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ELHATEEM

Student Management Project

For the whole code >> check [this](#)

1st: adding a student manually:

```

Student_management.exe [C/C++ Application] C:\Users\Dell\STM32CubeIDE\workspace_1.4.0\Student_management\Deb
1. Add Student Details manually.
2. Add Student Details From File.
3. Find the student by the given Roll Number.
4. Find the student by the given First Name.
5. Find the students registered in a course ID.
6. Find the Total Number of Students
7. Delete the Student Details by Roll Number.
8. Update the Student Details by Roll Number.
9. Show all Information.
10.To Exit.
Enter your choice to perform the task:
1
enter the students unique roll number:
1
enter the first name of the student:
ahmed
enter the last name of the student:
amr
enter the gpa of the student:
2.7
enter the course number of the student :
1) 15
enter the course number of the student :
2) 4
enter the course number of the student :
3) 3
enter the course number of the student :
4) 9
enter the course number of the student :
5) 7

[INFO] ID number 1 saved successfully
-----
the total number of Student is 1
you can add up to 50 Students
you can add 49 more Students
-----
Welcome to the Student Management System
<

```

2nd: adding a student from a file:

The screenshot shows a C++ IDE with the following components:

- Editor:** Displays `Student_management.c` with a `switch` statement. The visible code is:


```

36         switch(atoi(temp)){
37             case 1:
38                 Add_Student_Manually(&fifo);
39                 break;
40             case 2:
41                 Add_Student_From_File(&fifo);
42                 break;
43             case 3:
44                 Find_The_Student_By_Roll_Number(&fifo);
45                 break;
46             case 4:
47                 Find_The_Student_By_First_Name(&fifo);
48                 break;

```
- Console:** Shows the output of the program. It lists 10 tasks, with task 2 selected. The output shows successful additions for IDs 1, 3, 4, and 5, followed by an error for ID 1 being already used. It also displays the total number of students (4) and the remaining capacity (46 more students).


```

Student_management.exe [C/C++ Application] C:\Users\Dell\STM32CubeIDE\workspace_1.4.0\Student_managem
2. Add Student Details From File.
3. Find the student by the given Roll Number.
4. Find the student by the given First Name.
5. Find the students registered in a course ID.
6. Find the Total Number of Students
7. Delete the Student Details by Roll Number.
8. Update the Student Details by Roll Number.
9. Show all Information.
10.To Exit.
Enter your choice to perform the task:
2
[INFO] ID number 1 saved successfully
ERROR , ID:1 is already used by another student
[INFO] ID number 3 saved successfully
[INFO] ID number 4 saved successfully
[INFO] ID number 5 saved successfully
-----
the total number of Student is 4
you can add up to 50 Students
you can add 46 more Students
-----

```

3rd: deleting a student by ID:

```

33     printf( "\n 10.10 EXIT.\n ");
34     printf("Enter your choice to perform the task:\n");
35     get(temp);
36     switch(atoi(temp)){
37     case 1:
38         Add_Student_Manually(&fifo);
39         break;
40     case 2:
41         Add_Student_From_File(&fifo);
42         break;
43     case 3:
44         Find_The_Student_By_Roll_Number(&fifo);
45         break;
46     case 4:
47         Find_The_Student_By_First_Name(&fifo);
48         break;
49     case 5:
50         Find_The_Students_Registered_In_Course(&fifo);
51         break;
52     case 6:
53         Students_Count(&fifo);

```

Problems Tasks Console Properties

Student_management.exe [C/C++ Application] C:\Users\Dell\STM32CubeIDE\workspace_1.4.0\Student_management\Debug\Student_mar

4. Find the student by the given First Name.
5. Find the students registered in a course ID.
6. Find the Total Number of Students
7. Delete the Student Details by Roll Number.
8. Update the Student Details by Roll Number.
9. Show all Information.
- 10.To Exit.

