CPSC 481 Group Project

Deliverable 2

Group 2.4 - Ivan, Karen, Louise Lee, Nathan, Osa

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1.Project Idea

U-Collaborator is a schedule builder for students in the University of Calgary to arrange collaborations with their peers. Users will be able to upload their course schedules using an ICS file and join social groups of friends or project members. Our system will analyse the compatibility of the group's schedules, automatically highlighting compatible time slots. This will allow students to arrange for meetings with their peers, be it for group projects or having study sessions together. A UCalgary meeting space booking system will be included, which will facilitate the organisation of such meetings. Both TAs and professors will also be able to register for an account to offer consultation times/crash courses directly to student groups within the system. This will be developed as a web-app, optimized for a mobile browser experience. Overall, this app will help users at the University of Calgary to coordinate between each other.

2. Stakeholders

The main stakeholders would be the users of the system. They would mainly be students, as well as teaching staff such as Teaching Assistants (TAs) and professors.

- **Students**
  - Students interact with the app by creating accounts, uploading their schedules, and joining groups. These groups are used to create a compatibility schedule, highlighting times during the day that students will be able to meet. They will then be able to book rooms during their time slots.
- **Profs/TAs**
  - Professors and TAs would interact with the app to schedule study sessions and crash courses for their students. They would be able to establish groups for students and automatically merge all of their time slots.

- **Information Technology Services**
  - IT services would only interact with the system to support the API required for booking spaces on campus. Their interaction with the system would be minimal beyond this.

3. Research Methods

For our initial investigation, we decided to include IDEO methods such as surveys, interviews and cognitive maps.

1. **Surveys**
   We created a survey to be sent out to TAs and Professors. We chose this method because it will allow them to fill in their answers conveniently and easily, especially since the teaching staff will be very busy.

2. **Interviews**
   We also conducted interviews with students. We chose this method as a means to gather information on where students preferred to meet up with group members to study, and how such arrangements were made.

3. **Cognitive Maps**
   Additionally, we asked our interviewees to do up a cognitive map. This complemented the interviews, as it allowed us to visualize the process our end user's currently go through in order to schedule a group session. This will give us insights as to what the basic functional expectations of our system should be.

4. Results

4.1 Survey with Teaching Staff

The result sheet has been automatically generated by google forms. Questions are in the top row, with responses in the following rows.
The link to the Google sheet are as follows:
https://docs.google.com/forms/d/e/1FAIpQLScWJbb_IF8IdIMQygS8WowIMRIf1qrqK4HyOlIF-aLLPkPIKw/viewform
The link to the result of the survey is as follows:
https://docs.google.com/spreadsheets/d/1OLbPi15ddLuTpVyxqnz_vJgn7CbSk0f79w2C13_t7kQ/edit?usp=sharing

4.1.1 Summary of Survey Results

We received survey responses from 5 people, composed of 3 TAs or student leaders and 2 professors. The two professors teach in the Department of Computer Science and the others are from various backgrounds. Only one respondee has held a crash course, while 80% of the people surveyed have held a review session outside of scheduled time. Of the people who hold review sessions, one only does so for certain circumstances. Two people who have sessions outside of scheduled time ranked the difficulty of finding a time at a 3 on a scale of 1 to 5 (1 being easy, 5 being hard), while one person said it was very difficult, giving it a 5 out of 5 rating. Two respondents listed the varied schedules of students as the main difficulty in finding an appropriate time, while the other said that physics students generally have similar schedules, simplifying the process. These results show that there is a quantifiable problem which can be addressed.

A majority of people said they use a tool for finding a time slot to meet, and the tools are You-Can-Book-Me, a survey in D2L, and Doodle polls. These tools have various advantages and are quite distinct from each other. They can provide strong inspiration for features which we should include in our app to create an appealing interface to all users.

