><a href="home.hbs"> <b>Home</b></a></li>

<li><a href="index.hbs"><b>Faculty</b></a></li>

<li><a href="adminlogin.hbs"><b>Admin</b></a></li>

<li><a href=""><b>Aboutus</b></a></li>

</ul>

</nav>

<div class='fa'>

    
```

```
</div>

</body>

</html>
```

2) Routing

```
const express = require('express');
const router=express.Router();
const mysql=require("mysql");

const db=mysql.createConnection({
    host:'localhost',
    user:'root',
    password:'',
    database:'facultylogin'
});

router.get('/',(req,res)=>{
    res.render('home');
});
router.get('/home.hbs',(req,res)=>{
    res.render('home');
});
router.get('/index.hbs',(req,res)=>{
    res.render('index');
});
router.get('/adminlogin.hbs',(req,res)=>{
    res.render('adminlogin');
});
router.get('/adminlogout.hbs',(req,res)=>{
    res.render('adminlogout');
});
router.get('/signup.hbs',(req,res)=>{
    res.render('signup');
});
router.get('/admin.hbs',(req,res)=>{
```

```
        res.render('admin');
    });
router.get('/timetab.hbs', (req,res)=>{
    res.render('timetab');
});
router.get('/adminca.hbs', (req,res)=>{
    res.render('adminca');
});
router.get('/facassign.hbs', (req,res)=>{
    db.query('SELECT name FROM emp', (err,results)=>{
        if(err) throw err;
        db.query('select room from facroom', (err,result)=>{
            res.render('facassign', {facname: results,user:result});
        });
    });
});

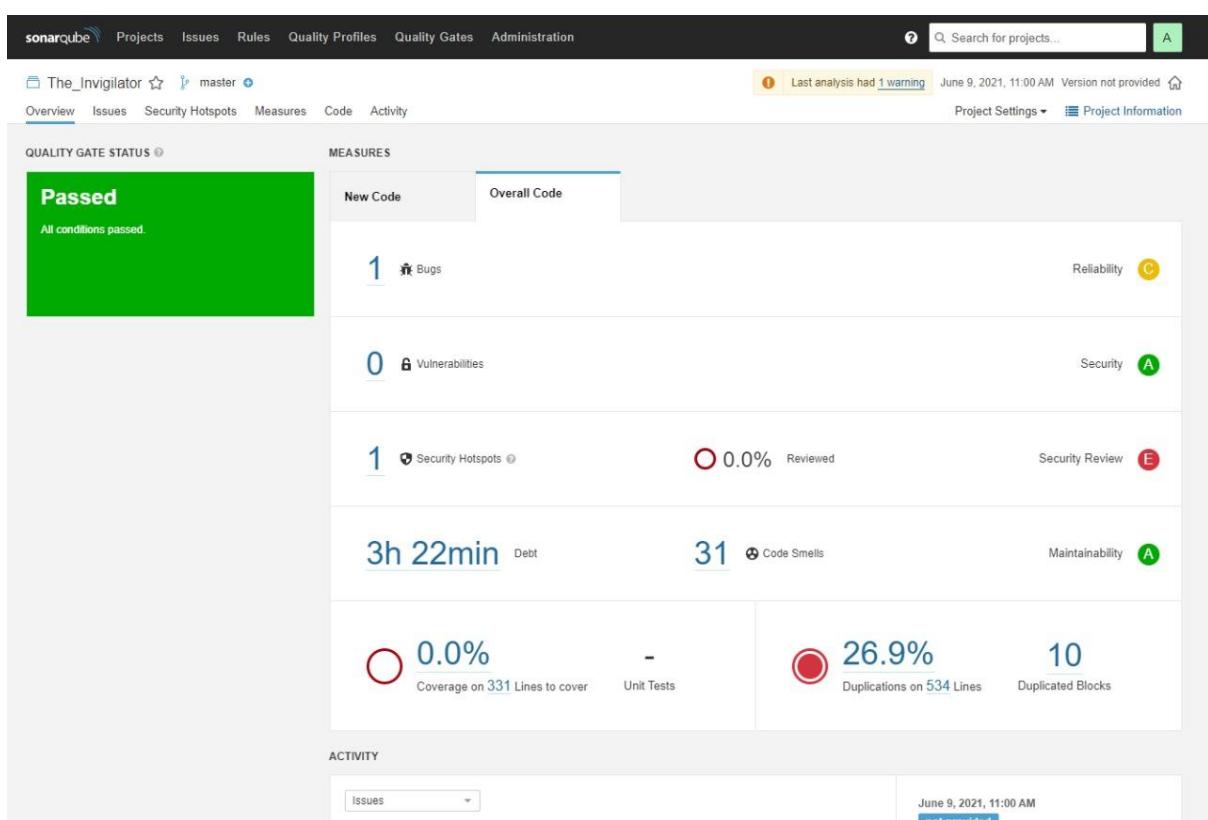
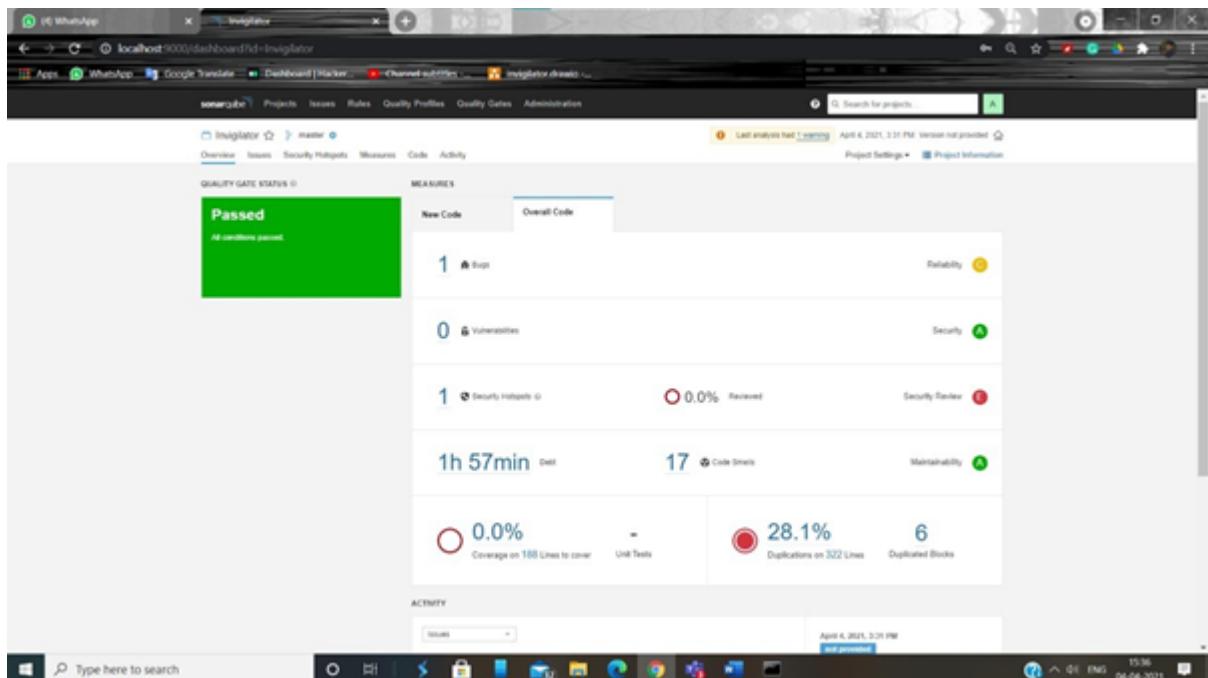
router.get('/adminfac.hbs', (req,res)=>{
    db.query('SELECT id,name,dept,phno,userid FROM
emp', (err,results)=>{
        if(err) throw err;
        console.log(results);
        res.render('adminfac', {userdata: results});
    });
});

