
Status Report: Student Attendance Management System

CS 305 Software Engineering
Group 13
Course Project
Under: Dr. Balwinder Sodhi

Click [here](#) to visit the GitHub repo

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Overview

The detailed description of the project has already been submitted in the form of Software Requirements Specification Document. The detailed design aspects of the project have also been submitted in the form of Design Document.

This document discusses the following issues.

- Original Plan for the period
- Progress till now
- Remaining work and Plan of Action
- Demo of the code
- Goals for next meeting

Original Plan for the period

- The original plan for the first release was to do the backend part, which includes defining models for various users like students, instructors, teaching assistants, and admin. Other than users, models to store course information and class event to store the attendance information were to be created.
- Original plan included only initializing the mobile app, and including basic functionalities like login.
- We decided to use Django REST Framework to make APIs for the app to communicate with database. The functionalities expected were registering various users and performing login.

Progress till now (Web App)

The web app is **production ready** with all the features (except for clicking photographs to take attendance which was decided not to be a part of the web app). **Functionalities for admin, instructor, teaching assistant, and student are available.**

Models

- User
- Admin
- Student
- ClassEventCoordinator
- Instructor
- TeachingAssistant
- Course
- ClassEvent
- CumulativeAttendance



Progress till now (Web App)

Views

- Add Students
- Add Instructors
- Add Teaching Assistants
- Add courses
- Assign student Role To Users
- Assign Instructor Role To Users
- Assign Instructor Role To Class Event Coordinator
- Assign Teaching Assistant Role To Users
- Assign Teaching Assistant Role To Class Event Coordinator
- View Course Attendance Details
- View Student attendance Details In a Course



Progress till now (APIs)

We were able to complete more APIs than were originally planned.

Implemented Functions

- Logging User
- Add Students
- Add Instructors
- Add Teaching Assistant
- Add Courses
- List Students
- List Instructors
- List Courses
- Assign Student To User
- Assign Instructor To User
- Assign Instructor To Class Event Coordinator
- Assign Teaching Assistant To Class Event Coordinator
- Assign Teaching Assistant To User

Progress till now (Mobile App)

We were able to do more for Mobile App than was planned for the period.

App Functionalities

- Login Functionality connected with backend.
- Welcome Dashboard
- Instructor Course Page
- Take Attendance Page
- Daily Attendance With Date Picker

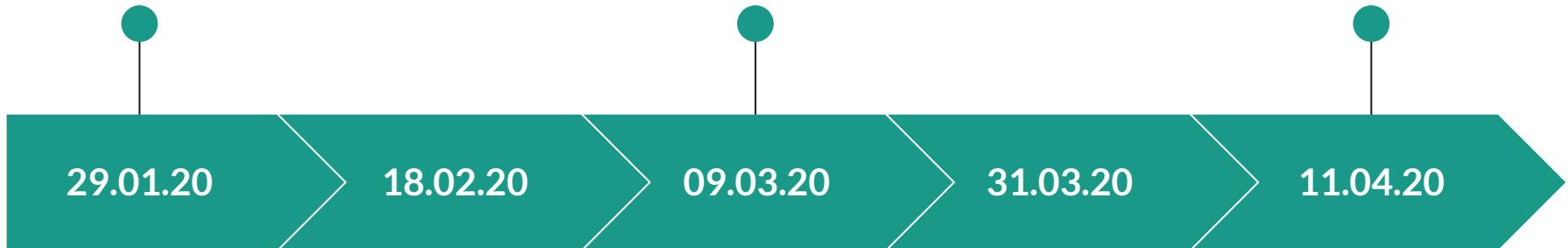
App Design

- Focus has been made on reuse of Flutter Widgets, hence the pending work will take much less time to complete.
- App Theme: All color schemes and theme is generalised and hence can be easily changed without changing much of the code.

Detailed Software Requirements Specification

Initial commit for django models of the web app

Software release #1



Detailed Software Design Document and initial commit of the source code

Initial commit for Django REST API of the web app

Demo of application

Web App
Screenshots

Welcome to Student Attendance Management System!

Click [here](#) to Login

Home page

Sign In

Email address

Email address:

Password

Password:

SIGN IN

----- OR -----

Forgot Password?

