

# **First Term Final Project 2**

## **Student Database Using Queue**

### **Project Options:**

- 1: Add Student Manually.
- 2: Add Student From a Text File.
- 3: Find Student by Roll Number.
- 4: Find Student by First Name.
- 5: Find Student by Course ID.
- 6: Print The Students Number.
- 7: Delete Student by Roll Number.
- 8: Update Student by Roll Number.
- 9: View All Students.
- 10: Exit The Program.

### **Project Code Link:-**

[https://github.com/YoussefSamy21/Embedded-Systems-K.S/tree/main/First%20Term%20Final%20Projects/Student\\_Database\\_using\\_Queue](https://github.com/YoussefSamy21/Embedded-Systems-K.S/tree/main/First%20Term%20Final%20Projects/Student_Database_using_Queue)

## 1- Add Student Manually:

```
=====
===== Welcome to our Students DataBase =====
===== Refresh DataBase =====
=====
[ERROR] database_students_file.txt file not found.

[ERROR] adding students from update file failed.

=====

Choose on of the following options

    1: Add Student Manually.
    2: Add Student From a Text File.
    3: Find Student by Roll Number.
    4: Find Student by First Name.
    5: Find Student by Course ID.
    6: Print The Students Number.
    7: Delete Student by Roll Number.
    8: Update Student by Roll Number.
    9: View All Students.
    10: Exit The Program.

=====

Enter an option number: 1
=====

=== Enter student data ===
Enter roll number: 5
Enter first name: youssef
Enter second name: samy
Enter GPA: 3.15
Enter Courses IDs
    Enter Courses no.1: 12
    Enter Courses no.2: 32
    Enter Courses no.3: 14
    Enter Courses no.4: 74
    Enter Courses no.5: 10

[INFO] Student details us saved successfully
```

## 2- Add Student From Text File:

The Text file:

```
students_file.txt - Notepad
File Edit Format View Help
1 Ahmed Samy 3.02 11 3 4 20 99
2 Mohamed Tarek 3.65 25 20 18 64 73
3 Zein Ahmed 2.98 57 5 17 40 21
```

Choose on of the following options

- 1: Add Student Manually.
- 2: Add Student From a Text File.
- 3: Find Student by Roll Number.
- 4: Find Student by First Name.
- 5: Find Student by Course ID.
- 6: Print The Students Number.
- 7: Delete Student by Roll Number.
- 8: Update Student by Roll Number.
- 9: View All Students.
- 10: Exit The Program.

Enter an option number: 2

[INFO] Roll number 1 is saved successfully

[INFO] Roll number 2 is saved successfully

[INFO] Roll number 3 is saved successfully

[INFO] Students details are saved successfully

Done

### 3- Find Student by Roll Number:

Choose on of the following options

- 1: Add Student Manually.
- 2: Add Student From a Text File.
- 3: Find Student by Roll Number.
- 4: Find Student by First Name.
- 5: Find Student by Course ID.
- 6: Print The Students Number.
- 7: Delete Student by Roll Number.
- 8: Update Student by Roll Number.
- 9: View All Students.
- 10: Exit The Program.

Enter an option number: 3

Enter roll number: 5

The student details are

First Name: youssef

Last Name: samy

Roll Number: 5

GPA: 3.2

Courses IDs are

Course 1 id: 12

Course 2 id: 32

Course 3 id: 14

Course 4 id: 74

Course 5 id: 10

Done

## 4- Find Student by First Name:

Choose on of the following options

- 1: Add Student Manually.
- 2: Add Student From a Text File.
- 3: Find Student by Roll Number.
- 4: Find Student by First Name.
- 5: Find Student by Course ID.
- 6: Print The Students Number.
- 7: Delete Student by Roll Number.
- 8: Update Student by Roll Number.
- 9: View All Students.
- 10: Exit The Program.

Enter an option number: 4

Enter First Name: youssef

The student details are

First Name: youssef

Last Name: samy

Roll Number: 5

GPA: 3.2

Courses IDs are

Course 1 id: 12

Course 2 id: 32

Course 3 id: 14

Course 4 id: 74

Course 5 id: 10

Done

## 5- Find Student by Course ID:

Choose on of the following options

- 1: Add Student Manually.
- 2: Add Student From a Text File.
- 3: Find Student by Roll Number.
- 4: Find Student by First Name.
- 5: Find Student by Course ID.
- 6: Print The Students Number.
- 7: Delete Student by Roll Number.
- 8: Update Student by Roll Number.
- 9: View All Students.
- 10: Exit The Program.

