

CS102**Fall 2018/19**

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Criteria	TA/Grader	Instructor
Presentation		
Overall		

Project Requirements Report

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1. Introduction

One of the biggest problems of college students is selecting their courses and arranging their schedules in each semester. Since Bilkent University students might not select their courses, teachers and sections by pre-registration, a student often look for other ones having potential to swap their sections. In order to do this, students usually use social media. However, this takes too much time and effort; also students may not find each other to swap their sections. Therefore, students need an efficient way to ease this swapping process. Our aim is developing an desktop application to solve the course arrangement problem. Due to the program:

- Students will spend less time and effort.
- Students will reach more people to swap.
- Students can find people they cannot find themselves to swap automatically.

2. Details

2.1 How it works

Students create an account by using their Bilkent mail. They choose which section they want and which section they will drop in course menu. Program automatically matches proper students. After matching, program initially creates a chat room and puts students in the chat room. To inform users about whether match is found, program sends a notification

mail. Students can communicate and make deal to exchange their courses in there. Note that, a student can make only one trade request simultaneously. After one trade is completed, they can make another trade request. Students make these adding/dropping actions manually. This desktop application has no interaction with Bilkent SRS system.

Use case:

Cihan who is a computer science student in Bilkent University, wants to change his CS102-1 section to CS102-2 section. Aynur, who is another Bilkent student, wants to change her CS102-2 section with PHYS102-1 lesson. David, another student, wants to change his PHYS102-1 lesson with CS102-1 lesson.. After these people login program and submit their requests, application searches for a match. As it is seen, Cihan can give CS102-1 to David, David can give PHYS102-1 to Aynur, Aynur can give CS102-2 to Cihan. Application detects this match and put these students in a chat room. Now they can make a deal and trade their courses.

2.2 Features

- The program has register/login system:

Due to the system, students can create an account by their Bilkent mail and a password they create. After registration, they can login the program by entering their mail and passwords.

- Course menu:

Users can find all courses in Bilkent from the menu and select which one they want to add and drop.

- Matching System:

The system can find match pairs. Moreover, it can detect match cycles which include more than 2 people. For example, let's say user A wants to change x section with y, B wants to change y section with z, C wants to change z section with x. The system will match these 3 people quickly and without miss matches. The system removes request after matching them. Thus, there will not be any wrong matches. Also, a cycle can contain unlimited number of users.

- Chat Room:

The program creates a chat room for every match groups. Chat room receives and sends messages simultaneously. It can include more than 2 users (since there can be more than 2 user in a match group). It is private so another people can not join the chat room.

- Notification Mail System:

When a match is found, the application sends a notification mail to each students in the match cycle. Therefore, students are informed immediately and they can trade their courses as quick as possible.

- Profile:

Each user has a profile including e-mail (Bilkent mail), password and username. Users can create and change their username and password.

2.3 Security

In order to prevent fake accounts, users can only sign up with their Bilkent mail. The application does not accept other than Bilkent mail. Also, application uses e-mail verification system to prevent using other students' mails. In the system, program sends a code to students' unique bilkent e-mail address to register. Therefore, people cannot register with others' identities and fake accounts. This leads more secure trades among students.

2.4 Inspiration

When we designed the program, we are inspired by some universities' course selecting system. [1] For instance, in Wisconsin-Madison University, there is a swapping process but it is for just one person. We improved on that and create this program. We add chat system and it can be used among 2 or more people.

3. Summary & Conclusions

This report developed the features required for a new and, hopefully, helpful product intended to help students. The desktop program provides a convenience way for student to organize their desired course schedules by spending less time and effort. Besides, it ensures all potential matches to swap.

4. References

- 1- "DoIT Help Desk Knowledgebase." Student Center - Swapping a Class, kb.wisc.edu/helpdesk/page.php?id=15257.