module.exports = router;
```

7. Software Engineering tools used

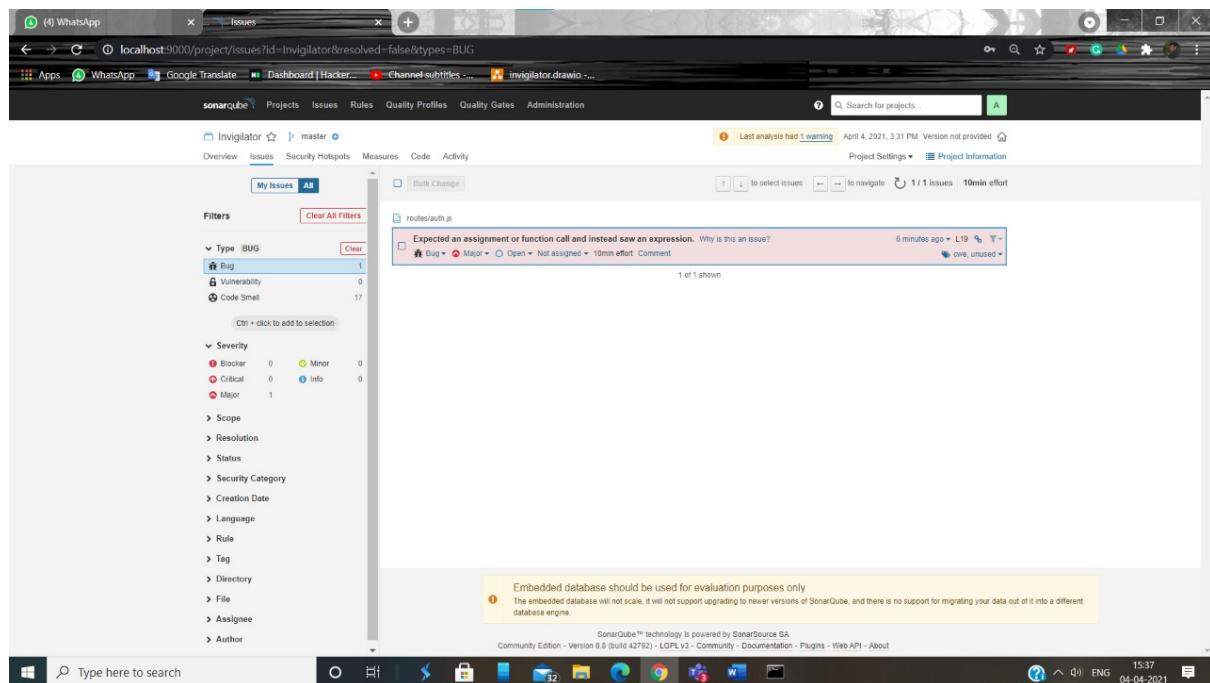
7.1 Static Code analysis

7.1.1 Screenshots/report



7.1.2 Actions Taken

Cleared Bug



7.1.3 Additional Information

All the bugs were cleared and final results were obtained.

7.2 Unit Testing

7.2.1 Tool used and its setup details

i) We have used Jest for unit testing.

ii) We created a test and defined function to test the validity of username and password

7.2.2 Passed TestCases:

```
auth.test.js ...
1 const{ exam } = require('../controllers/auth');
2
3 test('the exam details', () => {
4   const text = exam('cse', '10-06-2021', 'CSE001', 'EXAM1', '1');
5 });

```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

```
Ravi teja@LAPTOP-DDJ3VI13 MINGW64 ~/Desktop/Seproject/SE (master)
$ npm test

> SE@1.0.0 test
> jest

PASS ./auth.test.js
  ✓ the exam details (87 ms)

  console.log
    undefined

    at exam (controllers/auth.js:164:13)

  console.log
    TypeError: Cannot read property 'dept' of undefined
      at exam (C:\Users\Ravi teja\Desktop\Seproject\SE\controllers\auth.js:166:29)
      at Object.<anonymous> (C:\Users\Ravi teja\Desktop\Seproject\SE\auth.test.js:4:18)
      at Promise.then.completed (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\utils.js:316:28)
      at new Promise (<anonymous>)
      at callAsyncCircusFn (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\utils.js:241:10)
      at _callCircusTest (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:218:40)
      at processTicksAndRejections (node:internal/process/task_queues:94:5)
      at _runTest (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:155:3)
      at _runTestsForDescribeBlock (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:66:9)
      at run (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:25:3)
      at exam (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:25:3)

  at exam (controllers/auth.js:198:17)

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
Snapshots:  0 total
Time:        3.84 s
Ran all test suites.
```

```
auth.test.js ...
1 const{ student } = require('../controllers/auth');
2
3 test('the exam details of student will be displayed', () => {
4   const text = student('CB.EN.U4AERO18001','shankar','C204');
5 });

```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