Login page



Admin Details

Name: Academics Section

Admin ID: ad001

ADD ...

Num students to add

ADD STUDENTS

instructors to add

ADD INSTRUCTORS

Num courses to add

ADD COURSES

Num teaching assistants

ADD TEACHING ASSISTANTS

ASSIGN ...

[Assign student role to users](#)

[Assign student role to users](#)

[Assign instructor role to users](#)

[Assign instructor role to class event coordinators](#)

[Assign teaching assistant role to users](#)

[Assign teaching assistant role to class event coordinators](#)

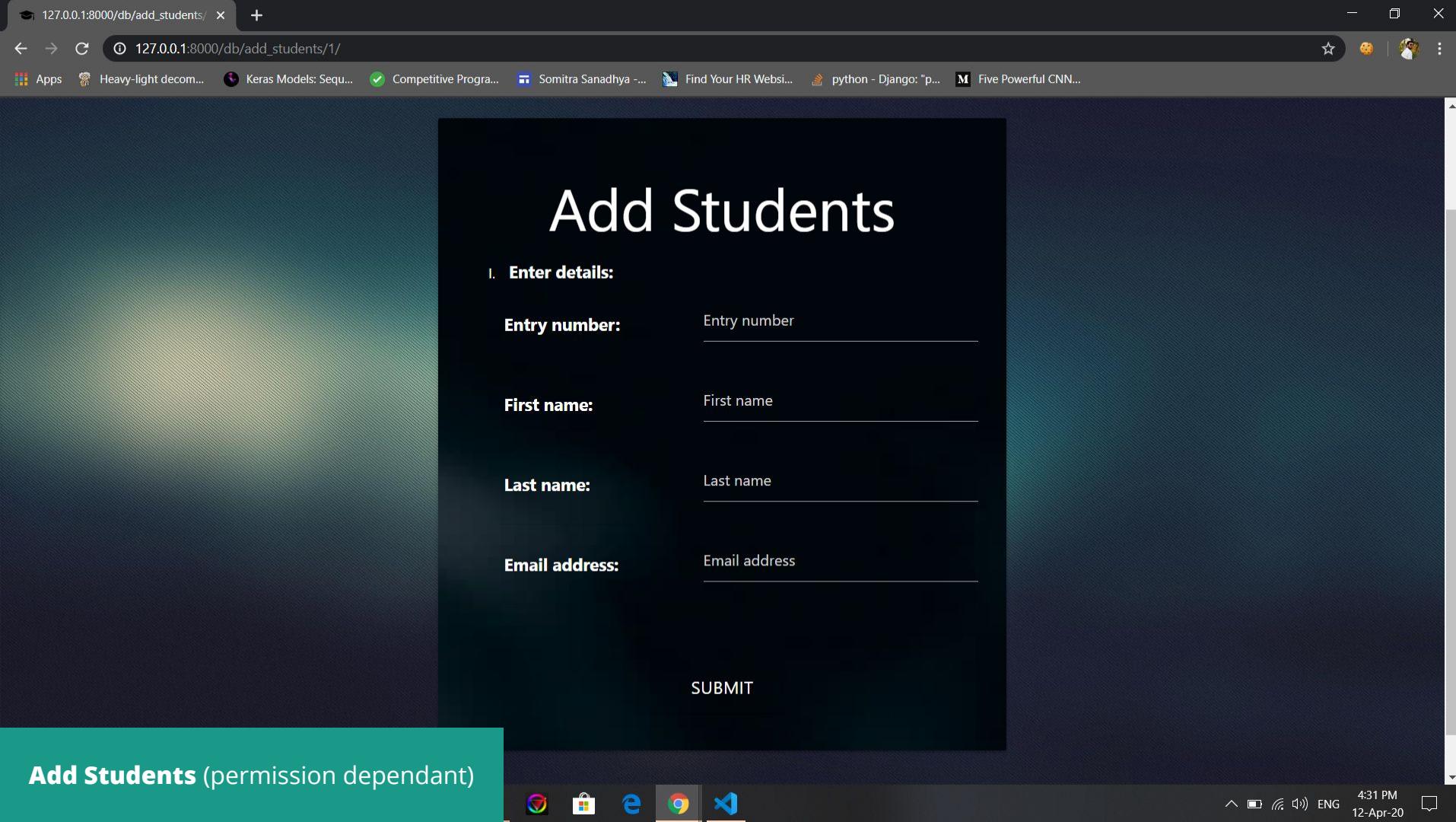
ADD ...

