

Structured Programming Project Documentation

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HOW THE PROGRAM WORKS

Firstly when the user opens the program the main menu shows up and asks the user to choose which user type he/she wants to proceed with.

```
1. Admin
2. Instructor
3. Student
4. Exit
Select user type:
```

The admin can do the following:

- 1) Register a new instructor.
- 2) Remove an instructor.
- 3) Add a new student.
- 4) Remove a student.
- 5) Add a new course.
- 6) Delete a course.

The instructors can do the following:

- 1) Update their own courses.

The students can do the following:

- 1) Enroll in a course
- 2) Unenroll from a course

ADMIN

When entering as an admin three types of operations will appear.

```
## ADMIN ##
1. Instructor operations
2. Student operations
3. Course operations
4. Back
Select operation:1
```

In the following section I will explain all the operations and how they work.

1. Instructor operations:

```
## INSTRUCTOR OPERATIONS ##
1. Register new instructor
2. Delete an instructor
3. Update an instructor informations
4. List all instructors
5. Back
Select operation:1
```

1) Register a new instructor.

Enter the details of the instructor to be registered. Then press ENTER

Note: inputs that contain space are not accepted.

Enter the following informations to add an instructor

Instructor ID: 123

Name: yunus

Surname: selcuk

Title: prof.

If the instructor added successfully the following will be printed. And the data will be printed in the file.

```
123,yunus,selcuk,prof.  
Data successfully written in file instructors.txt  
## ADMIN ##  
1. Instructor operations  
2. Student operations  
3. Course operations  
4. Back  
Select operation:
```

The content of instructors.txt:

```
123,yunus,selcuk,prof.
```

If you try to register another instructor with the same id:

```
Enter the following informations to add an instructor  
Instructor ID: 123  
This instructor is already registered
```

Repeating the previous operation several times we got the following data in our instructors.txt file

```
123,yunus,selcuk,prof.  
111,xxx,xxx,lect.  
222,Ahmet,Elbir,lect.  
333,Banu,Dir,prof.  
444,Furkan,cakmak,lect.
```

2) Delete an instructor.

```
## INSTRUCTOR OPERATIONS ##  
1. Register new instructor  
2. Delete an instructor  
3. Update an instructor informations  
4. List all instructors  
5. Back  
Select operation:2
```

To delete an instructor entering his/her id is enough.

```
Enter the id of the instructor you want to remove  
Id:111  
The instructor has been deleted successfully.
```

Updated instructors.txt content:

123,yunus,selcuk,prof. 222,Ahmet,Elbir,lect. 333,Banu,Dir,prof. 444,Furkan,cakmak,lect.
--

If you enter a non valid instructor id:

```
Enter the id of the instructor you want to remove  
id:555  
Non valid instructor id.
```

3) Update an instructor informations

```
## INSTRUCTOR OPERATIONS ##
1. Register new instructor
2. Delete an instructor
3. Update an instructor informations
4. List all instructors
5. Back
Select operation:3
```

Enter the id and the new details of the instructor to make updates.

Note: inputs that contain space are not accepted.

```
Enter the following informations to add an instructor
Instructor ID: 333
Name: Banu
Surname: Dirı
Title: prof.
333,Banu,Dirı,prof.
Data successfully written in file instructors.txt
```

The updated content of instructors.txt

```
123,yunus,selcuk,prof.
222,Ahmet,Elbir,lect.
333,Banu,Dirı,prof.
444,Furkan,cakmak,lect.
```

4)List all instructors

```
## INSTRUCTOR OPERATIONS ##
1. Register new instructor
2. Delete an instructor
3. Update an instructor informations
4. List all instructors
5. Back
```

```
Select operation:4
```

Enter 4 to print all the instructors in instructors.txt on the screen

```
ID - NAME - SURNAME - TITLE
123,yunus,selcuk,prof.
222,Ahmet,Elbir,lect.
444,Furkan,cakmak,lect.
333,Banu,Diri,prof.
```

2. Student operations

```
## ADMIN ##
1. Instructor operations
2. Student operations
3. Course operations
4. Back
Select operation:2
```

The same instructor operations are valid for the students

1)Register new student

```
## STUDENT OPERATIONS ##
1. Register new student
2. Delete a student
3. Update a student informations
4. List all students
5. Back
Select operation:1
```

Note: inputs that contain space are not accepted.

```
Enter the following informations to add an student
Student ID: 19011913
Name: muhanad
Surname: tuameh
19011913,muhanad,tuameh,0,0
Data successfully written in file students.txt
```

The content of students.txt

19011913,muhanad,tuameh,0,0

The two zeros at the end of the data are the number of courses taken by the student and the number of credits.