```
> SE@1.0.0 test
> jest

PASS ./auth.test.js
  ✓ the exam details (70 ms)

  console.log
    undefined

    at exam (controllers/auth.js:164:13)

  console.log
    TypeError: Cannot read property 'dept' of undefined
      at exam (C:\Users\Ravi teja\Desktop\Seproject\SE\controllers\auth.js:166:29)
      at Object.<anonymous> (C:\Users\Ravi teja\Desktop\Seproject\SE\auth.test.js:4:18)
      at Promise.then.completed (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\utils.js:316:28)
      at new Promise (<anonymous>)
      at callAsyncCircusFn (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\utils.js:241:10)
      at _callCircusTest (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:218:40)
      at _runTest (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:155:3)
      at _runTestsForDescribeBlock (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:66:9)
      at run (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:25:3)
      at runAndTransformResultsToJestFormat (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\legacy-code-to-todo-rewrite\jestAdapterInit.j
s:166:21)
      at exam (controllers/auth.js:198:17)

  at exam (controllers/auth.js:198:17)

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
Snapshots:  0 total
Time:        0.689 s, estimated 3 s
Ran all test suites.

Ravi teja@LAPTOP-DDJ3VI13 MINGW64 ~/Desktop/Seproject/SE (master)
$
```

```
1 const { facroom } = require('../controllers/auth');
2
3 test('the room number for the faculty should be assigned', () => {
4   const text = facroom('V Ravi', 'A202', '10-06-2021');
5 });
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```

```
1 const edit = require( './controllers/auth' );
2
3 test('details of the faculty will be changed', () => {
4   const text = edit('raviaero@gmail.com','ravi','2147665544');
5 });

```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

```
> SE@1.0.0 test
> jest
```

PASS ./auth.test.js
✓ exam details (70 ms)

```
console.log
undefined

at exam (controllers/auth.js:164:13)

console.log
TypeError: Cannot read property 'dept' of undefined
    at exam (C:\Users\Ravi teja\Desktop\Seproject\SE\controllers\auth.js:166:29)
    at Object.<anonymous> (C:\Users\Ravi teja\Desktop\Seproject\SE\auth.test.js:4:18)
    at Promise.then.completed (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\utils.js:316:28)
    at new Promise (<anonymous>)
    at callAsyncCircusFn (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\utils.js:241:10)
    at _callCircusTest (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:218:40)
    at _runTest (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:155:3)
    at _runTestsForDescribeOrBlock (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:66:9)
    at run (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:25:3)
    at runAndTransformResultsToTestFormat (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\legacy-code-to-todo-rewrite\jestAdapterInit.js:166:21)
    at exam (controllers/auth.js:198:17)

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
Snapshots:  0 total
Time:        0.686 s, estimated 1 s
Ran all test suites.
```

```
Ravi teja@LAPTOP-DDJ3VI13 MINGW64 ~/Desktop/Seproject/SE (master)
$
```

```

JS auth.test.js > ...
1   const notify = require('../controllers/auth');
2
3   test('should notify the faculty', () => {
4     const text = notify('C siddhartha','Schedule updated');
5   });

```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

```

> SE@1.0.0 test
> jest

PASS ./auth.test.js
  ✓ the exam details (68 ms)

console.log
undefined

  at exam (controllers/auth.js:164:13)

console.log
TypeError: Cannot read property 'dept' of undefined
  at exam (C:\Users\Ravi teja\Desktop\Seproject\SE\controllers\auth.js:166:29)
  at Object.<anonymous> (C:\Users\Ravi teja\Desktop\Seproject\SE\auth.test.js:4:18)
  at Promise.then.completed (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\utils.js:316:28)
  at new Promise (<anonymous>)
  at callAsyncCircusFn (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\utils.js:241:10)
  at _callCircusTest (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:218:40)
  at _runtest (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:55:3)
  at _runtestsForDescribeBlock (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:66:9)
  at run (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\run.js:25:3)
  at runAndTransformResultsToJestFormat (C:\Users\Ravi teja\Desktop\Seproject\SE\node_modules\jest-circus\build\legacy-code-todo-rewrite\jestAdapterInit.js:166:21)
  at exam (controllers/auth.js:198:17)

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
Snapshots:  0 total
Time:        0.69 s, estimated 1 s
Ran all test suites.

Ravi teja@LAPTOP-DD13VI13 MINGW64 ~/Desktop/Seproject/SE (master)

```

7.2.3) Failed TestCases

The screenshot shows the Visual Studio Code interface with the following details:

- File Explorer:** Shows the project structure with files like auth.js, controllers, routes, pages.js, views, and various .hbs files.
- Terminal:** Shows the command `npm test` being run, resulting in a failure message: "npm ERR! Test failed. See above for more details."
- Code Editor:** The file `auth.test.js` is open, containing Jest test cases for the `signup` function in `controllers/auth.js`. One test case fails with the error: "TypeError: Cannot destructure property 'id' of 'req.body' as it is undefined." The failing line is highlighted in red.
- Status Bar:** Shows the current file is `auth.test.js` and the status bar indicates the test failed with 1 error.

```

File Edit Selection View Go Run Terminal Help auth.test.js - SE - Visual Studio Code
auth.test.js controllers auth.js routes auth.test.js ✘ package.json 1 from selenium import webdriver.py admin.hbs facassign.hbs adm app.js auth.test.js package-lock.json package.json
EXPLORER
SE
controllers
auth.js
node_modules
public
logo.png
routes
auth.js
pages.js
views
admin.hbs
adminca.hbs
adminfac.hbs
adminlogin.hbs
adminlogout.hbs
facassign.hbs
home.hbs
index.hbs
signup.hbs
timetab.hbs
app.js
auth.test.js
package-lock.json
package.json
PROBLEMS 1 OUTPUT TERMINAL DEBUG CONSOLE
3: powershell
AUTHOR: Ravi teja
DATE: 2021-05-04T11:24:45Z
MESSAGE: ./auth.test.js
  ✓ should register successfully (22 ms)

  ● should register successfully
    TypeError: Cannot destructure property 'id' of 'req.body' as it is undefined.

      20 | //console.log(req.body);
      21 |
      22 |   const{id,phno,email,password,passwordconfirm}=req.body;
      23 |   ^
      24 |   db.query('SELECT userid FROM faculty WHERE userid=?',[email],async (error,results)>{
      25 |     if(error){
        console.log(error);

      at signup (controllers/auth.js:22:11)
      at Object.<anonymous> (auth.test.js:4:18)

Test Suites: 1 failed, 1 total
Tests:       1 failed, 1 total
Snapshots:  0 total
Time:        2.45 s, estimated 3 s
Ran all test suites.
npm ERR! Test failed. See above for more details.
PS C:\Users\ASUS\Desktop\SE>