Num students to add [ADD STUDENTS](#)

Num instructors to add [ADD INSTRUCTORS](#)

Num courses to add [ADD COURSES](#)

Num teaching assistants [ADD TEACHING ASSISTANTS](#)



Add Students (permission dependant)

Add Instructors

I. Enter details:

Instructor id: Instructor id

First name: First name

Last name: Last name

Email address: Email address

SUBMIT

Add Teaching Assistants

I. Enter details:

Teaching assistant id:

Teaching assistant id

First name:

First name

Last name:

Last name

Email address:

Email address

SUBMIT

Add TAs (permission dependant)

Add Courses

I. Enter details:

Name:

Name

Code:

Code

Relative attendance for one lecture:

Relative attendance for one le

Relative attendance for one tutorial:

Relative attendance for one tu

Relative attendance for one practical:

Relative attendance for one p

Instructors:

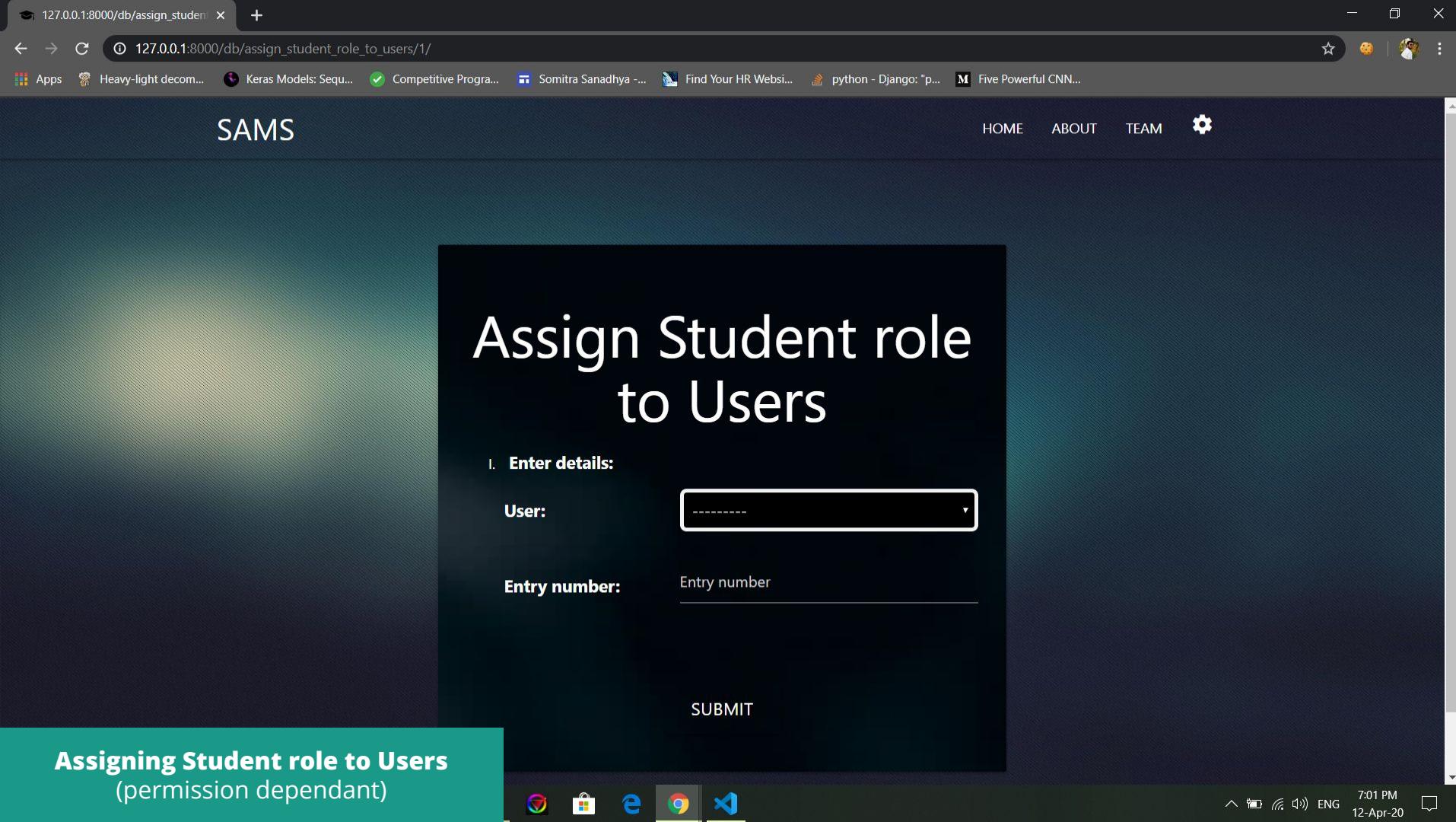
in001 - Balwinder Sodhi

Teaching assistants:

ta001 - Anurag Banerjee

Registered students:

2017csb1061 - Abhinav Kh



127.0.0.1:8000/db/assign_student_role_to_users/1/

