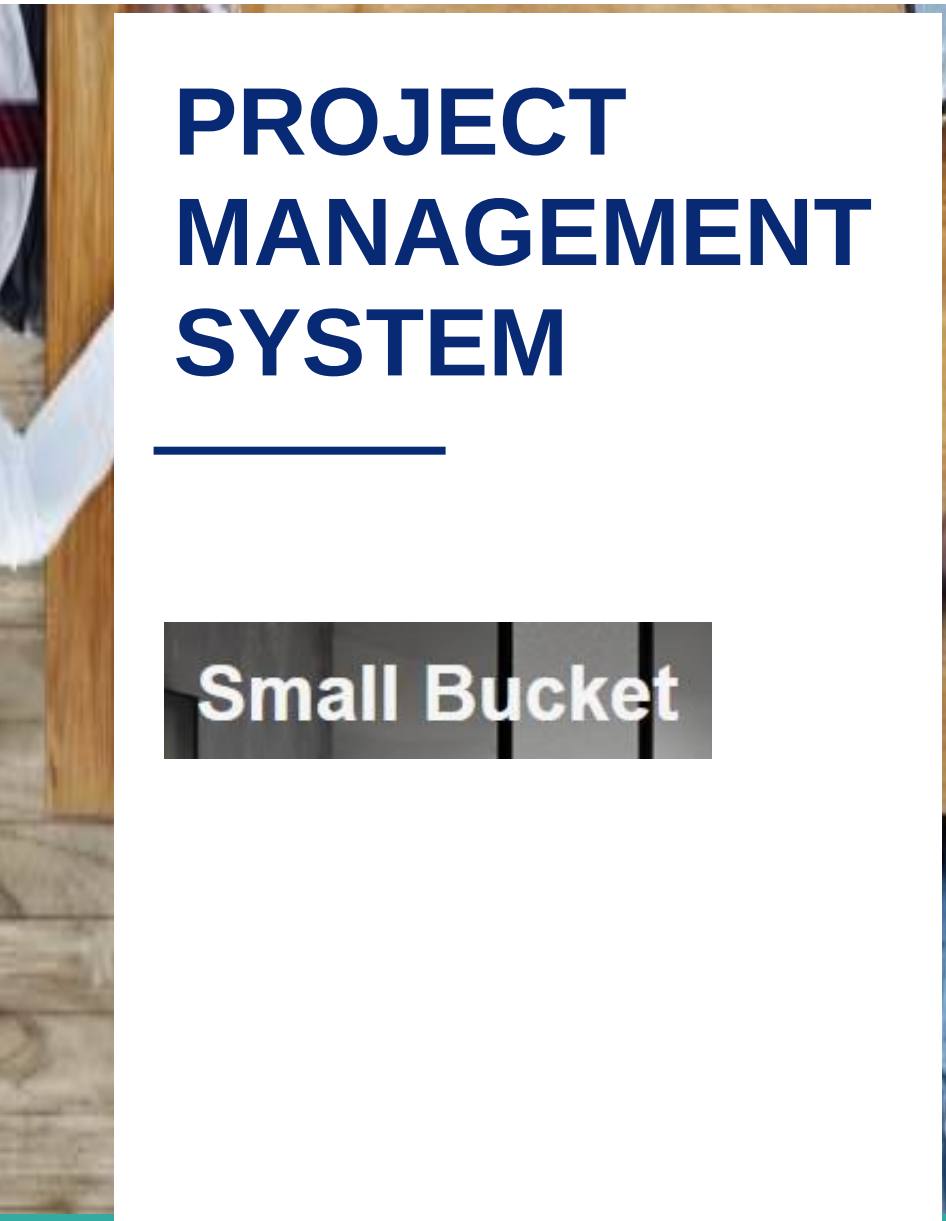
PROJECT MANAGEMENT SYSTEM



Small Bucket

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INTRODUCTION

Small Bucket is a web-based application that center on the planning and control of everything involved in delivering the end result. In simple language, it helps the administrator and managers to manage all the details of project. They once must enter all the details of users and project and then the system does automated tracking for progress of project and help in deliver the projects timely.

TECHNOLOGIES USED

Programming Language: Python, HTML
Framework: Django
Database: SQLite
Web Technology: CSS, JavaScript, Ajax, Bootstrap

SYSTEM FUNCTIONS

Small Bucket's functionality is divided among three different type of users which are administrator, manager and members of an organization.
The functions of each are:

ADMIN:

1. Create users and assign roles. Also assign each member to a manager
2. Create clients and their projects
3. Assign projects to the manager
4. Enter different company events to a calendar which is shared by everybody in the organization

MANAGER:

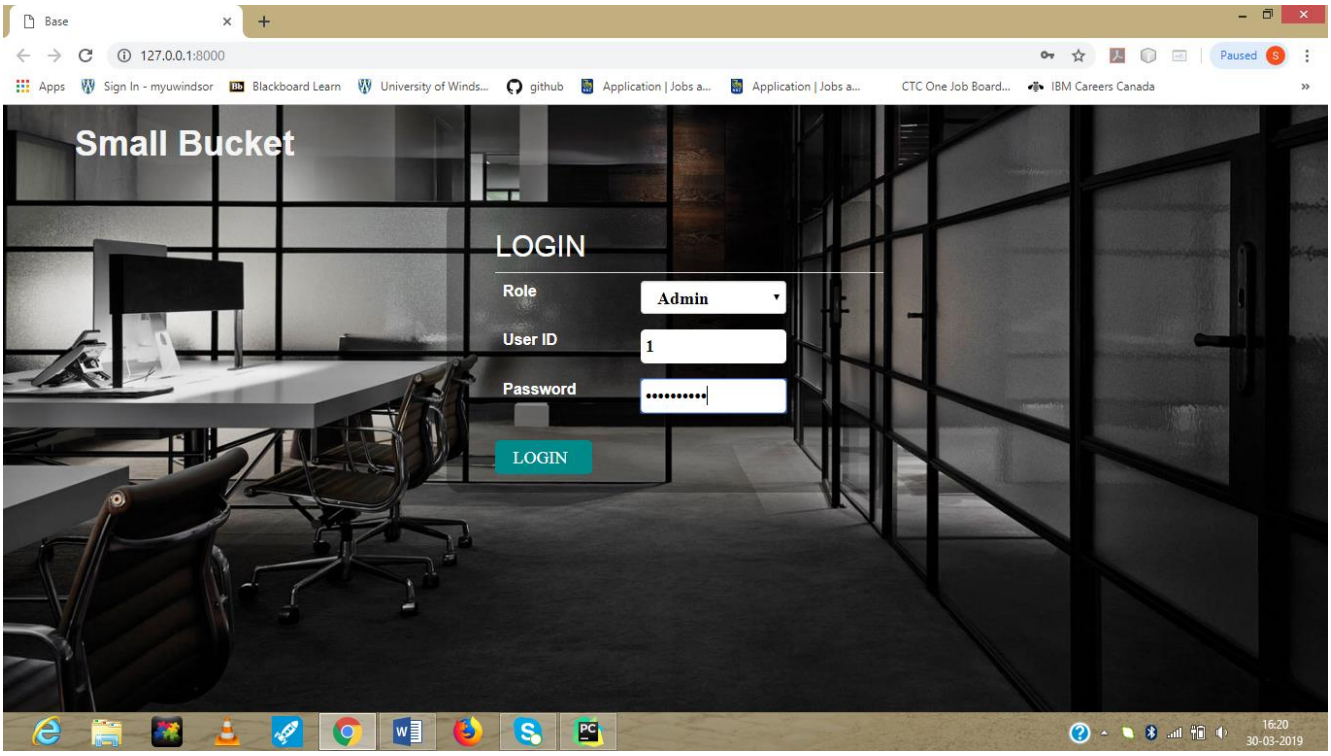
1. Report for each project is shown on managers dashboard which includes status of project, progress, status of milestones (in pie chart) and also status of each task for every milestone
2. Assign the members that are under him/her to different projects
3. Create milestone and tasks for the project and assign different tasks to members.
4. Tasks can also have subtasks
5. Live chat with team members
6. Manager can also add event into the calendar
7. Manager can also add notes