Repeating the previous operation several times.

The content of student.txt:

19011913,muhanad,tuameh,0,0
19001,tarik,akan,0,0
19002,yusuf,ozdemir,0,0
19003,mahmut,altay,0,0
19004,hatices,ilhan,0,0

If you try to enter the same id to register another student.

```
Enter the following informations to add an student
Student ID: 19011913
This student is already registered
```


2) delete a student

```
## STUDENT OPERATIONS ##  
1. Register new student  
2. Delete a student  
3. Update a student informations  
4. List all students  
5. Back  
Select operation:2
```

To delete a student entering his/her id is enough.

```
Enter the id of the student you want to remove  
id:19003  
The student has been deleted successfully.
```

The updated content of students.txt:

19011913,muhanad,tuameh,0,0
19001,tarik,akan,0,0
19002,yusuf,ozdemir,0,0
19004,haticce,ilhan,0,0

If you enter a non valid student id:

```
Enter the id of the student you want to remove  
id:18001  
Non valid student id.
```

3) Update a student informations

```
## STUDENT OPERATIONS ##
1. Register new student
2. Delete a student
3. Update a student informations
4. List all students
5. Back
Select operation:3
```

Note: inputs that contain space are not accepted.

```
Enter the following informations to add an instructor
Student ID: 19002
Name: mehmet
Surname: ozdemir
19002,mehmet,ozdemir
Data successfully written in file students.txt
```

The updated students.txt

```
19011913,muhanad,tuameh,0,0
19001,tarik,akan,0,0
19004,hatice,ilhan,0,0
19002,mehmet,ozdemir
```

4) List all students

```
## STUDENT OPERATIONS ##
1. Register new student
2. Delete a student
3. Update a student informations
4. List all students
5. Back
```

```
Select operation:4
ID - NAME - SURENAME
19011913,muhanad,tuameh,0,0
19001,tarik,akan,0,0
19004,hatice,ilhan,0,0
19002,mehmet,ozdemir
```

3. Course operations

```
## ADMIN ##
1. Instructor operations
2. Student operations
3. Course operations
4. Back
Select operation:3
```

The same instructor and students operations are valid for the courses

1)Add new course

```
## COURSE OPERATIONS ##
1. Add new course
2. Delete a course
3. Update a course details
4. List all courses
5. Back
Select operation:1
```

Note: inputs that contain space are not accepted.

```
Enter the details of the course you want to add
Code:BLM1
name:yapisal
instructor ID:123
credit:3
capacity:80
```

```
BLM1,yapisal,123,3,80
```

The content of courses.txt

```
BLM1,yapisal,123,3,80
```

Repeating the previous operation several times.

The file content:

```
BLM1,yapisal,123,3,80
BLM2,Assembly,444,3,90
BLM3,Math,333,4,90
BLM4,signals,222,3,80
BLM5,algebra,333,3,90
BLM6,BBG,123,4,100
```

If you try to enter the same id to add another course.

```
Enter the details of the course you want to add
```

```
Code:BLM1
```

```
This course is already added
```

If you try to enter the non valid instructor id

```
Enter the details of the course you want to add
```

```
Code:BLM2
```

```
Enter new name:Assembly
```

```
Enter new instructor ID:555
```

```
Not valid instructor
```

2) delete a course

```
## COURSE OPERATIONS ##
1. Add new course
2. Delete a course
3. Update a course details
4. List all courses
5. Back
```

```
Select operation:2
```

To delete a course entering its code is enough.

```
Enter the code of the course you want to remove  
Code:BLM3  
The course has been deleted successfully.
```

The updated content of courses.txt:

```
BLM1,yapisal,123,3,80  
BLM2,Assembly,444,3,90  
BLM4,signals,222,3,80  
BLM5,algebra,333,3,90  
BLM6,BBG,123,4,100
```

If you enter a non valid course code:

```
Enter the code of the course you want to remove  
Code:BLM8  
Non valid course code.
```

3) Update a student informations

Note: inputs that contain space are not accepted.

```
## COURSE OPERATIONS ##  
1. Add new course  
2. Delete a course  
3. Update a course details  
4. List all courses  
5. Back  
Select operation:3
```