Apps Heavy-light decom... Keras Models: Sequ... Competitive Progra... Somitra Sanadhya ... Find Your HR Websi... python - Django: "p... Five Powerful CNN...

SAMS

HOME ABOUT TEAM

Assign Student role to Users

I. Enter details:

User:

Entry number: Entry number

SUBMIT

Assigning Student role to Users
(permission dependant)

127.0.0.1:8000/db/assign_instruct +

127.0.0.1:8000/db/assign_instructor_role_to_users/1/

Apps Heavy-light decom... Keras Models: Sequ... Competitive Progra... Somitra Sanadhy... Find Your HR Websi... python - Django: "p... Five Powerful CNN...

SAMS

HOME ABOUT TEAM ⚙

Assign Instructor role to Users

I. Enter details:

Instructor id:

User:

SUBMIT

Assigning Instructor role to Users
(permission dependant)

7:01 PM 12-Apr-20

127.0.0.1:8000/db/assign_teachin X +

127.0.0.1:8000/db/assign_teaching_assistant_role_to_users/1/

Apps Heavy-light decom... Keras Models: Sequ... Competitive Progra... Somitra Sanadhy... Find Your HR Websi... python - Django: "p... Five Powerful CNN...

SAMS

HOME ABOUT TEAM ⚙

Assign Teaching Assistant role to Users

I. Enter details:

Teaching assistant id:

User:

SUBMIT

Assign TA role to Users (permission dependant)