MEMBER:

1. All tasks that are assigned to a member by their manager will be shown on their dashboard in different columns depending upon their status (not started, in progress, complete and overdue)
2. Member can start or report tasks (number of hours worked and change their status)
3. If a task is dependent on other incomplete task and member try to start it, then system will tell the member to complete that other task first
4. Members can also chat with their team members
5. Member can only see the events on the calendar and cannot add another
6. Member can also add notes

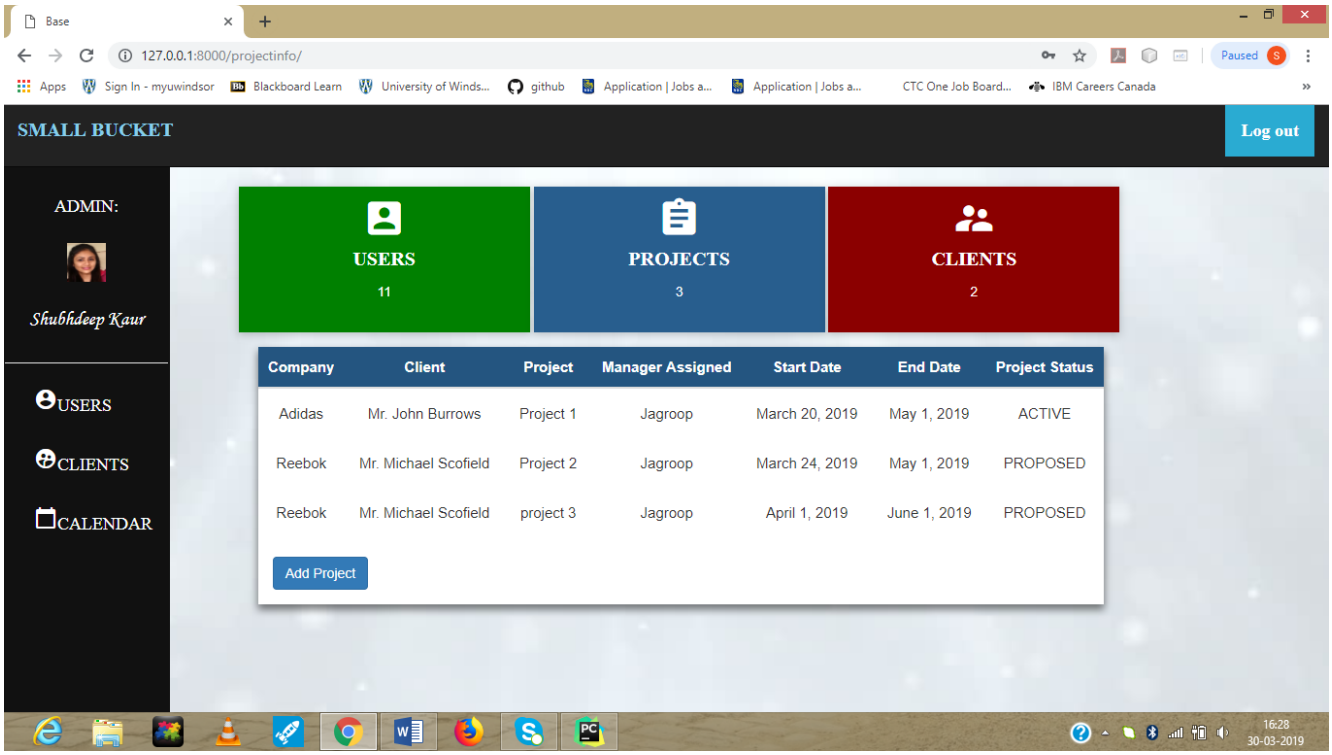
SCREENSHOTS OF PROJECT

Main page (Login)

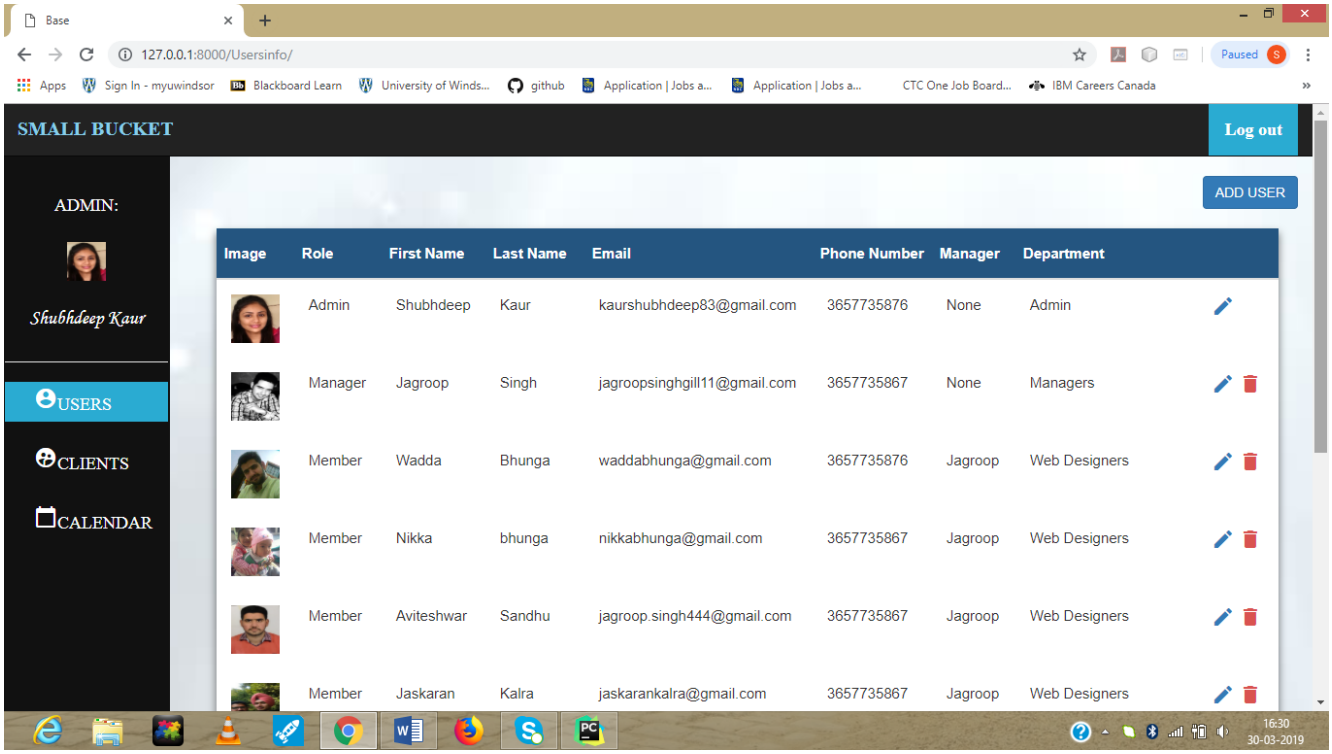


ADMIN:

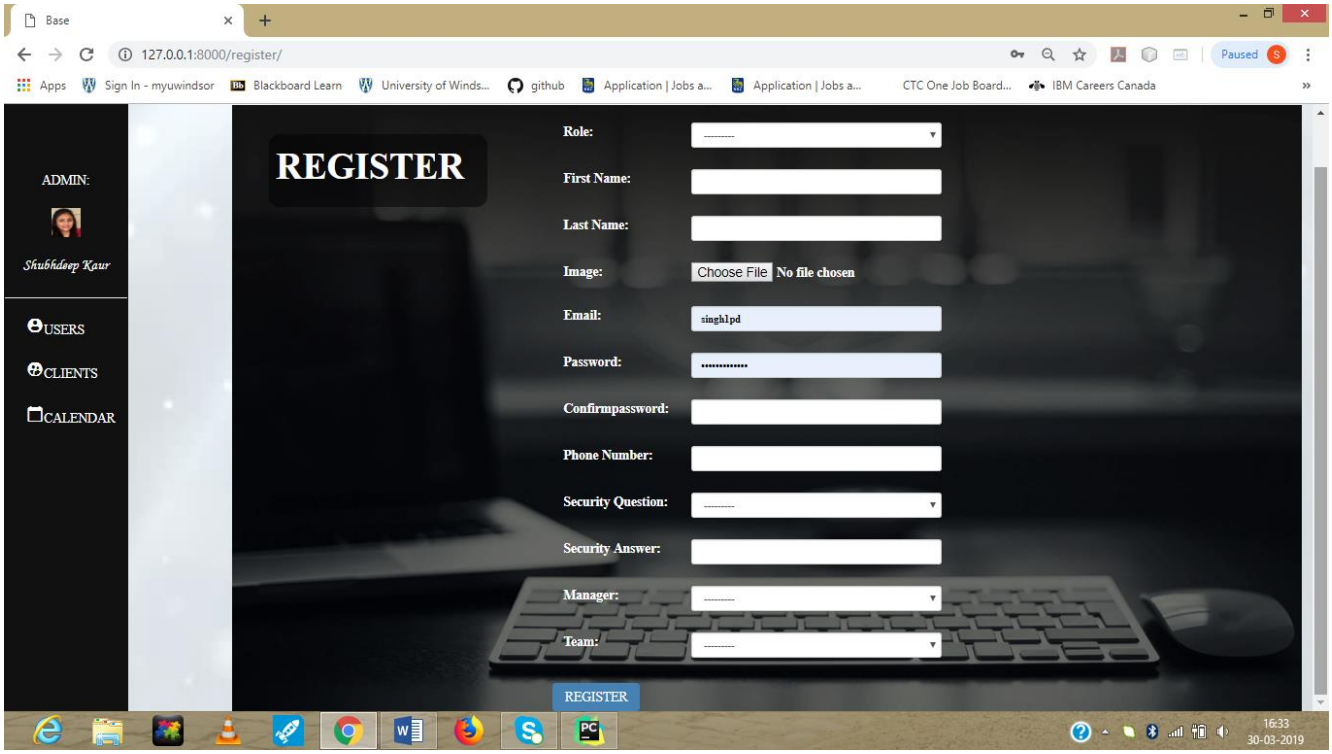
Admin Dashboard



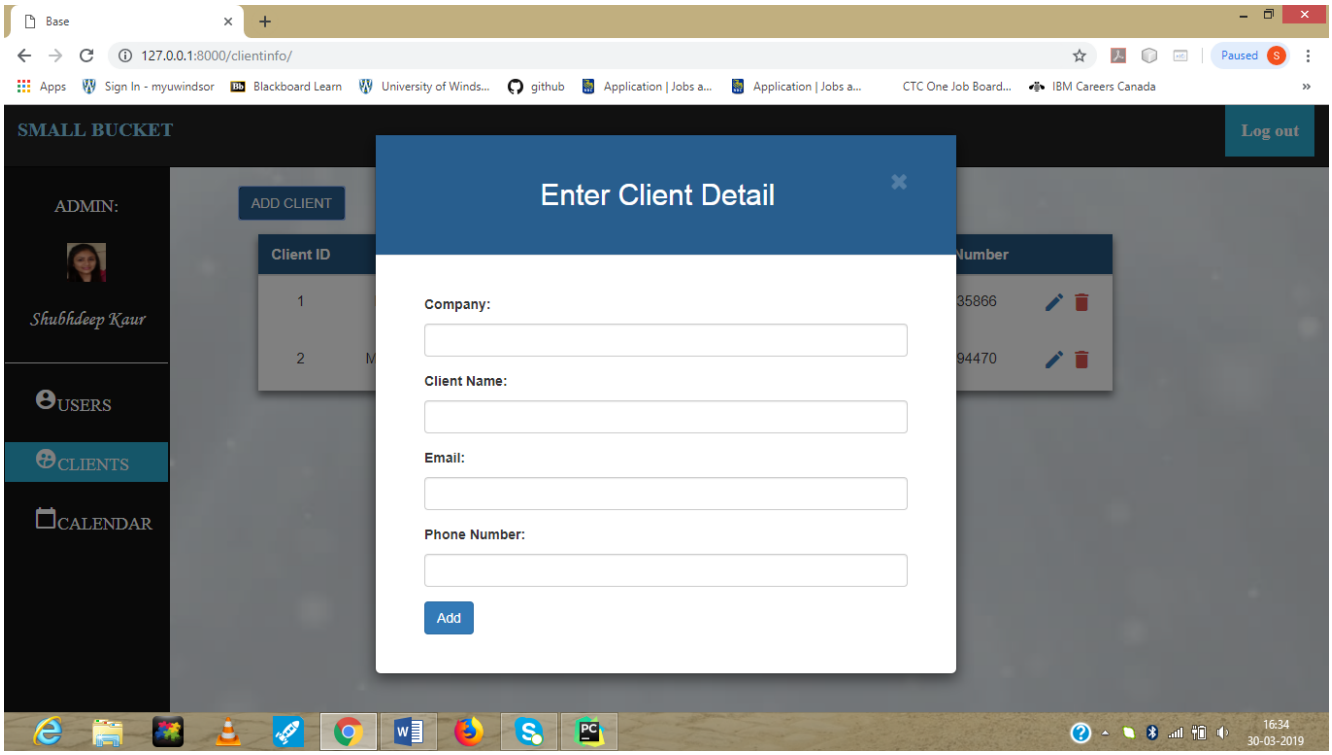
User table having options for add, edit and delete users