Enter an option number: 5

Enter Course ID: 12

The student details are

First Name: youssef

Last Name: samy

Roll Number: 5

GPA: 3.2

Courses IDs are

Course 1 id: 12

Course 2 id: 32

Course 3 id: 14

Course 4 id: 74

Course 5 id: 10

[INFO] Total number of students enrolled: 1

Done

## 6- Print the Students Number:

Choose on of the following options

- 1: Add Student Manually.
- 2: Add Student From a Text File.
- 3: Find Student by Roll Number.
- 4: Find Student by First Name.
- 5: Find Student by Course ID.
- 6: Print The Students Number.
- 7: Delete Student by Roll Number.
- 8: Update Student by Roll Number.
- 9: View All Students.
- 10: Exit The Program.

Enter an option number: 6

[INFO] Total number of students is 4  
[INFO] You can add up to 50 students  
[INFO] You can add 46 more students

Done

## 7- Delete Student by Roll Number:

Choose on of the following options

- 1: Add Student Manually.
- 2: Add Student From a Text File.
- 3: Find Student by Roll Number.
- 4: Find Student by First Name.
- 5: Find Student by Course ID.
- 6: Print The Students Number.
- 7: Delete Student by Roll Number.
- 8: Update Student by Roll Number.
- 9: View All Students.
- 10: Exit The Program.

Enter an option number: 7

Enter roll number: 5

[INFO] The Roll Number is removed successfully

Done

## 9- View ALL Students:

Choose on of the following options

- 1: Add Student Manually.
- 2: Add Student From a Text File.
- 3: Find Student by Roll Number.
- 4: Find Student by First Name.
- 5: Find Student by Course ID.
- 6: Print The Students Number.
- 7: Delete Student by Roll Number.
- 8: Update Student by Roll Number.
- 9: View All Students.
- 10: Exit The Program.

Enter an option number: 9

All Students

The student details are

First Name: Ahmed

Last Name: Samy

Roll Number: 1

GPA: 3.0

Courses IDs are

Course 1 id: 11

Course 2 id: 3

Course 3 id: 4

Course 4 id: 20

Course 5 id: 99

The student details are

First Name: Mohamed

Last Name: Tarek

Roll Number: 2

GPA: 3.7

Courses IDs are

Course 1 id: 25

Course 2 id: 20

Course 3 id: 18

Course 4 id: 64

Course 5 id: 73

The student details are

First Name: Zein

Last Name: Ahmed

Roll Number: 3

GPA: 3.0

Courses IDs are

Course 1 id: 57

Course 2 id: 5

Course 3 id: 17

Course 4 id: 40

Course 5 id: 21

Done

## 8- Update Student by Roll Number:

```
Choose on of the following options

1: Add Student Manually.
2: Add Student From a Text File.
3: Find Student by Roll Number.
4: Find Student by First Name.
5: Find Student by Course ID.
6: Print The Students Number.
7: Delete Student by Roll Number.
8: Update Student by Roll Number.
9: View All Students.
10: Exit The Program.

=====

Enter an option number: 8
=====

Enter roll number: 2

==== Student data ====
The student details are
    First Name: Mohamed
    Last Name: Tarek
    Roll Number: 2
    GPA: 3.7
    Courses IDs are
        Course 1 id: 25
        Course 2 id: 20
        Course 3 id: 18
        Course 4 id: 64
        Course 5 id: 73

Which date do you want to change ?
1: The Roll Number
2: The First Name
3: The Second Name
4: The GPA Score
5: The Courses ID
Enter your option: 1
Enter the new roll number: 60

[INFO] The Roll Number 60 in updated successfully
```

## 10- Exit the Program:

Choose on of the following options

- 1: Add Student Manually.
- 2: Add Student From a Text File.
- 3: Find Student by Roll Number.
- 4: Find Student by First Name.
- 5: Find Student by Course ID.
- 6: Print The Students Number.
- 7: Delete Student by Roll Number.
- 8: Update Student by Roll Number.
- 9: View All Students.
- 10: Exit The Program.

Enter an option number: 10

[INFO] Update Students details are saved in file successfully

Exit

## The Final Saved File:

DataBase\_Students.txt - Notepad

File Edit Format View Help

```
1 Ahmed Samy 3.0 11 3 4 20 99  
60 Mohamed Tarek 3.7 25 20 18 64 73  
3 Zein Ahmed 3.0 57 5 17 40 21
```