7:13 PM 12-Apr-20

Assign Instructor role to Class Event Coordinators

I. Enter details:

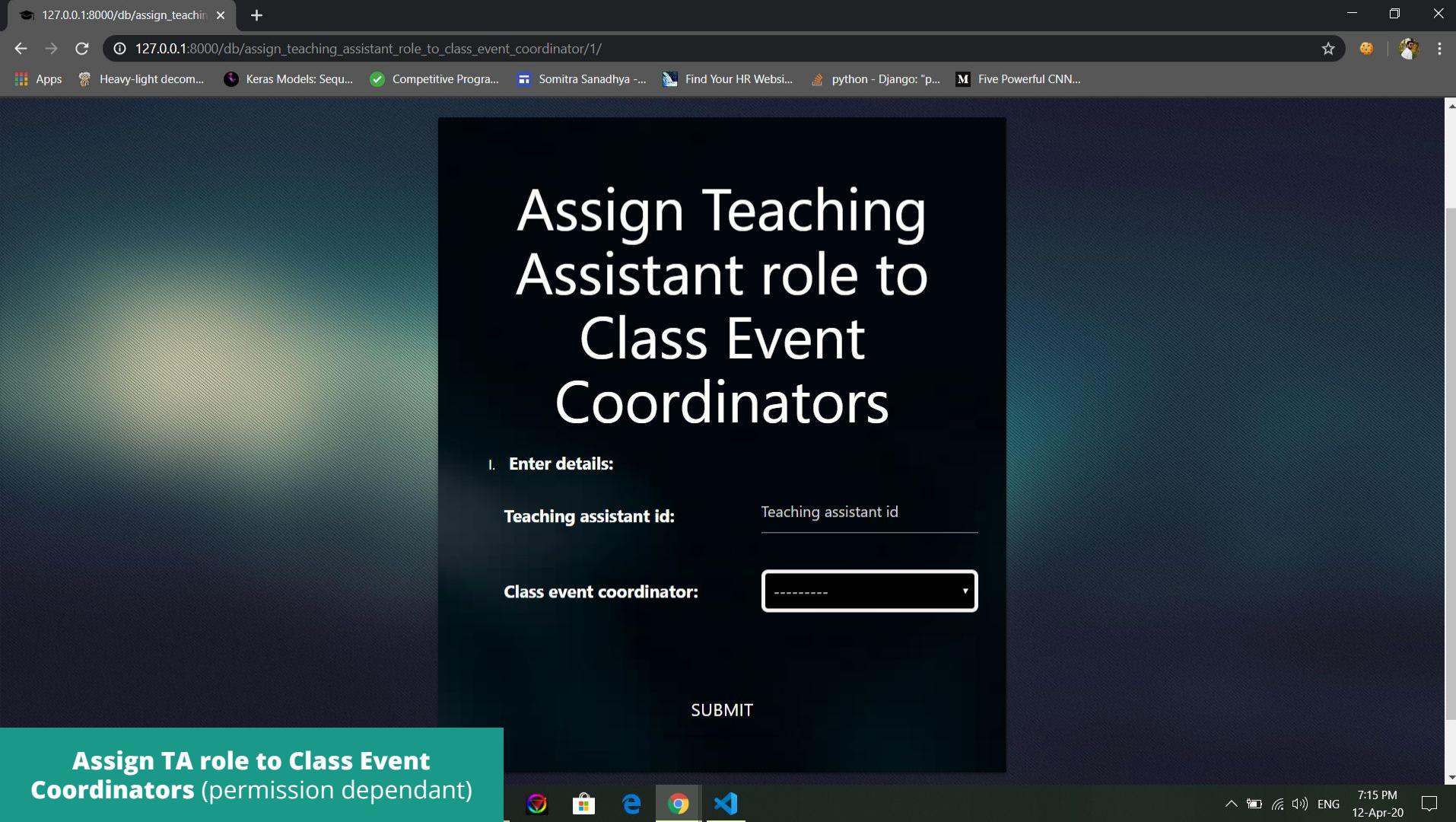
Instructor id:

Instructor id

Class event coordinator:

SUBMIT

Assign Instructor role to Class Event Coordinators (permission dependant)



Assign TA role to Class Event Coordinators (permission dependant)

Course Name: Software Engineering

Course Code: cs305

Attendance Policy:

1. Relative attendance for one lecture: 1
2. Relative attendance for one tutorial: 1
3. Relative attendance for one practical: 2

Registered Students:

1. 2017csb1061 - Abhinav Khanna
2. 2017csb1062 - Abhineet Pandey
3. 2017csb1063 - Abhishek Yadav
4. 2017csb1064 - Adarsh Kumar
5. 2017csb1065 - Akansha Singh

View Course attendance details
(permission dependant)

127.0.0.1:8000/db/view_course_a X +

127.0.0.1:8000/db/view_course_attendance_details/2/

Apps Heavy-light decom... Keras Models: Sequ... Competitive Progra... Somitra Sanadhy... Find Your HR Websi... python - Django: "p... Five Powerful CNN...

Start Date: End Date:

Enter date range: DD-----YYYY DD-----YYYY GO

* HIDE ATTENDANCE IN LECTURES

| Timestamp | Attendance Taken By | List of students |
|---------------------------|----------------------------|---|
| April 4, 2020, 9:34 a.m. | sodhi@iitrpr.ac.in | <p>* HIDE ENTRY NO. OF STUDENTS PRESENT</p> <ul style="list-style-type: none">• 2017csb1061• 2017csb1062• 2017csb1064 |
| March 17, 2020, 5:08 p.m. | sodhi@iitrpr.ac.in | * SEE ENTRY NO. OF STUDENTS PRESENT |
| March 31, 2020, 5:08 p.m. | sodhi@iitrpr.ac.in | * SEE ENTRY NO. OF STUDENTS PRESENT |
| April 1, 2020, 5:00 p.m. | sodhi@iitrpr.ac.in | * SEE ENTRY NO. OF STUDENTS PRESENT |