Enter the code of the course you want to update

Code:BLM4

Enter new name:Signals

Enter new instructor ID:222

Enter new credit:3

Enter new capacity:100

BLM4,Signals,222,3,100

Data successfully written in file courses.txt

The updated students.txt

BLM1,yapisal,123,3,80

BLM2,Assembly,444,3,90

BLM5,algebra,333,3,90

BLM4,Signals,222,3,100

BLM6,BBG,123,4,100

4) List all students

COURSE OPERATIONS

1. Add new course

2. Delete a course

3. Update a course details

4. List all courses

5. Back

Select operation:4

CODE - NAME - INSTRUCTOR - CREDIT - CAPACITY

BLM1,yapisal,123,3,80

BLM2,Assembly,444,3,90

BLM5,algebra,333,3,90

BLM4,Signals,222,3,100

BLM6,BBG,123,4,100

INSTRUCTOR

```
1. Admin
2. Instructor
3. Student
4. Exit
Select user type:2
```

To enter as an instructor you have to provide an id.

```
Enter your ID:
ID: 123
Welcome
1. Update a course
2. List my courses
3. Back
Select operation:
```

If your id is available in instructors.txt you can enter as an instructor.
Otherwise:

```
Enter your ID:
ID: xxx
Your ID is not correct if you are an instructor ask the
admin to register you
```

When entering as an instructor you can just update your own courses.

1) Update a course

```
Welcome
1. Update a course
2. List my courses
3. Back
Select operation:1
```

```
Enter the code of the course you want to update
Code:BLM6
Enter new name:BBG
Enter new credit:3
Enter new capacity:50
BLM6,BBG,123,3,50
Data successfully written in file courses.txt
```

The instructor can't update the instructor id of the course.

The updated courses.txt content.

```
BLM1,yapisa1,123,3,80
BLM2,Assembly,444,3,90
BLM5,algebra,333,3,90
BLM4,Signals,222,3,100
BLM6,BBG,123,3,50
```

If the instructor try to update a course he/her don't give

```
Enter the code of the course you want to update
Code:BLM2
you can't update a course you don't give!
```


2) List my courses

```
Welcome
1. Update a course
2. List my courses
3. Back
Select operation:2
```

This operation prints the instructor's courses on the screen

```
COURSE ID, NAME, INSTRUCTOR ID, CREDIT, CAPACITY
BLM1,yapisal,123,3,80
BLM6,BBG,123,3,50
```

STUDENT

```
1. Admin
2. Instructor
3. Student
4. Exit
Select user type:3
```

To enter as a student you have to provide an id.

```
Enter your ID:
ID: 19011913
1. Enroll in a course
2. Unenroll from a course
3. List my courses
4. Back
Select operation:
```

If your id is available in students.txt you can enter as a student. Otherwise:

```
Enter your ID:
ID: xxx
Your ID is not correct if you are an student ask the admin
to register you
```

The students can do 3 operations
1) Enroll in a course

```
1. Enroll in a course
2. Unenroll from a course
3. List my courses
4. Back
Select operation:1
```

The student can enroll in a course by entering the course code.
Enter the code of the course you want to enroll in
Code:BLM1
Enrolled successfully.

This operation prints the the course code, student id, the status of enrollment, the enrollment id and the date of the enrollment

The content of studentsEnrollment.txt:

BLM1,19011913,Enrolled,0,08/01/2021

If the student is already enrolled in the course:

```
Enter the code of the course you want to enroll in
Code:BLM1
You are already enrolled in this course!
```

If the student tries to enter a non existing course:

```
Enter the code of the course you want to enroll
Code:BLM3
This course is not existing
```

Repeating the same operation several times.
The content of studentsEnrollment.txt

```
BLM1,19011913,Enrolled,0,08/01/2021
BLM2,19011913,Enrolled,1,08/01/2021
BLM4,19011913,Enrolled,2,08/01/2021
```

2) Unenroll from a course

```
1. enroll a course
2. unenroll a course
3. List my courses
4. Back
Select operation:
```

Provide the code of the course you want to unenroll from to make this operation.

```
Enter the code of the course you want to unenroll
Code:BLM4
BLM4,19011913,Unenrolled,2,08/01/2021
Data successfully written in file studentsEnrollment.txt
```

The updated content of studentsEnrollment.txt:

```
BLM1,19011913,Enrolled,0,08/01/2021
BLM2,19011913,Enrolled,1,08/01/2021
BLM4,19011913,Unenrolled,2,08/01/2021
```

If the student enters a code of a course already unenrolled:

```
Enter the code of the course you want to unenroll  
Code:BLM4  
You are not enrolled in a course with BLM4 code
```

2) List my courses

```
1. enroll a course  
2. unenroll a course  
3. List my courses  
4. Back  
Select operation:3
```

This operation prints the student's courses on the screen:

```
COURSE CODE, STUDENT ID, STATUS, ENROLLMENT ID, DATE  
BLM1,19011913,Enrolled,0,08/01/2021  
BLM2,19011913,Enrolled,1,08/01/2021
```

```
*****THE END*****  
*****THANKS FOR READING*****
```