Enter your choice to perform the task:

7

please enter the ID of the student you want to delete:

5

====Student with id:5 deleted successfully====

```

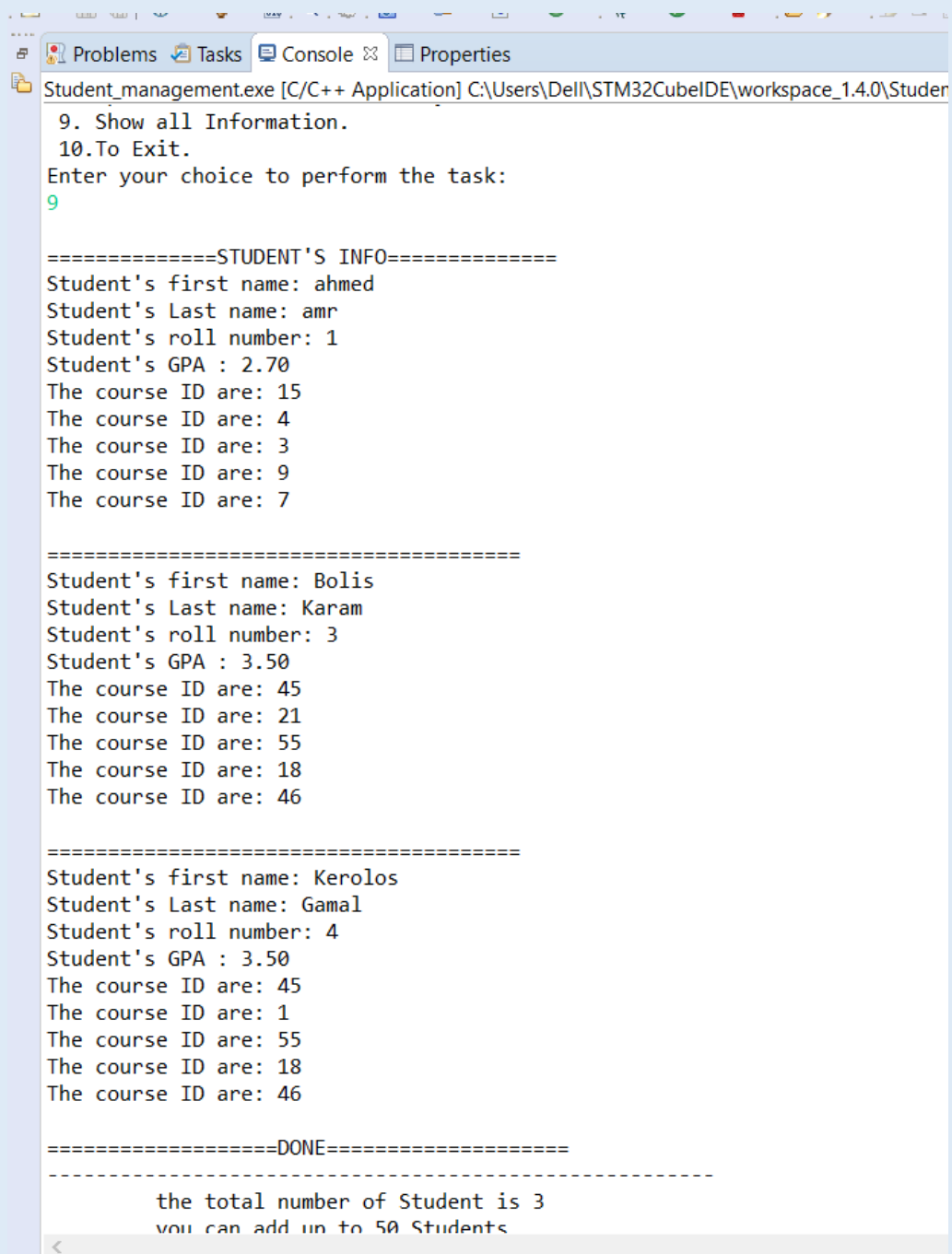
-----
the total number of Student is 3
you can add up to 50 Students
you can add 47 more Students
-----

```

Welcome to the Student Management System.

