**CMPE312 “Software Engineering” Term Project Spring 2020**

28.02.2020

**CMPE-312 Term Project “University Student Registration System (USRS)” – 40 points**

Develop an application for a single host computer providing concurrent (parallel) work of four actors (participants) of the University Student Registration System (USRS): Student (S), Academic advisor (AA), Vice-Chair (VC), Vice-Dean (VD), System Administrator (SA). Implement USRS using data for the Faculty of Engineering, CMPE Department [1], Computer and Software Engineering Programs. Use information on the staff of CMPE and other necessary Departments from EMU and CMPE web-sites [1, 2]. Sample screenshots are shown in Figures 1-6.

The work shall be done in teams of 3-10 people. Reports are prepared by teams. Any programming language/environment and Database management system may be used.

Bonus (5 points): Develop on-line USRS

Functional requirements for USRS actors:

1. Student:
   1. View the list of courses offered in the registration priority order (failed and withdrawn courses (F, D-, W) shall be on the top, followed by not taken courses, followed by passed courses ordered by their reference code) [2, 3].
   2. Add courses for a program. Normal load is 3-5 courses. Prerequisite courses shall be already passed [2, 3].
   3. Delete courses from a program
   4. Change group of a course in the program
   5. View time-table of a group
2. Academic advisor:
   1. All Student’s functionalities
   2. Program courses confirmation (single/all) for students advised by this AA.
3. Vice-Chair:
   1. All AA’s functionalities
   2. Assigning S to AA inside VC’s Department
   3. View/insert/delete/update departmental course information
4. Vice-Dean:
   1. View courses of all Faculty Departments
   2. View programs of all students of the Faculty
5. System Administrator
   1. Introduce use to the system (give user name and password)
   2. Assign role to a user (S, AA, VC, VD, SA)

Non-functional requirements;

1. USRS shall provide interface similar to shown in Figures 1-6
2. USRS shall provide security by the use of usernames and passwords.

**The project has three phases:**

* Proposal – presentation on **March 23, 2020, Monday**, 10.30-12.20, CMPE-137 (8 points)
* Design - presentation on **April 27, 2020, Monday**, 10.30-12.20, CMPE-137 (12 points)
* Implementation and testing - presentation on **May 18, 2020**, Monday, 10.30-12.20, CMPE-137 (20 points)

**Report templates are provided in** [**Homework**](https://staff.emu.edu.tr/alexanderchefranov/en/teaching/cmpe312/homework) **. Reports shall be printed and have CD’s with all related to the project information (Report, design materials, sources, executables, etc.)**

References

1. [CMPE Department](https://cmpe.emu.edu.tr/tr)
2. [EMU Web-site](https://www.emu.edu.tr/en)
3. [CMPE Curriculum](https://cmpe.emu.edu.tr/Documents/Sharepointtraing/Curriculum/CMPE_final_15.01.2019.pdf)
4. [CMSE Curriculum](https://cmpe.emu.edu.tr/Documents/Sharepointtraing/Curriculum/CMSE_final_15.01.2019.pdf)