```

```

JS auth.test.js > ⚠ test('should assign faculty to their roles') callback > [✖] text
  1 const{ adminca } = require('../controllers/auth');
  2
  3 test('should assign faculty to their roles', () => {
  4   |   const text = adminca(`c siddhartha`'CI');
  5 });

TERMINAL PROBLEMS 1 OUTPUT DEBUG CONSOLE

Ravi_teja@LAPTOP-DDJ3VII13 MINGW64 ~/Desktop/Seproject/SE
$ npm test

> SE@1.0.0 test
> jest

FAIL ./auth.test.js
● Test suite failed to run

SyntaxError: C:\Users\Ravi_teja\Desktop\Seproject\SE\auth.test.js: Unexpected token, expected "," (4:39)

  2 |
  3 | test('should assign faculty to their roles', () => {
  4 |   |   const text = adminca(`c siddhartha`'CI`); ^

at Parser._raise (node_modules/@babel/parser/src/parser/error.js:134:45)
at Parser.raiseWithData (node_modules/@babel/parser/src/parser/error.js:129:17)
at Parser.raise (node_modules/@babel/parser/src/parser/error.js:78:17)
at Parser.unexpected (node_modules/@babel/parser/src/parser/util.js:179:16)
at Parser.expect (node_modules/@babel/parser/src/parser/util.js:144:28)
at Parser.parseCallExpressionArgument (node_modules/@babel/parser/src/parser/expression.js:909:14)
at Parser.parseCoverCallAndAsyncArrowHead (node_modules/@babel/parser/src/parser/expression.js:786:29)
at Parser.parseSubscript (node_modules/@babel/parser/src/parser/expression.js:676:19)
at Parser.parseSubscripts (node_modules/@babel/parser/src/parser/expression.js:634:19)
at Parser.parseExprSubscripts (node_modules/@babel/parser/src/parser/expression.js:619:17)

Test Suites: 1 failed, 1 total
Tests:       0 total
Snapshots:  0 total
Time:        6.984 s
Ran all test suites.
npm ERR! code 1

```

```

JS auth.test.js > ⚠ test('the room number for the faculty should be assigned') callback > [✖] text
  1 const{ facroom } = require('../controllers/auth');
  2
  3 ✓ test('the room number for the faculty s facroom(req: any, res: any): void {
  4 |   const text = facroom(['A202', 'V Ravi', '10-06-2021']);
  5 });

TERMINAL PROBLEMS 0 OUTPUT DEBUG CONSOLE

Ravi_teja@LAPTOP-DDJ3VII13 MINGW64 ~/Desktop/Seproject/SE
$ npm test

> SE@1.0.0 test
> jest

FAIL ./auth.test.js
  ✗ the room number for the faculty should be assigned (1305 ms)

● the room number for the faculty should be assigned

TypeError: Cannot read property 'room' of undefined

  57 | exports.facroom=(req,res)=>[
  58 |   console.log(req.body);
  59 |   db.query('INSERT INTO schedule SET ?',{room:req.body.room,name:req.body.name,faculty:req.body.faculty,date:req.body.date},(err,result)=>{
  60 |     if(err) throw err;
  61 |     db.query('SELECT name FROM emp WHERE role="CI"',(err,results)=>[
  62 |       if(err) throw err;

    at facroom (controllers/auth.js:59:58)
    at Object.<anonymous> (auth.test.js:4:18)

  console.log
  undefined

    at facroom (controllers/auth.js:58:13)

Test Suites: 1 failed, 1 total
Tests:       1 failed, 1 total
Snapshots:  0 total
Time:        2.132 s

```

7.4 Continuous Integration

Tools used (jenkins)

Jenkins

Dashboard > The Invigilator > #8

Build #8 (Jun 9, 2021, 7:52:41 PM)

Keep this build forever

Status: Success

Started 16 sec ago
Took 0.53 sec

Changes

1. Update README.md (commit: e13efe0) (details / githubweb)

Started by GitHub push by raviteja213

Revision: e13efe09bcfb0d0ac54408bd374148620fd0549
Repository: https://github.com/raviteja213/TheInvigilator.git

refs/remotes/origin/main

Back to Project

Changes

Console Output

Edit Build Information

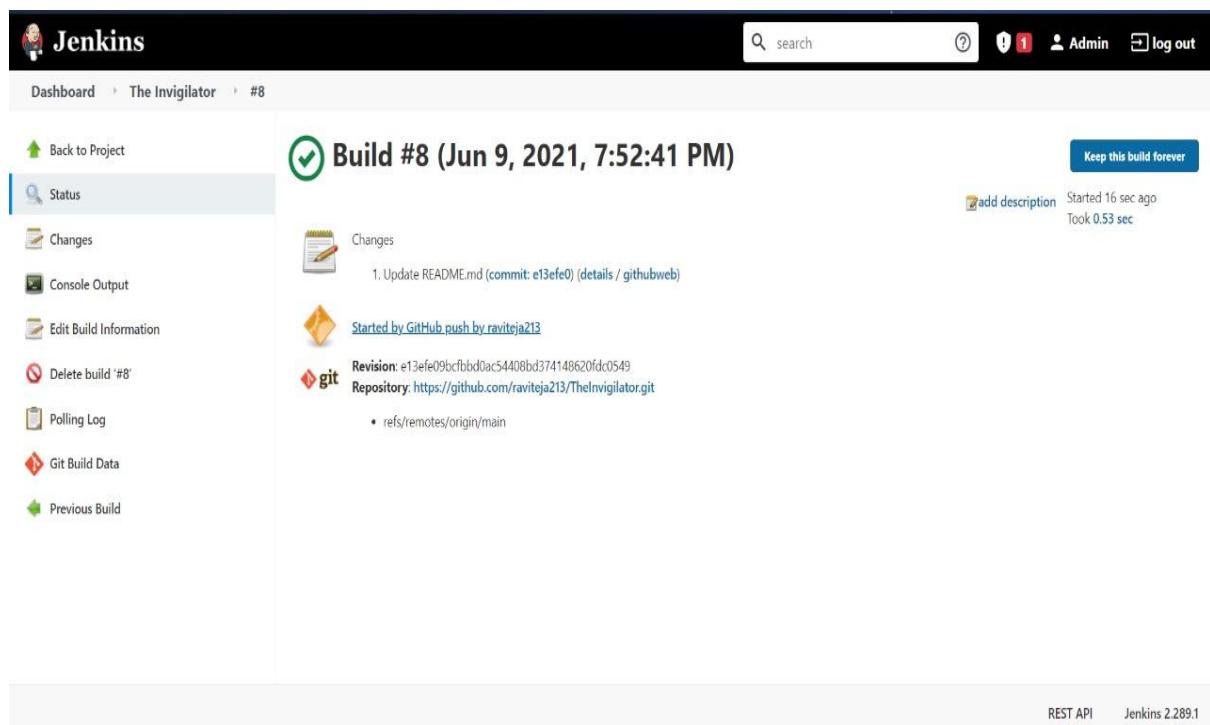
Delete build '#8'