<

4th: viewing all student{info}:



The screenshot shows a C++ application window titled "Student_management.exe [C/C++ Application] C:\Users\Dell\STM32CubeIDE\workspace_1.4.0\Studen". The window has tabs for "Problems", "Tasks", "Console", and "Properties". The "Console" tab is active, displaying the following text:

```

9. Show all Information.
10.To Exit.
Enter your choice to perform the task:
9

=====STUDENT'S INFO=====
Student's first name: ahmed
Student's Last name: amr
Student's roll number: 1
Student's GPA : 2.70
The course ID are: 15
The course ID are: 4
The course ID are: 3
The course ID are: 9
The course ID are: 7

=====
Student's first name: Bolis
Student's Last name: Karam
Student's roll number: 3
Student's GPA : 3.50
The course ID are: 45
The course ID are: 21
The course ID are: 55
The course ID are: 18
The course ID are: 46

=====
Student's first name: Kerolos
Student's Last name: Gamal
Student's roll number: 4
Student's GPA : 3.50
The course ID are: 45
The course ID are: 1
The course ID are: 55
The course ID are: 18
The course ID are: 46

=====DONE=====
-----
the total number of Student is 3
you can add up to 50 Students

```

5th: updating data by ID:

The screenshot shows a C++ IDE with four tabs: Student_management.c, S_management.c, S_management.h, and student.txt. The code in Student_management.c (lines 294-304) handles the update logic for last name and GPA. The console output shows the program's execution flow, including a menu of tasks, a choice to search by ID, and the successful update of a student's GPA to 2.90.

```

294         printf("please enter the new last name:\n");
295         get(temp);
296         strcpy(current->lastName , temp);
297         printf("new last Name is set: %s\n",current->lastName);
298         break;
299     case 3:
300         printf("please enter the new GPA:\n");
301         scanf("%f" , &current->GPA);
302         printf("new GPA is set: %0.2f \n", current->GPA);
303         break;
304     case 4:

```

Problems Tasks Console Properties

Student_management.exe [C/C++ Application] C:\Users\Dell\STM32CubeIDE\workspace_1.4.0\Student_management\you can add 47 more Students

Welcome to the Student Management System:
Choose the task that you want to perform:

1. Add Student Details Manually.
2. Add Student Details From File.
3. Find the student by the given Roll Number.
4. Find the student by the given First Name.
5. Find the students registered in a course ID.
6. Find the Total Number of Students
7. Delete the Student Details by Roll Number.
8. Update the Student Details by Roll Number.
9. Show all Information.
- 10.To Exit.

Enter your choice to perform the task:

8

please enter the ID of the student you want to search for:

4

choose one of the following options:

- 1) Update First name
- 2) Update Last name
- 3) Update GPA
- 4) Update course ID

3

please enter the new GPA:

2.9

new GPA is set: 2.90

6th: searching for a student by ID:

giving an error message in case ID isn't found:

```

Student_management.c S_management.c S_management.h student.txt
126 void Find_The_Student_By_Roll_Number(FIFO_T *studentQueue){
127     int i , id;
128     char temp[10];
129     elementType *current;
130
131     if(studentQueue->count ==0){
132         printf("====EMPTY QUEUE :NO STUDENT TO SEARCH FOR====\n");
133         return;
134     }
135     printf("please enter the ID of the student you want to search for:\n");
136     get(temp);
137     id=atoi(temp);
138     current = findStudentwithID(studentQueue , id);
139     if(!current){
140         printf("ERROR: no student with that id:%d\n" , id);
141     }
142     else{
143         printf("\n=====STUDENT'S INFO=====\\n");
144         printf("Student ID: %d \\n" , current->ID);
145         printf("Student First Name: %s \\n" , current->firstName);
146         printf("Student Last Name: %s \\n" , current->lastName);
147         printf("Student GPA Number: %0.2f \\n" , current->GPA);
148     }
149 }