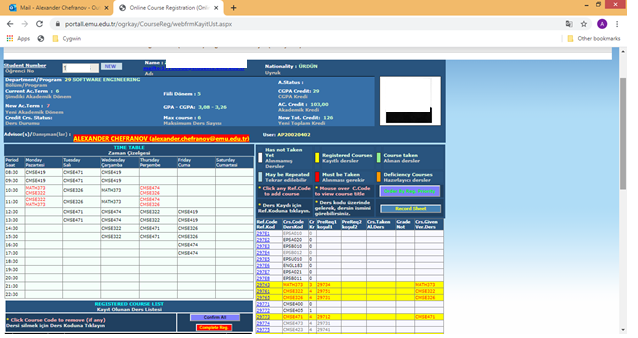


Figure 1. Program with clashes

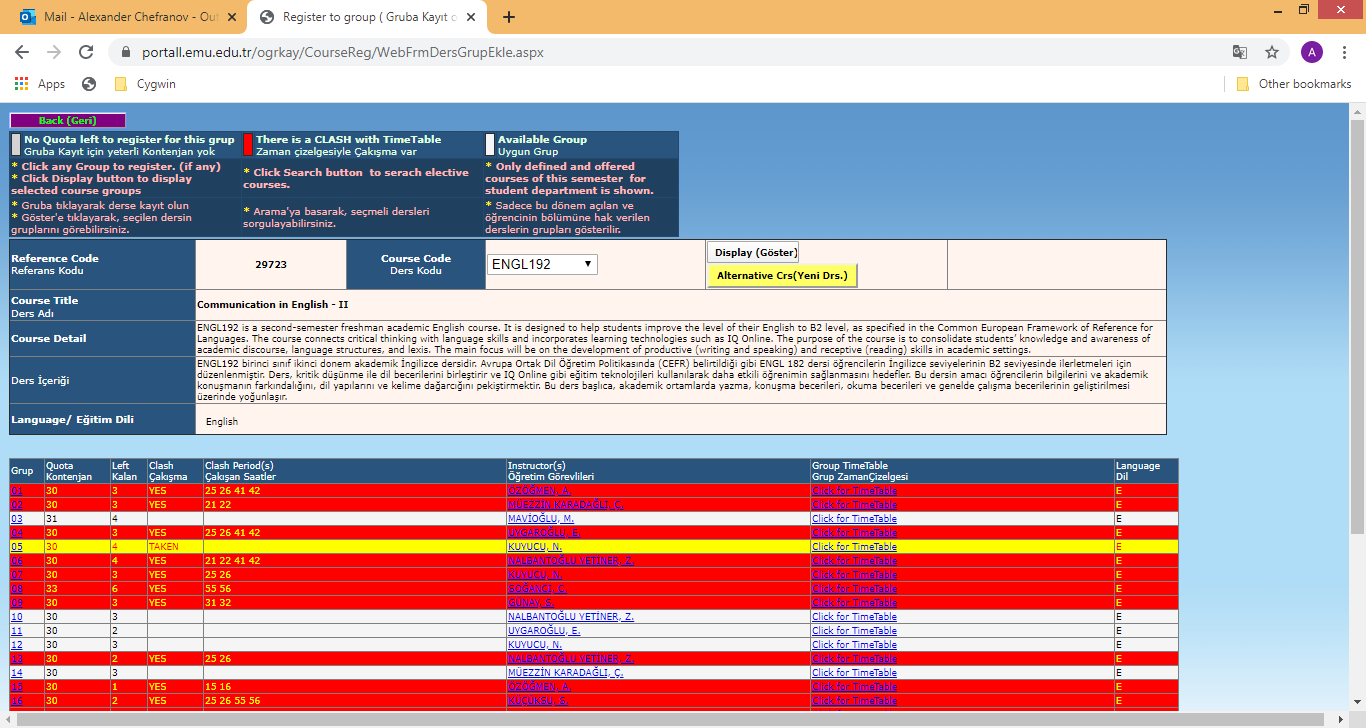


Figure 2. Selected group (yellow) and other with clashes, number of places left, group time-tables, teachers