View Course attendance details
(permission dependant)

7:25 PM ENG 12-Apr-20

127.0.0.1:8000/db/view_student... X +

127.0.0.1:8000/db/view_student_attendance_details_in_a_course/2/1/

Apps Heavy-light decom... Keras Models: Sequ... Competitive Progra... Somitra Sanadhy... Find Your HR Websi... python - Django: "p... Five Powerful CNN...

SAMS

HOME ABOUT TEAM ⚙

Course Name: Software Engineering

Course Code: cs305

Attendance Policy:

1. Relative attendance for one lecture: 1
2. Relative attendance for one tutorial: 1
3. Relative attendance for one practical: 2

Student: 2017csb1061 - Abhinav Khanna

View Student attendance details in a course (permission dependant)

te: End Date: DD----YYYY GO

DD----YYYY

7:29 PM 12-Apr-20 ENG

The screenshot shows a web application for managing student attendance. The main content area displays the course details: "Course Name: Software Engineering" and "Course Code: cs305". Below this, the "Attendance Policy" is listed with three items: 1. Relative attendance for one lecture: 1, 2. Relative attendance for one tutorial: 1, and 3. Relative attendance for one practical: 2. Further down, a student record is shown: "Student: 2017csb1061 - Abhinav Khanna". At the bottom of the page, there's a section titled "View Student attendance details in a course" with a note "(permission dependant)". This section includes input fields for "te:" and "End Date:" (both set to "DD----YYYY") and a "GO" button. The bottom of the screen also shows the operating system's taskbar with various icons and the date/time "7:29 PM 12-Apr-20 ENG".

127.0.0.1:8000/db/view_student_attendance_details_in_a_course/2/1/

Apps Heavy-light decom... Keras Models: Sequ... Competitive Progra... Somitra Sanadhya -... Find Your HR Websi... python - Django: "p... Five Powerful CNN...

Start Date: DD-----YYYY End Date: DD-----YYYY GO

* HIDE ATTENDANCE IN LECTURES

| Timestamp | Attendance Taken By | Present/Absent |
|---------------------------|---------------------|----------------|
| April 4, 2020, 9:34 a.m. | sodhi@iitrpr.ac.in | Present |
| March 17, 2020, 5:08 p.m. | sodhi@iitrpr.ac.in | Present |
| March 31, 2020, 5:08 p.m. | sodhi@iitrpr.ac.in | Absent |
| April 1, 2020, 5:09 p.m. | sodhi@iitrpr.ac.in | Present |

View Student attendance details in a course (permission dependant)

Django administration

WELCOME, **OVERALL**. [VIEW SITE](#) / [CHANGE PASSWORD](#) / [LOG OUT](#)

Site administration

AUTH TOKEN

Tokens

Add Change

AUTHENTICATION AND AUTHORIZATION

Groups

Add Change

DATABASE_MANAGER

Admins

Add Change

Class event coordinators

Add Change

Class events

Add Change

Courses

Add Change

Cumulative Attendance

Add Change

Instructors

Add Change

Students

Add Change

Teaching assistants

Add Change

Users

Add Change

Recent actions

My actions

amritpal@gmail.com

User

amritpal@gmail.com

User

2017csb1090@iitpr.ac.in

User

2017csb1064@iitpr.ac.in

Class event coordinator

2017csb1110@iitpr.ac.in

User

in002 - Shivam Prasad

Instructor

cs305 - Software Engineering -

2020-04-04 17:11:49+00:00

Class event

cs305 - Software Engineering -

2020-04-01 17:11:35+00:00

Class event

cs305 - Software Engineering -

2020-03-31 17:11:18+00:00

Class event

cs305 - Software Engineering -

2020-03-16 17:10:57+00:00

Class event

Demo of application

Mobile App Screenshots



User Id

Password

Login

Forgot Password ?