```

Problems Tasks Console Properties

Student_management.exe [C/C++ Application] C:\Users\Dell\STM32CubeIDE\workspace_1.4.0\Student_management\Debug

- Find the student by the given Roll Number.
- Find the student by the given First Name.
- Find the students registered in a course ID.
- Find the Total Number of Students
- Delete the Student Details by Roll Number.
- Update the Student Details by Roll Number.
- Show all Information.
- To Exit.

Enter your choice to perform the task:

3

please enter the ID of the student you want to search for:

0

ERROR: no student with that id:0

Welcome to the Student Management System:

Choose the task that you want to perform:

- Add Student Details Manually.
- Add Student Details From File.

7th: searching students registered in the same course:

Gives all student info taking that course through course id:

```

Welcome to the Student Management System:
Choose the task that you want to perform:

1. Add Student Details Manually.
2. Add Student Details From File.
3. Find the student by the given Roll Number.
4. Find the student by the given First Name.
5. Find the students registered in a course ID.
6. Find the Total Number of Students
7. Delete the Student Details by Roll Number.
8. Update the Student Details by Roll Number.
9. Show all Information.
10.To Exit.
Enter your choice to perform the task:
5
please enter the course number you want to search for:
1

=====STUDENT'S INFO=====
Student ID: 4
Student First Name: Kerolos
Student Last Name: Gamal
Student GPA Number: 2.90
the course ID are: 45
the course ID are: 1
the course ID are: 55
the course ID are: 18
the course ID are: 46

=====
Student ID: 5
Student First Name: kerolos
Student Last Name: magdy
Student GPA Number: 4.00
the course ID are: 12
the course ID are: 5
the course ID are: 6
the course ID are: 3
the course ID are: 1

=====DONE=====

```


8th: total number of students:

Giving also maximum number of students and how much we can add further:

```
Student_management.exe [C/C++ Application] C:\Users\Dell\STM32CubeIDE\workspace_1.4.0\Student_management\Debug\Student_manage
1. Add Student Details Manually.
2. Add Student Details From File.
3. Find the student by the given Roll Number.
4. Find the student by the given First Name.
5. Find the students registered in a course ID.
6. Find the Total Number of Students
7. Delete the Student Details by Roll Number.
8. Update the Student Details by Roll Number.
9. Show all Information.
10.To Exit.
Enter your choice to perform the task:
6
-----
the total number of Student is 4
you can add up to 50 Students
you can add 46 more Students
-----
```

9th)Searching students by first name:

Gives all student info with that name:

```

Student_management.c S_management.c S_management.h student.txt
242 printf("\n=====DONE=====\\n");
243

Problems Tasks Console Properties
Student_management.exe [C/C++ Application] C:\Users\Dell\STM32CubeIDE\workspace_1.4.0\Student_management
2. Add Student Details From File.
3. Find the student by the given Roll Number.
4. Find the student by the given First Name.
5. Find the students registered in a course ID.
6. Find the Total Number of Students
7. Delete the Student Details by Roll Number.
8. Update the Student Details by Roll Number.
9. Show all Information.
10.To Exit.
Enter your choice to perform the task:
4
please enter the name of the student you want to search for:
kerolos

=====STUDENT'S INFO=====
Student ID: 4
Student First Name: Kerolos
Student Last Name: Gamal
Student GPA Number: 2.90
the course ID are: 45
the course ID are: 1
the course ID are: 55
the course ID are: 18
the course ID are: 46

=====
Student ID: 5
Student First Name: kerolos
Student Last Name: magdy
Student GPA Number: 4.00
the course ID are: 12
the course ID are: 5
the course ID are: 6
the course ID are: 3
the course ID are: 1

=====DONE=====

```