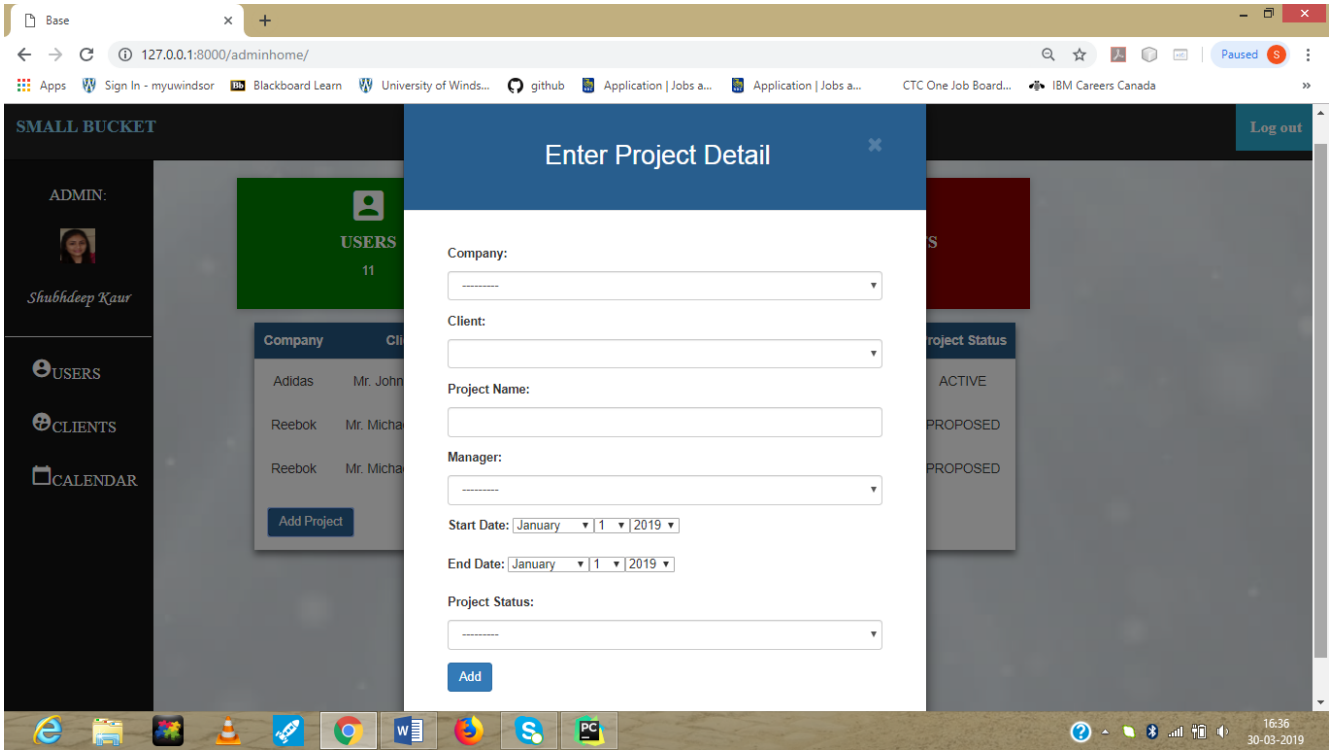
User registration page



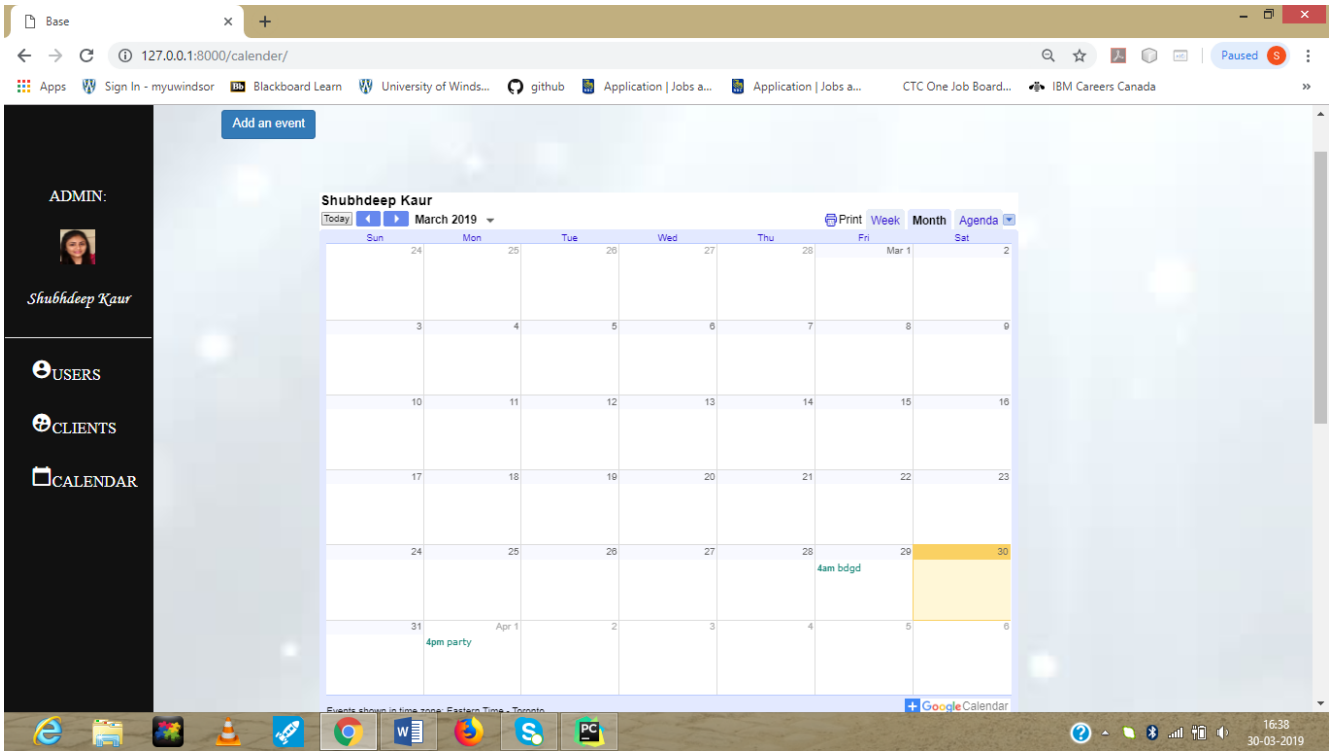
Add Client



Assign Project to Manager