Polling Log

Git Build Data

Previous Build

REST API Jenkins 2.289.1



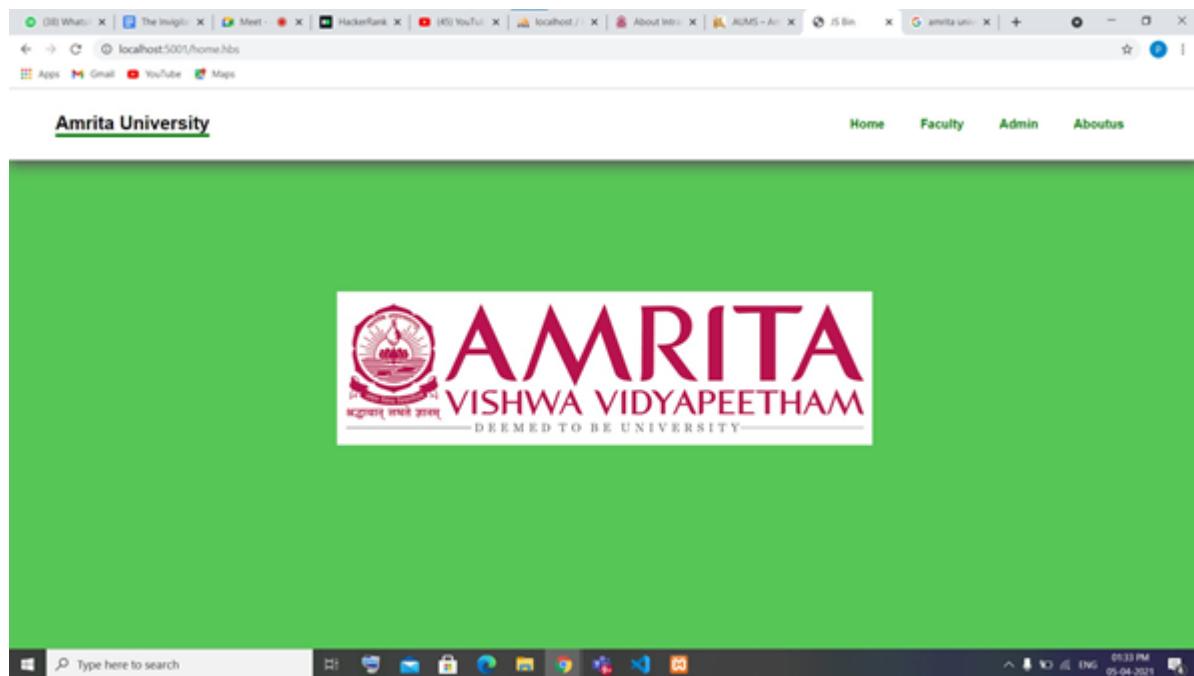
8. Screenshots of Project

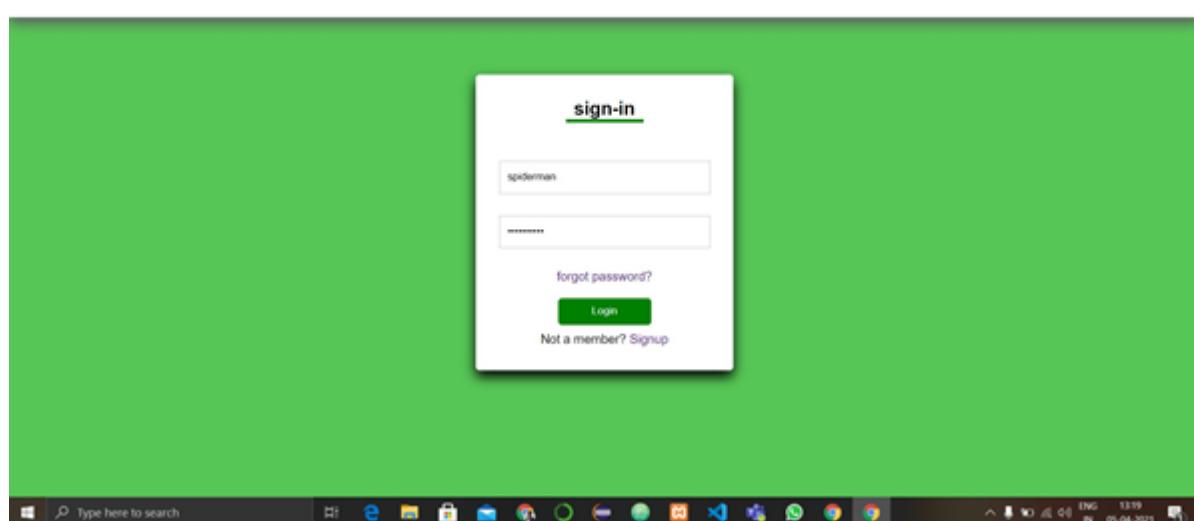
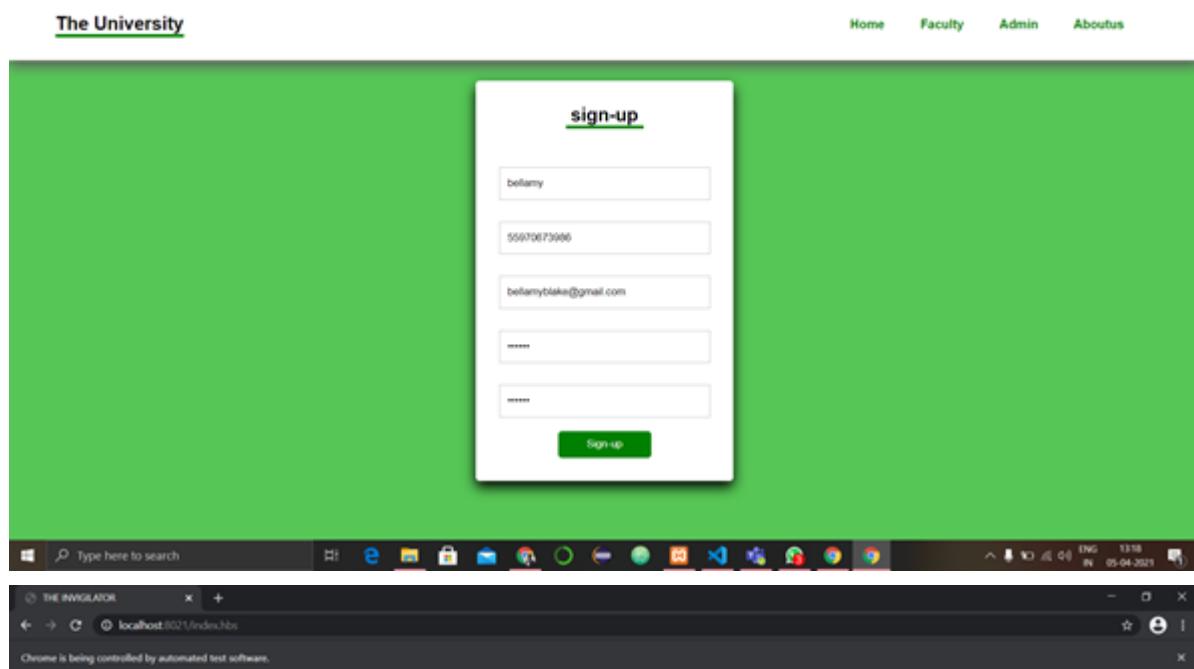
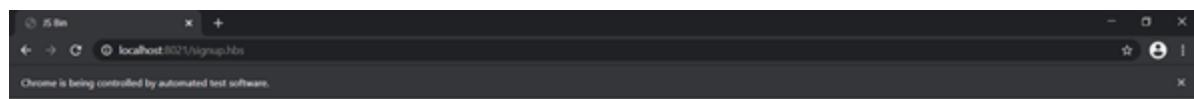
localhost:5001/home.html

Amrita University

Home Faculty Admin Aboutus

AMRITA VISHWA VIDYAPEETHAM
DEEMED TO BE UNIVERSITY





THE INVIGILATOR

localhost:8021/adminlogin.html

Chrome is being controlled by automated test software.

The University

Home Faculty Admin Aboutus

sign-in

suresh

password

forgot password?

Login

Type here to search

localhost:5001/admin.html

Amrita University

Home Faculty Aboutus Logout

Faculty List

Click here to get all the information about Faculty



Time Table

Click here to view the exam schedule for each department



Check Faculty

Document +

localhost:8021/adminfac.htm

Chrome is being controlled by automated test software.

The University

Home Faculty Aboutus

FACULTY LIST

Faculty ID	Full Name	Email Address	phno	DEPT
AE001	P Krishna	prashidhAero@gmail.com	2147483647	AERO
AE002	T Natarajan	NatarajanAero@gmail.com	2147483647	AERO
AE003	V Ravi	raviAero@gmail.com	2147483647	AERO
CE001	S Thakur	shardulCivil@gmail.com	2147483647	CIVIL