4.2 Interview with Students

Responses from the interviews have been loosely transcribed into a google doc:
https://docs.google.com/document/d/1KzKlAQP3xhVZsAtn3xOCvZQIamGHRQYgER5xGoP5XZ8/edit?usp=sharing

4.2.1 Summary of Interview Results

We can gather from the interview results that most students would have to done group projects at least once during their time in university. In fact, most people find it hard to coordinate timings with their group mates, with one person indicating they are unsure what app they can use to coordinate. Lastly, all find it useful to be able to schedule and book a room through a single service.

4.3 Cognitive Map

Cognitive maps have been scanned and uploaded to the following google doc:
https://docs.google.com/document/d/1h86BjmozW7PeM6JPEbU3N0wRNOP2cJv_UyAEkDWv2Pg/edit?usp=sharing

4.3.1 Summary of Cognitive Map Results

From the responses we received, it seems like most people will coordinate timings in person after class or over social media and text. Students would also have to go to workroom booking system to book TFDL rooms. In short, students currently have to access many different platforms just to coordinate one meeting.

5. Reflection of IDEO Methods

What went well
> The three methods…
- The survey was effective in gathering qualitative data for users who would otherwise have little free time for an in-person meeting. Its short answers were particularly useful in finding trends in what people currently use to complete these tasks, and highlighted the various and imperfect solutions available.
- The interview and cognitive maps complemented each other, and allowed our users to get creative. The structured format of the interview got us answers to questions which we had identified, while the more flexible structure of the cognitive maps allowed respondents to tell us what they thought was most important.
- Common themes were clear amongst the methods. These included a group chat feature and the mix of imperfect solutions currently being used. We were also able to quantify to an extent the need for a solution to this problem.

What went poorly

- The short format of the survey left a few questions unanswered. The structure of the survey also limited the responses of the respondents, which was good for focussing the discussion but excludes some more creative requests and feedback.
- The cognitive maps are somewhat harder to interpret and contrast, because they can't necessarily be directly compared like the survey or interview results.

What would you do differently
- We would lengthen the survey somewhat based on the responses we got this time. Perhaps if doing this from scratch again, a two-stage survey would be useful to investigate the questions that the first batch of responses evokes.
- To somewhat standardize the cognitive maps, we may provide examples in the future of the general structure we would like to see, without anything filled out so that we don't influence their feedback beyond the general format.

6. Task Descriptions

Task #1 (Creating an Account)

A user opens the app for the first time. They are greeted by a welcome screen and are prompted to either log in or create an account. Since this is their first time using the app, they create an account. After entering some basic information, they are brought to the home screen with several options for them.

Task #2 (Creating a Group of Friends)

Inside the app, a user can create a group in which they can sync their calendars with one another. A user clicks a button to create a group, enters the name and a short description of the group, and then clicks to confirm the creation. They will then be able to invite friends to join this group.

Task #3 (Managing your Schedule)

After creating their account, a user wishes to upload their schedule to the app. They start by downloading an ICS of their file from a website my.ucalgary.ca. Then, after clicking the upload button, they are prompted to select the file they would like to upload. On the home screen, the schedule automatically updates with the uploaded file. The user then clicks another button to manually block off a section of time in their schedule for homework. After entering basic information about the purpose of it, it also shows up on their homepage.

Task #4 (Scheduling a Meeting)

After clicking on a group, a user is given options for meeting times, organized by compatibility. Clicking on one of these, they enter basic information about the event, including the location, and click save. Once saved, all members of the group can see this event on their home page.

Task #5 (Chatting with Friends)

Entering the app, a user clicks on a group and then clicks on the chat icon. This brings up a message board available for users to chat with each other. A message is typed up to decide on a time and sent to the group by pressing the send button. Other members of the group are notified and reply in a similar way.

Task #6 (Booking a University Space)

During the process of scheduling a meeting, the user is asked to enter a location for the meeting. They decide to book a space at the university, and select a space which is available. The meeting space is booked for them after saving the event.