**Project Documentation**

This project summary document can be checked, reviewed and updated by any member of the team as we go.

Summary

Our project idea, ’Find Your Desk’, is where students are able to see the occupancies of libraries/computer.

At Universities finding a library space to work at can be difficult, especially around exam periods when many of the library/computer labs approach max capacity.

M5 Stacks placed on the back of chairs contain motion sensors which can detect when a chair is being used. Students will be able to select a location from a map of all the different libraries in their local area. This will bring up a list of the rooms in that building as well as the availability of chairs. Students are then able to book a chair.

The M5 Stack will then display the student number of the booked chair. When the student arrives they can scan their student card on the M5 Stack to confirm attendance. Students without bookings can search for a chair without a booking or they can sit in a booked chair but must be prepared to move should the student who booked it arrive.

Requirements

Your objective is to Design and Build:

* An innovative internet-enabled product or service.
* Will span **Desktop, Web, Internet of Things devices**
* Doesn't need to be a complete, market-ready product, rather, a working "Blended Fidelity" prototype (Something to enable you to pitch for more funding).

Marks:

* Product: 25%
* Portfolio: 40%
* Pitch: 25%
* Practices: 10%

Stakeholders

1. Student booking.
2. Student without booking.
3. University/admin

Project Plan

Following the Agile development plan, carrying out multiple ‘Sprints’ which involve:

1. ANALYSIS:

- User feedback from previous iteration.

- Tests from previous iteration.

- What are needs of users? What should the system do?

- Functional elements (what system should do) and non-functional (quality attributes).

- Verification (building the project right?) and Validation (building the right project).

2. DESIGN:

- Discussion process.

- Class diagrams (noun-verb analysis), Component diagrams, Deployment diagrams etc. (see design lecture).

- See design lecture for information on filtering + combination, relationships.

- Sequence diagrams complement Class diagrams.

- Wireframes?

- Review paper prototype, processing prototype????

3. CODE:

- Test driven code development.

- Agree on coding styles/rules.

- Collaboration with version control (GitHub).

- Need to code for 3 different applications (Desktop, Web, IoT).

- Desktop is processing, web is p5 javascript, M5stack is Arduino.

4. TEST:

- Ensure all features have tests.

- Don’t submit changes until code passes ALL tests.

- Not just tests for new feature but all existing tests previously made.

5. DEPLOY:

- Deployment with user testing.

- To get feedback on functional aspects as well as user experience.

If 1 sprint done every 2 weeks then it is possible to do 4 sprints before deadline.

**Meetings**

Group meeting held every Monday/Tuesday morning where we can discuss progress, review kanban board, assign jobs for the week etc.

Meeting notes to be made from each big meeting with summary of points.

Smaller 5 minute meetings (Scrums) can also be done on a daily basis.

Github and Kanban Board

<https://github.com/mathias-munk/FindYourDesk>

Everyones responsibility to continuously review and update the kanban board.