CE002	B Kumar	bhuviCivil@gmail.com	2147483647	CIVIL
CE003	R Bhavya	bhavyaCivil@gmail.com	2147483647	CIVIL
CS001	R Sharma	sharmaCse@gmail.com	2147483647	CSE
CS002	S Dhawan	dhawanCse@gmail.com	2147483647	CSE
CS003	A Prateek	prateekCse@gmail.com	2147483647	CSE
EC001	V Kohli	kohliEce@gmail.com	2147483647	ECE
EC002	K Rahul	rahulEce@gmail.com	2147483647	ECE
EC003	B Nikhil	nikhilEce@gmail.com	2147483647	ECE
ME001	R Pant	pantMech@gmail.com	2147483647	MECH
ME002	H Pandya	hardikMech@gmail.com	2147483647	MECH
ME003	C Siddhartha	siddharthaMech@gmail.com	2147483647	MECH

Type here to search

Document +

localhost:8021/submitab.htm

Chrome is being controlled by automated test software.

The University

Home Faculty Aboutus

Department:

Document × +

localhost:8021/faculty/timetable

Chrome is being controlled by automated test software.

The University

Home Faculty Aboutus

Department: Submit

COMPUTER SCIENCE

DATE	SUBJECTID	SUBJECT	SLOT
17/05/21	CSE001	EXAM1	1
19/05/21	CSE002	EXAM2	1
21/05/21	CSE003	EXAM3	2
23/05/21	CSE004	EXAM4	3
25/05/21	CSE005	EXAMS5	1

Rooms Available

A102	A202	A205
------	------	------

Document × +

localhost:8021/adminca.html

Chrome is being controlled by automated test software.