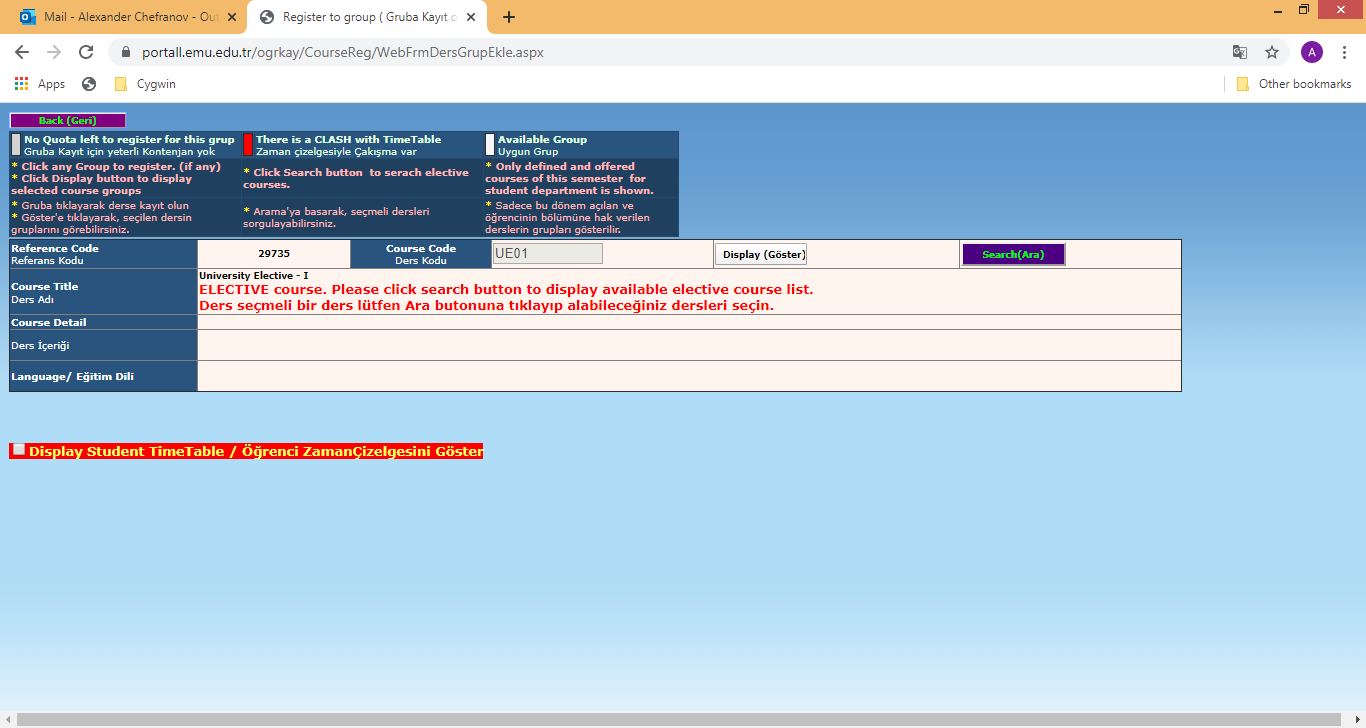


Figure 3. A screen to select from elective courses (click Select)