Please Enter User Id

User ID

Confirm



New Password

Confirm Password

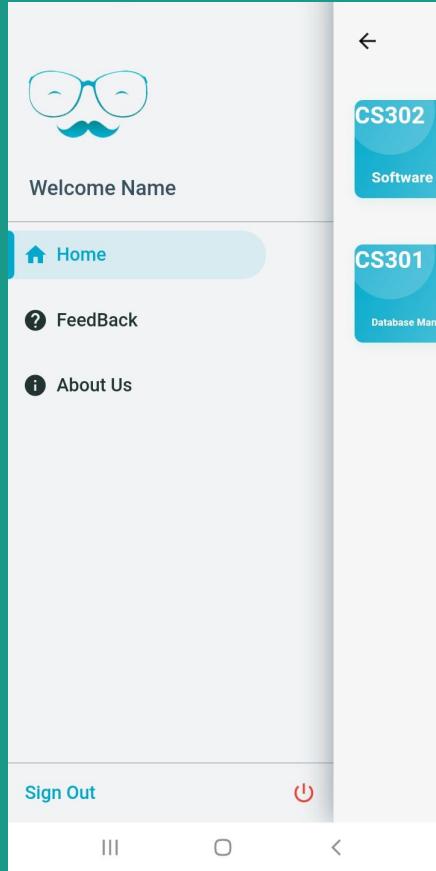
Confirm



Login Page

Forgot Password (ID)

Create New Password



Navigation Bar



Dashboard (Grid View)



Dashboard (List View)

< CS302

Software Engineering

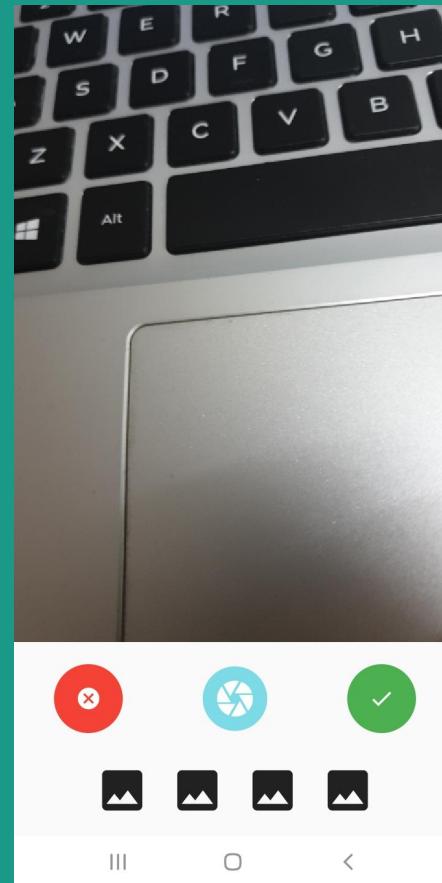
Total students: 0

Last Attendance
90 % Today 8:26 AM Lecture

| Lecture | Tutorial | Labs |
|-----------------------------------|-----------------------------------|-----------------------------------|
| Total Number 10 | Total Number 10 | Total Number 10 |
| Average Attendance 100% | Average Attendance 100% | Average Attendance 100% |

Take Attendance

III □ <





Daily Attendance

12, Apr

Attendance Summary

90 %

Today 8:26 AM
Lecture

No Students Yet



Daily Attendance Page



Daily Attendance

12, Apr

Choose Date

--/-

< April, 2020 >

Mon Tue Wed Thu Fri Sat Sun

30 31 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 1 2 3

4 5 6 7 8 9 10

Apply



Date Picker



Remaining work and Plan of Action

Since most of work of database (backend) has been completed major work left is regarding Frontend of both Mobile and Website.

Assignment 1 (Mobile App)

- Student Course, View Attendance, Report Pages
- Link To Backend

Assignment 2 (Web App)

- Connect With Face Recognition API
- Separate frontend and backend of Web App using API.

Assignment 3 (Mobile App)

- Cache Management
- Additional Features (UI improvements including animations)

Goals for next meeting

1. For the next meeting we would be completing assignment 1, assignment 2, as proposed on the previous page.
2. Complete APIs so that API calls can be used in order to communicate between frontend and Database for Web App as well as Mobile App.

Estimate Date : 26/04/2020