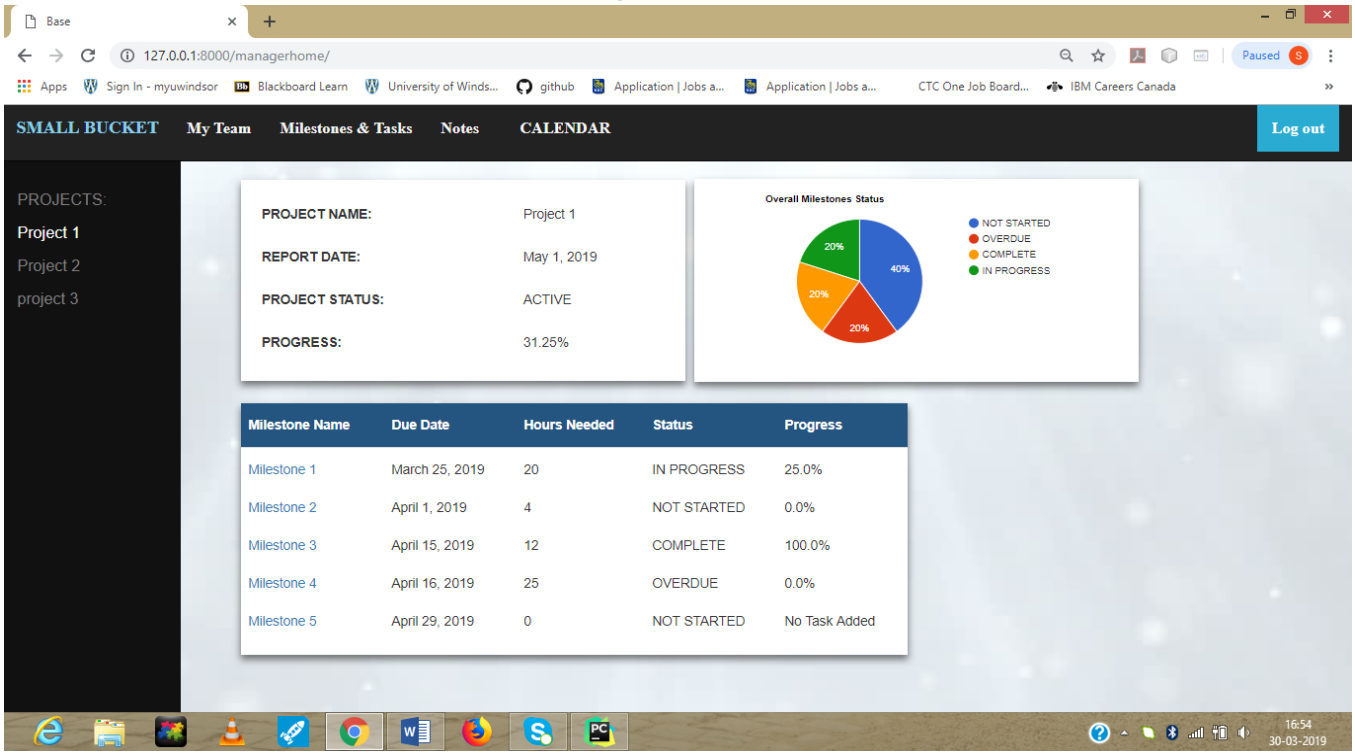


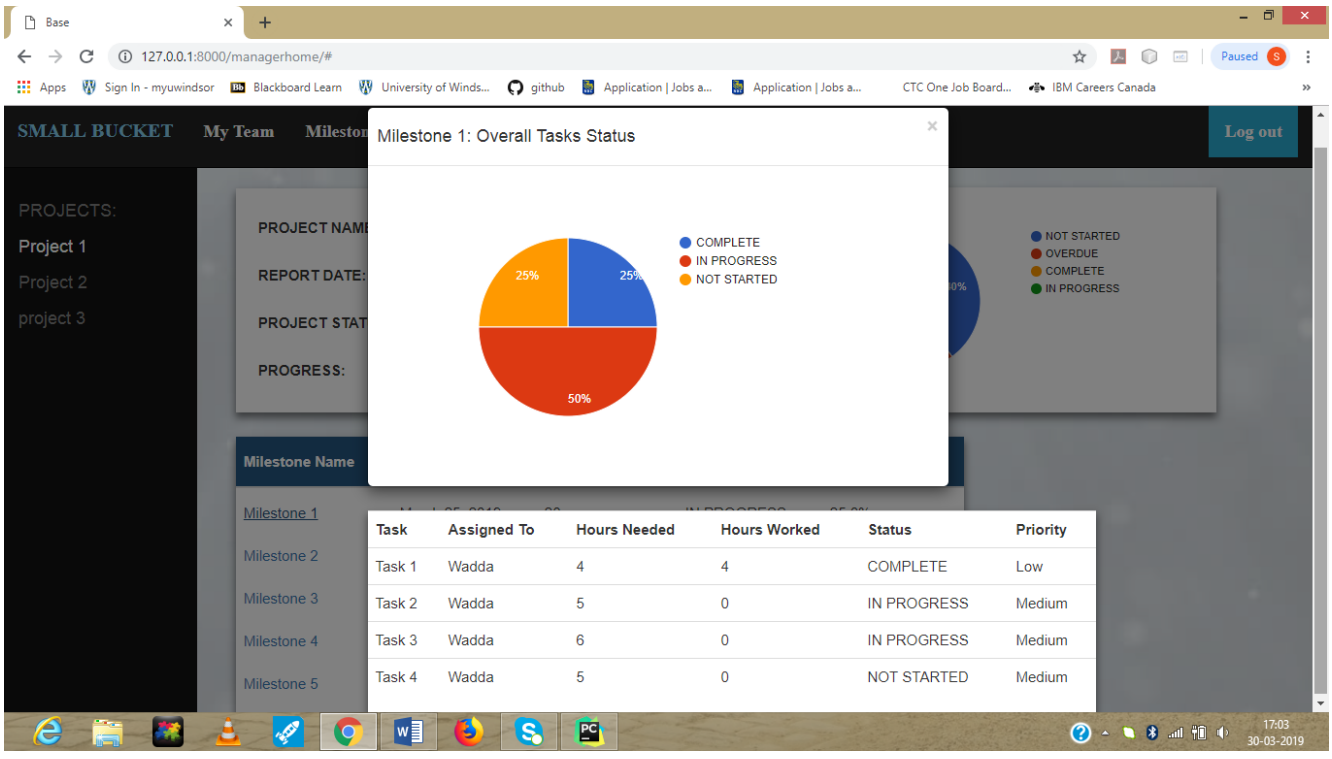
Calendar with add an event



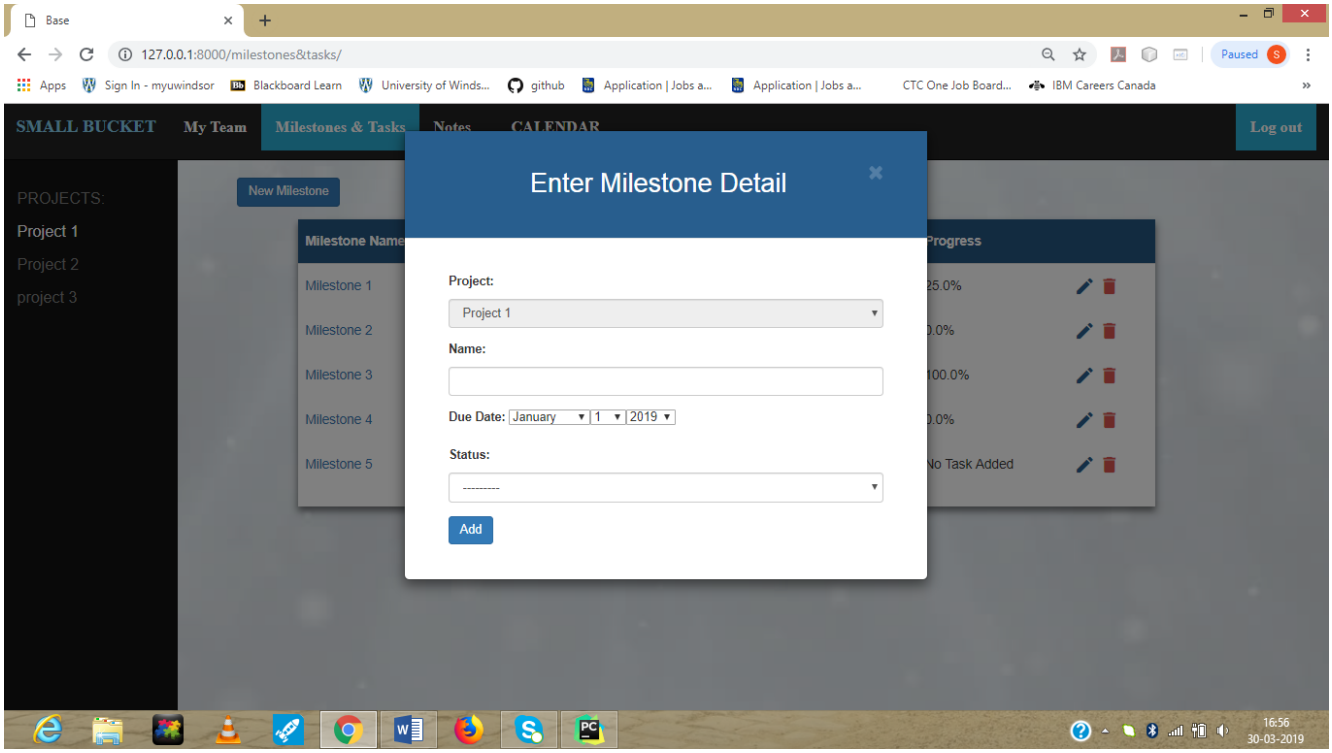
MANAGER:

Manager Dashboard

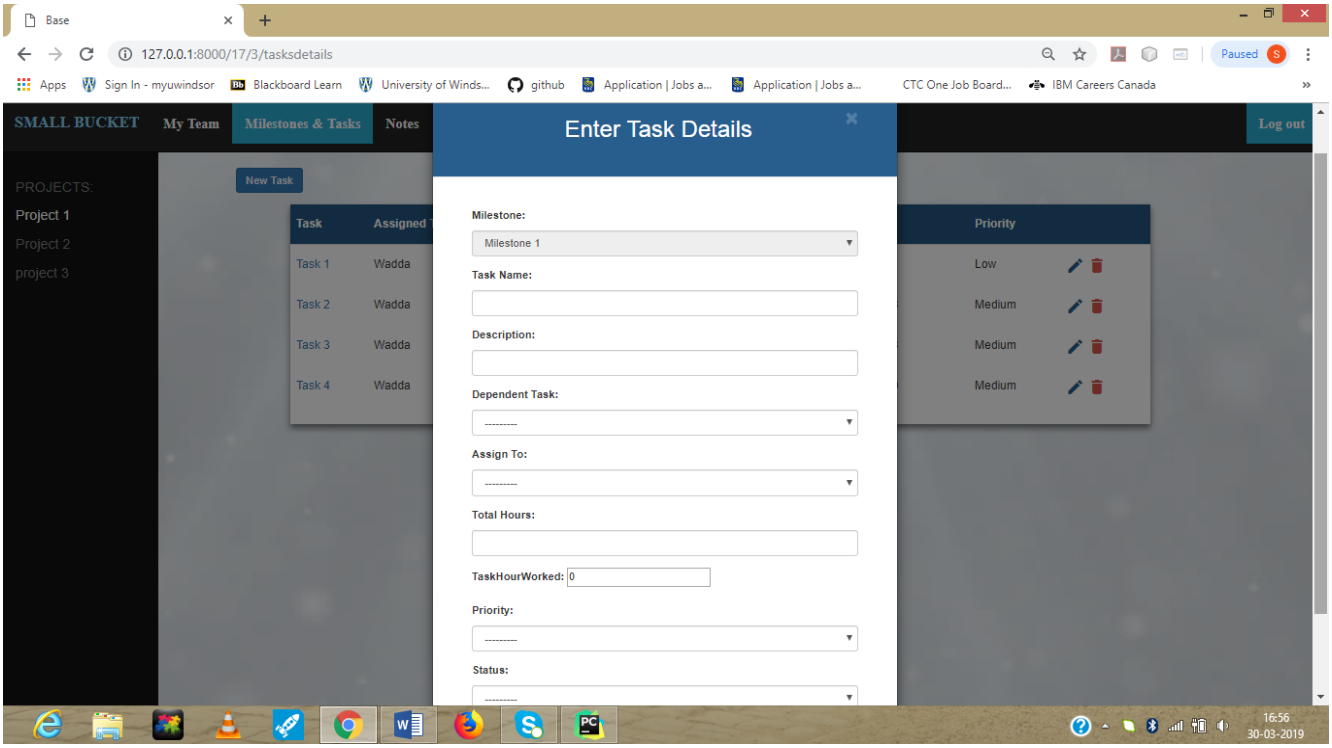




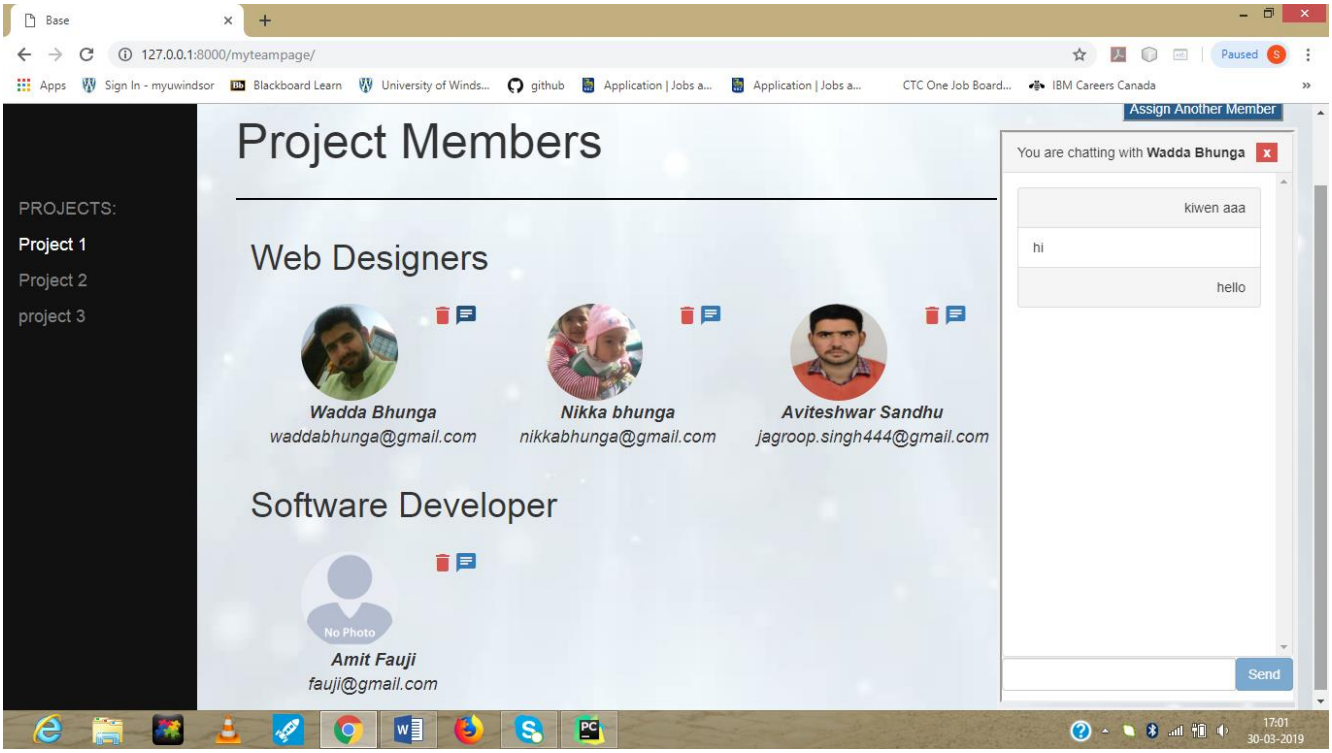
Milestone Page



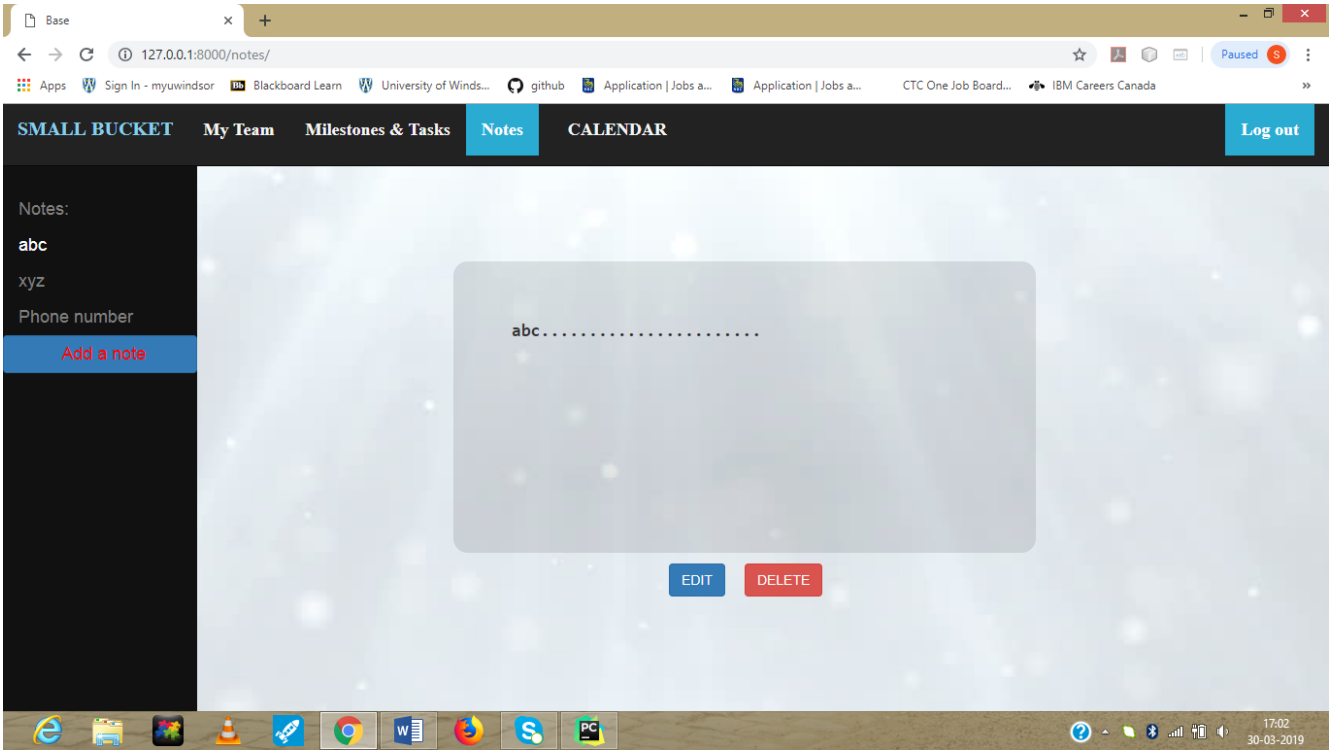
Task Page



Team page with chatting

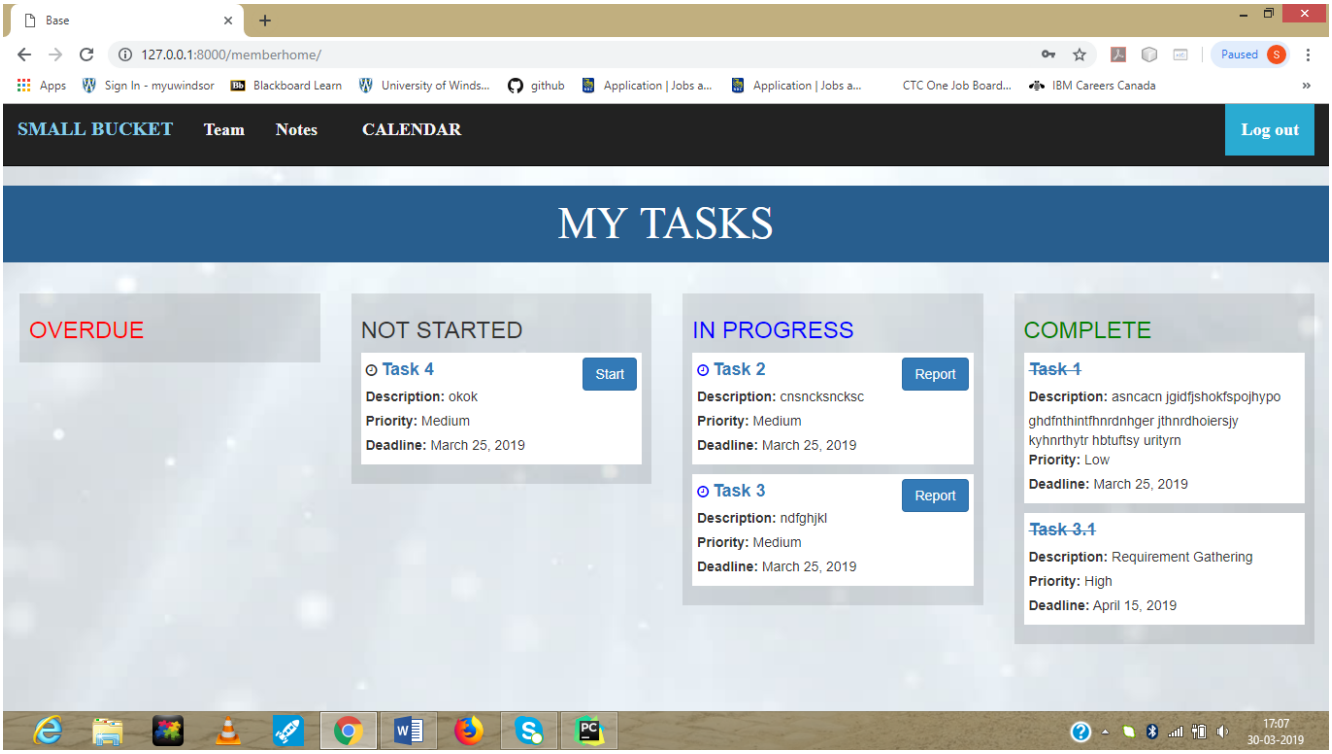


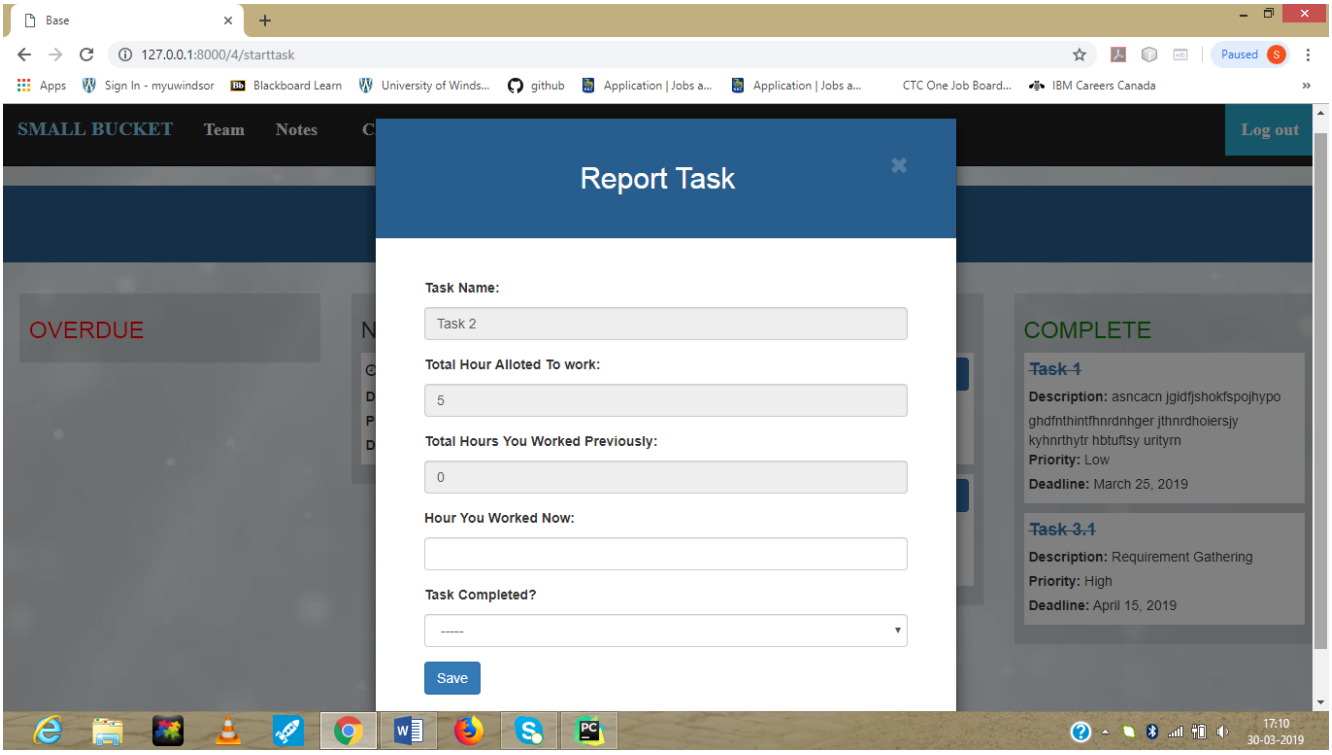
Manager Notes Page



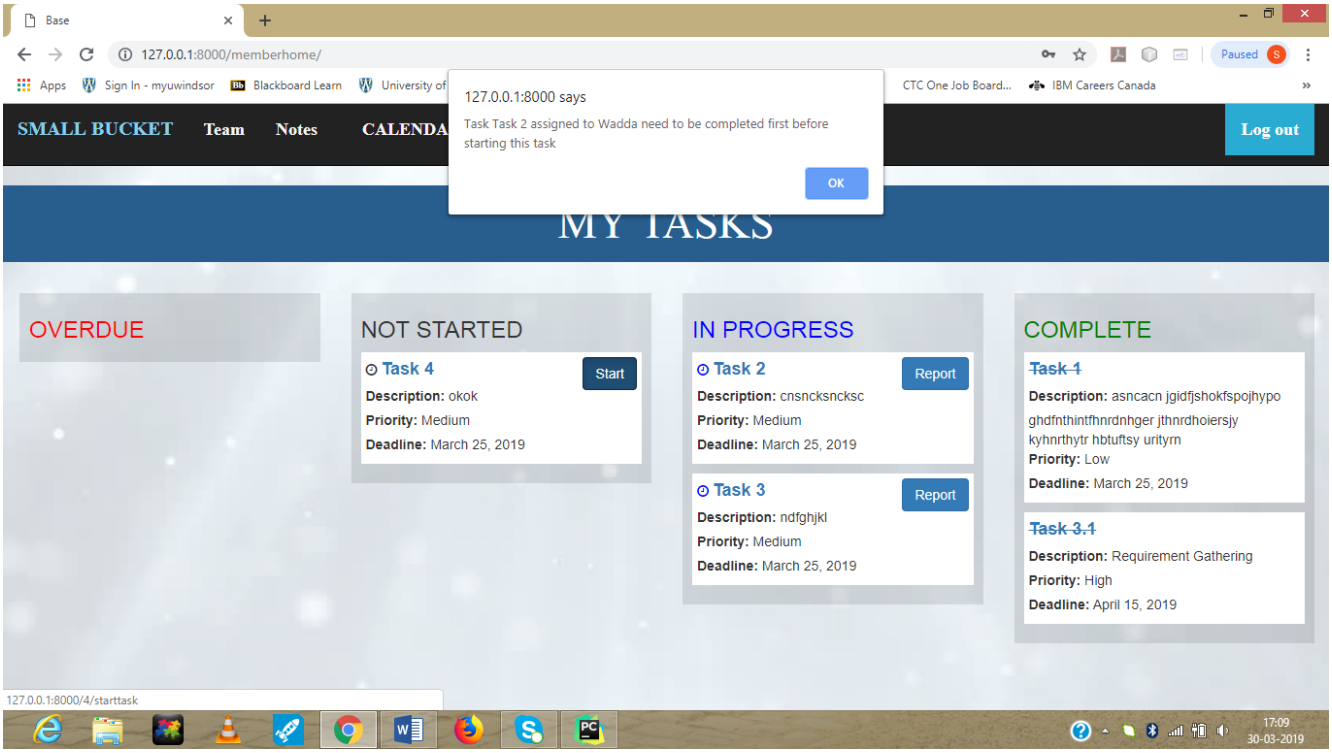
MEMBER:

Member Dashboard

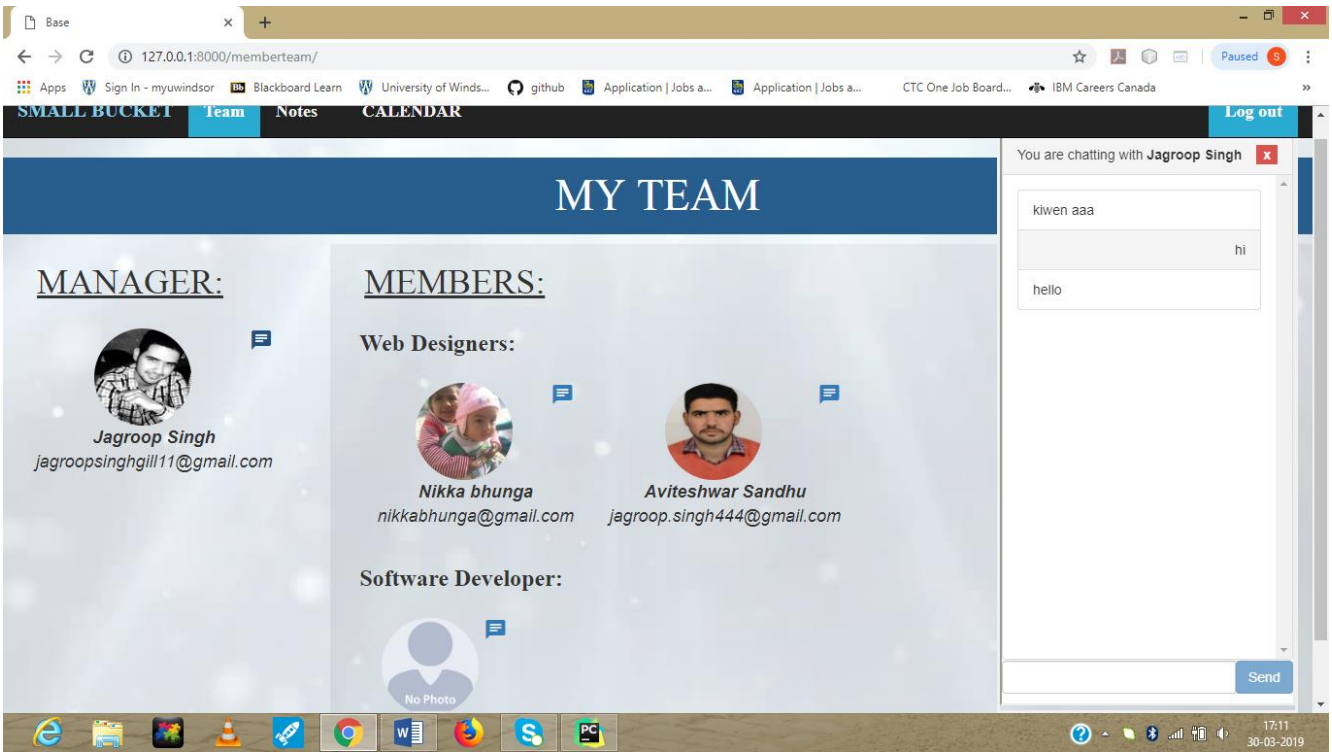




Dependency between Tasks



Member Team with chat



CHALLENGES FACED

- Django uses MVC framework, which is a new technology for us. Getting used to this type of framework was time consuming. We faced a lot of errors in the system in the beginning while developing but with time after learning MVC it seemed quite helpful for adding complex functionality in the application as it separates the functionality from the database and the frontend.
- Using JavaScript, Bootstrap and Ajax to make our application dynamic was bit tricky in this new framework.
- We made chat application before using client-server framework but doing it with MVC was again very difficult.
- Sharing of google calendar was also difficult as google does not allow sharing and adding event into a single calendar by different users and calendar must be owned by single user.

All the above challenges were tackled by learning more and more through watching tutorials from YouTube and Lynda.com and we also took help from stack overflow. This project was quite helpful for us in expanding our skill set and getting used to the new technology.