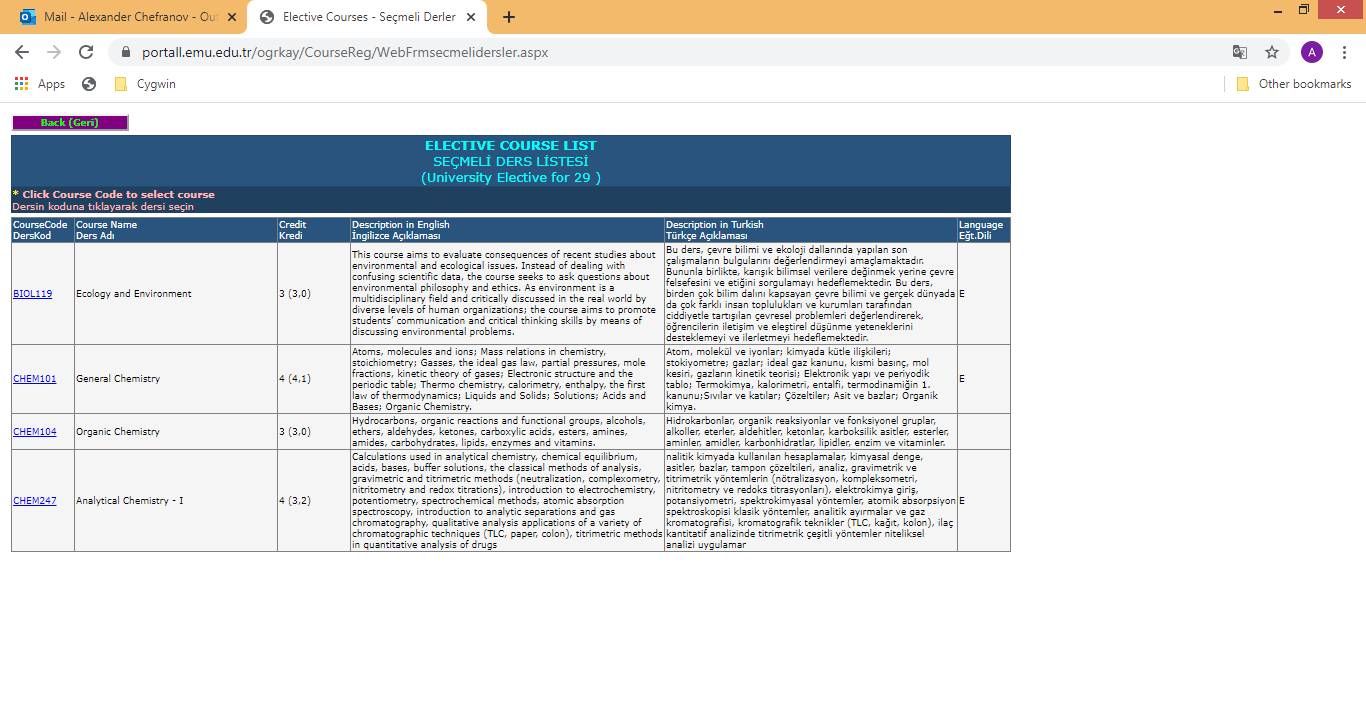


Figure 4. List of elective courses

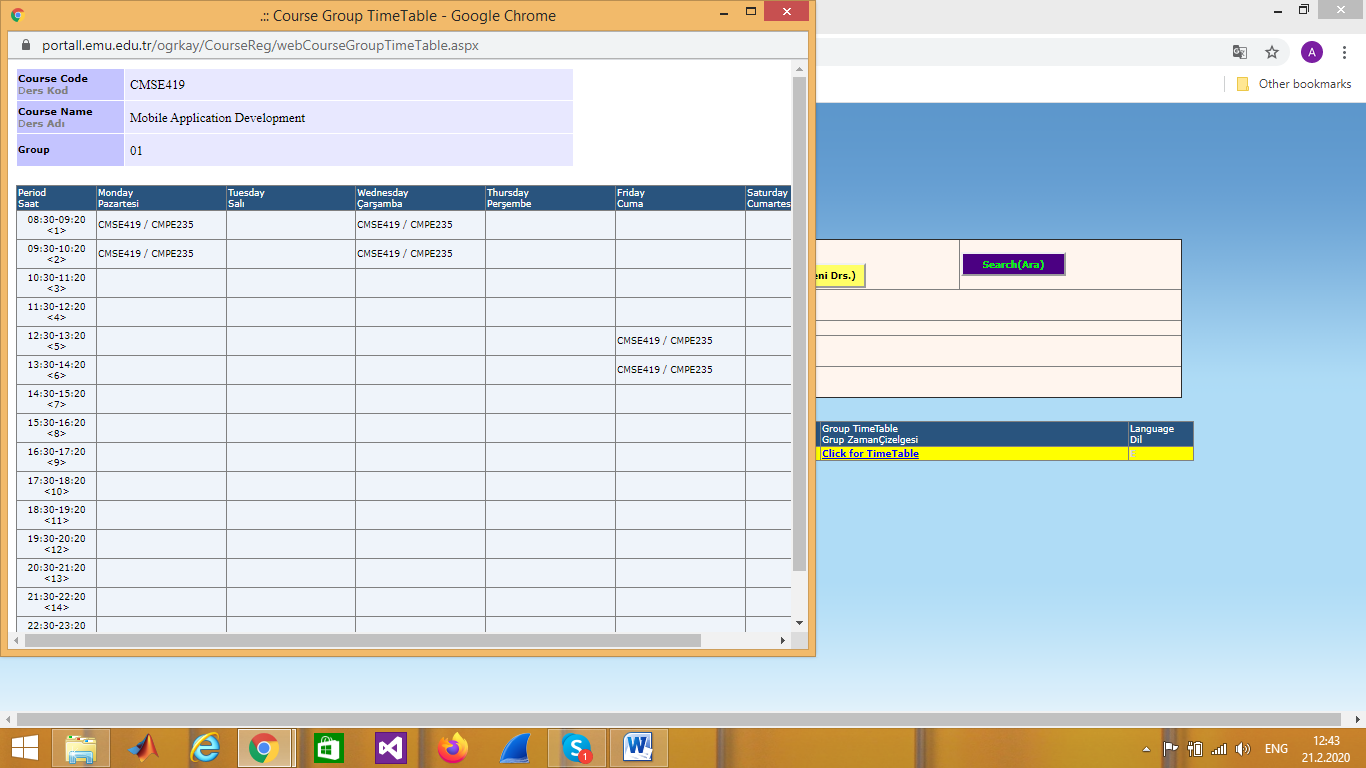