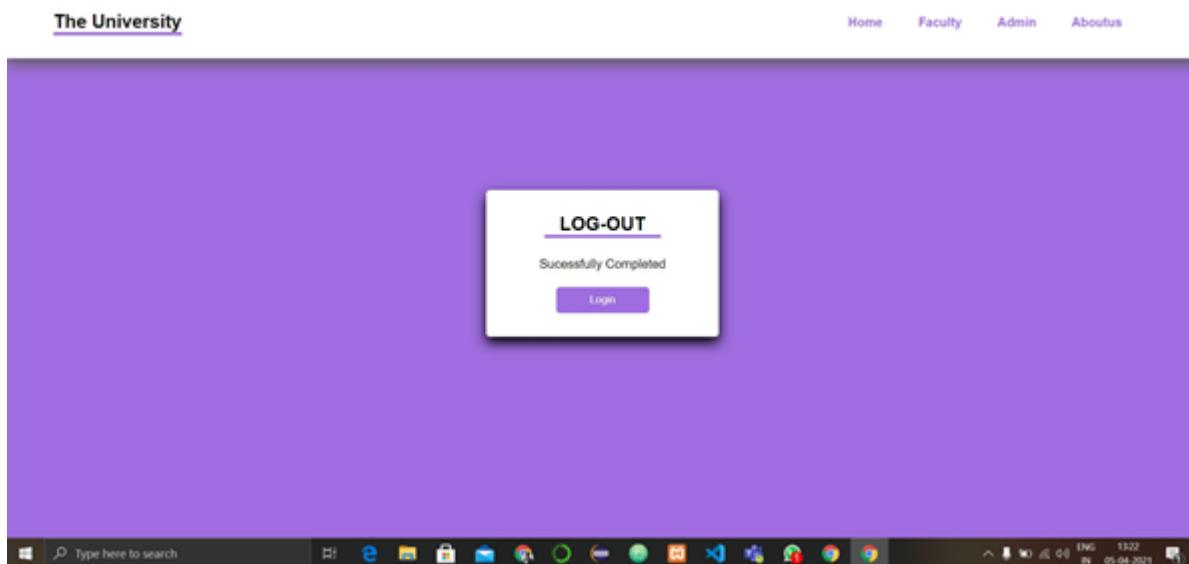
The University

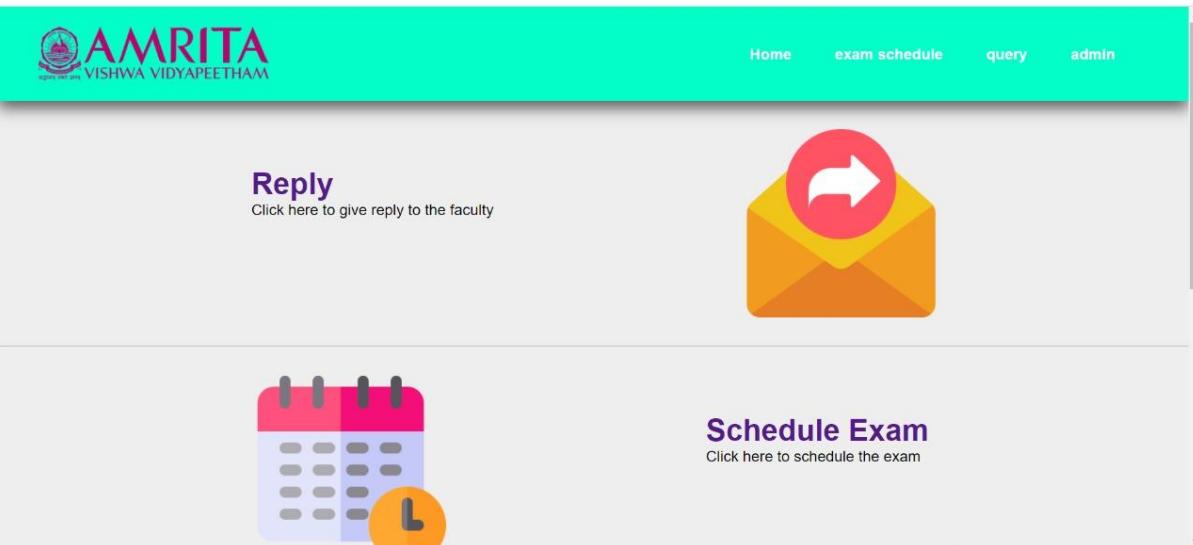
Home Faculty Aboutus

FACULTY: Submit

The University						
FACULTY:	-none-	Submit	Home	Faculty	Aboutus	
Faculty ID	Full Name	Email Address	phno	DEPT	ROLE	ROOM
AE003	V Ravi	raviAero@gmail.com	2147483647	AERO	AF	A202
CS002	S Dhawan	dhawanCse@gmail.com	2147483647	CSE	AF	
CS003	A Prateek	prateekCse@gmail.com	2147483647	CSE	AF	A202
EC001	V kohli	kohliEce@gmail.com	2147483647	ECE	AF	
EC002	K Rahul	rahulEce@gmail.com	2147483647	ECE	AF	
EC003	B Nikhil	nikhilEce@gmail.com	2147483647	ECE	AF	C102
ME003	C Siddhartha	siddharthaMech@gmail.com	2147483647	MECH	AF	C105

THE INVIGILATOR						
localhost:8021/auth/adminLogout.hbs						
Chrome is being controlled by automated test software.						

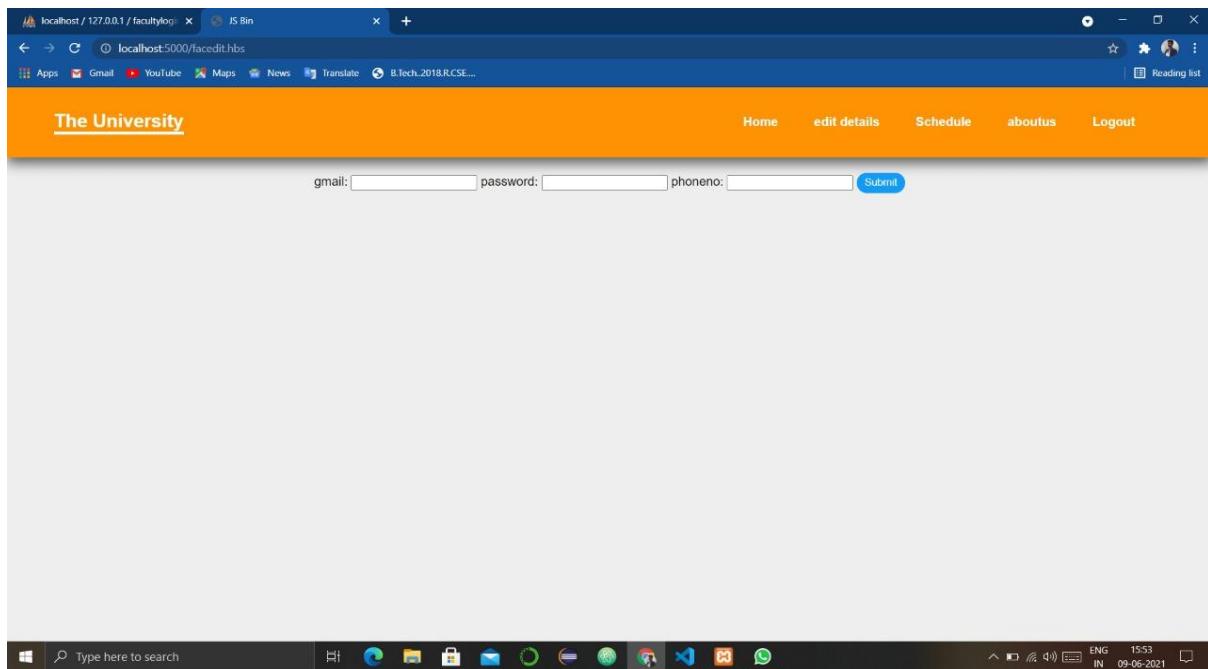




This screenshot shows the faculty home page. It features a large orange header bar with the text "The University". Below the header, there are two main sections:

- User Profile**: Displays a placeholder user icon and the following information:
 - Name: B Nikhil
 - Gmail: bnikhilsaiece@gmail.com
 - Phone: 2147483647
 - Dept: ECE
 - User ID: EC003
- QUERY**: A form for submitting a query, with fields for "Problem" (text input), "Shift with:" (dropdown menu set to "-none-"), and a "Submit" button.

At the bottom, there is a yellow "Notification" bar with the message "schedule updated." and a "updated" link. The bottom of the screen shows a Windows taskbar with various pinned icons and system status indicators.



9. LIST OF TEST CASES:

- 1)CHECKING THE SIGN UP BUTTON IS CLICKABLE OR NOT
- 2)CHECKING THE USER IS ALREADY REGISTERED OR NOT.
- 3)CHECKING THE PHONE NUMBER SHOULD BE 10 DIGITS
- 4)CHECKING THE PASS AND CONFIRM PASS SHOULD MATCH TO EACH OTHER
- 5)CHECKING THE USER SUCCESSFULLY REGISTERED
- 6)CHECKING THE SIGN IN BUTTON CLICKABLE OR NOT
- 7)CHECKING THE USER CREDENTIALS OR CORRECT OR WRONG
- 8)CHECKING THE USER CAN SUCCESSFULLY LOGIN OT NOT
- 9)CHECKING THE FACULTY ARE AVAILABLE OR NOT
- 10)CHECKING THE EACH AND EVERY BRANCHES TIME TABLE
- 11)CHECKING IF THE ROOMS AVAILABLE ARE SHOWN ARE NOT
- 12)CHECKING THE FACULTY ROLE FOR THE RESPECTIVE ROLES

- 13)CHECKING THE ASSIGNMENT OF THE FACULTY IS DONE OR NOT
- 14)CHECKING WHETHER THE ASSIGNED FACULTY SHOWED IN THE LIST OR NOT
- 15)CHECKING THE BUTTONS AND NAVIGATION BAR IN THE ADMIN HOME PAGE
- 16)CHECKING THE LOG OUT BUTTON IS CLICKABLE OR NOT
- 17)AFTER THE LOGOUT BUTTON IS CLICKED, CHECKING IT GOES TO THE ANOTHER PAGE AND LOGGED OUT.
- 18)AFTER LOGGED OUT ,MAKING SURE THERE IS A LOGIN BUTTON AVAILABLE IN THAT PAGE.
- 19)AFTER CHANGING THE ROLE OF FACULTY, IF SOME DETAILS ARE MISSED, CHECKING IT SHOWS A ERROR OR IT DOES NOT SHOW THE FACULTY ROLE BUTTON
- 20)MAKING SURE THE FACULTY ROLE BUTTON IS CLICKABLE OR NOT
- 21)MAKING SURE THAT ROOM NUMBERS ARE CHANGEABLE SO THAT THERE CAN BE A CLASH OR SAME ROOM NUMBERS.
- 22)CHECKING THE WEATHER THE NAVIGATION TO FACULTY HOME PAGE IS ACCESSIBLE OR NOT.
- 23)IN THE FACULTY HOME PAGE,CHECKING THE PROBLEM TEXTBOX AND THE SHIFTWITH BUTTON IS CLICKABLE OR NOT.
- 24)CHECKING THE SUBMIT BUTTON CLICKABLE OR NOT.
- 25)IF ANY CHANGES OCCURS, CHECKING THE NOTIFICATION BAR WHETHER SHOWS THE UPDATED THEME OR NOT.
- 26)CHECKING THE EDIT DETAILS BUTTON IN THE NAV BAR IS CLICKABLE OR NOT.
- 27)CHECKING THE OBJECTS IN THE EDIT DETAILS IS TEXTABLE AND CLICKABLE OR NOT.
- 28)IF DETAILS UPDATES,WHETHER SHOWING THE SCHEDULE BUTTON OR NOT.
- 29) NAVIGATING TO THE SCHEDULE BUTTON ,SHOWING THE UPDATES DETAILS OF THE FACULTY
- 30) CHECKING THE SCHEDULE BUTTON IS CLICKABLE OR NOT.
- 31)IF THERE IS ANY SCHEDULE ALLOCATED, IT SHOWS THE SCHEDULE OF THE PARTICULAR FACULTY
- 32) CHECKING THE LOGOUT BUTTON IS CLICKABLE

33)WHEN WE PRESS LOGOUT IT SHOULD NAVIGATE US TO THE
FACULTYLOGOUT PAGE

34)CHECKING AGAIN THE SIGN IN BUTTON IS VISIBLE AND CLICKABLE OR
NOT

35)CHECKING THE ABOUT US BUTTON IN THE NAV BAR

36) IN THE ABOUT US PAGE, USER CAN ABLE TO TEXT THEIR QUERIES

37)CHECKING THE SUBMIT BUTTON IS CLICKABLE OR NOT.

38)AFTER THE CLICKABLE OF SUBMIT,IT SHOULD SEND THE ADMIN THE
DETAILS AND QUERIES OF THE USER.

10. CONCLUSION:

Hence, we successfully created a website, working it through several phases , withholding to several, continuously integrating the website, running the code through analysis. We also gained a lot of knowledge through this course.