Figure 5. Pop-up window with a group time-table

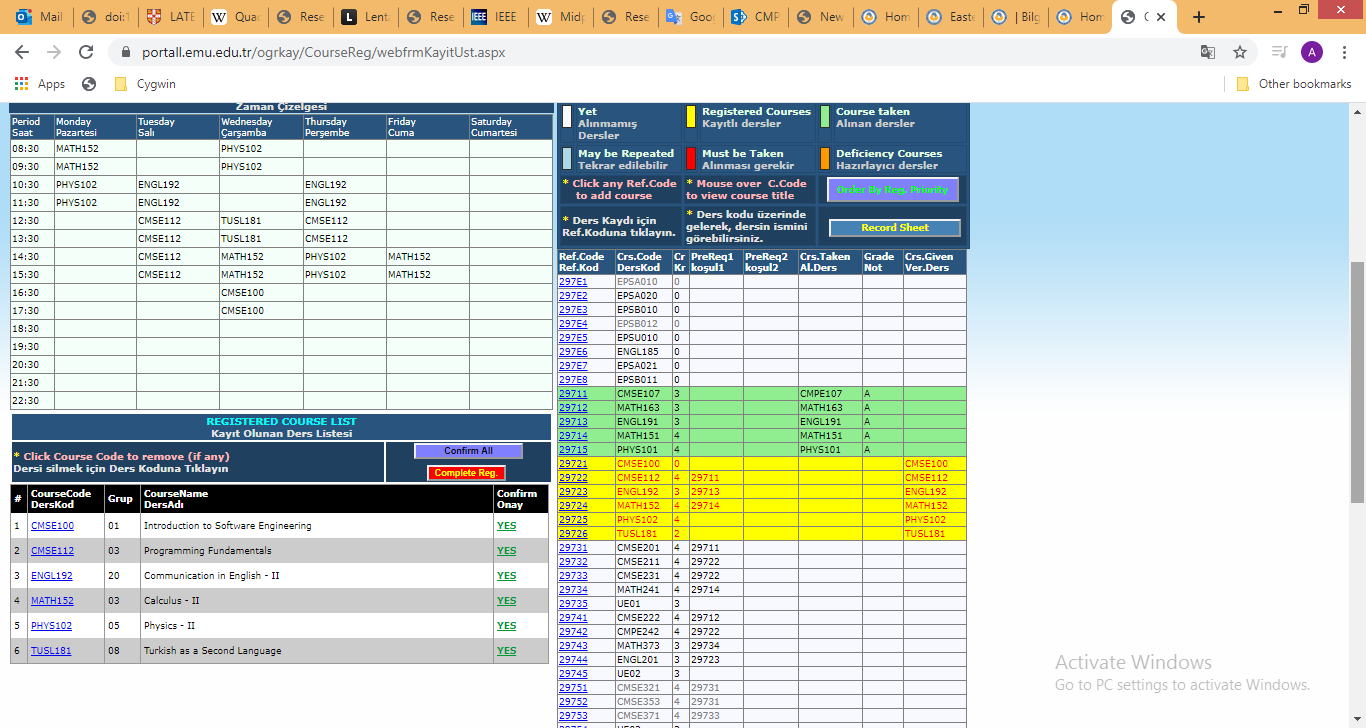


Figure 6. Time-table, selected courses, passed courses with grades