

Learn IN Depth

Be Professional in Embedded System



Project 2 Learn In Depth

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STUDENT MANAGEMENT SYSTEM



Project Scope / ProblemStatement:-

For this project, a student information management system software has to be implemented using queue method

The following operations have to be included in the system:-

1. Store the first name of the student
2. Store the last name of the student
3. Store the unique roll number of the student
4. Store the GPA of every student
5. Store the courses registered by the student.



APIs:-

```
// Functions / APIs:|
// Function to create a new node / Student
student_node* create_node(struct student_info st_data);
// Function to initialize the queue
student_queue* init_queue();
// Function to add an element to the queue
void enqueue_student(struct student_info st_data);
// Function to add the student manually to the queue
void add_element_manually();
// Function to add the student from the file to the queue
void add_element_file();
// Function to check the roll number of the student in the queue
int check_roll(int roll_num);
// Function to update the student data in the queue
void update_st_data();
// Function to find the student with his roll number in the queue
void find_roll();
// Function to find the student with his first name in the queue
void find_1st_name();
// Function to find the student with his course in the queue
void find_course();
// Function to calculate the total number of students in the queue
void tot_s();
// Function to remove the student manually from the queue
void delete_student();
// Function to display single student
void display_student(int roll_num);
// Function to display the queue (all students)
void show_students();
```

options:-

```
9 ./main.exe
```

```
<<< Welcome to student Management system >>>
```

```
choose the task that u want to perform :-
```

1. add the students details manually.
2. add the students details from text file.
3. find the student details by roll number.
4. find the student details by first name.
5. find the student details by 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 informations.
10. Exit

choice(1):

```
20: EXPL
Enter your choice to perform the task : 1
Enter your ID (Roll number):
1
Enter your Fisrt Name:
Abdullah
Enter your Last Name:
ghaza1
Enter your GPA:
3.6
Enter num of courses:
5
Enter the ID of each course:
Course 1 ID: 10
Course 2 ID: 20
Course 3 ID: 30
Course 4 ID: 40
Course 5 ID: 50
Add the Students Details
Roll Number 1 saved successfully
=====
You can add up to 50 students.
The total number of students: 1
the available number of students to add:
```

choice(2):

```
Enter your choice to perform the task : 2
Error!! Roll Number 1 is already taken!
Error!! Roll Number 1 is already taken!
Roll Number 3 saved successfully
Roll Number 4 saved successfully
Roll Number 5 saved successfully
Student Details is added successfully
-----^_-----
You can add up to 50 students.
The total number of students: 4
the available number of students to add:
```

choice(3):

```
Enter your choice to perform the task : 3
Enter the Roll Number of the student:
5
===== The Students Details: =====
The First name is : marwan
The Last name is : ayman
The GPA is 3.700
The Course IDs are is 5
The Course IDs are is 7
The Course IDs are is 8
The Course IDs are is 12
The Course IDs are is 14
```

choice(4):

```
107 EXIT
Enter your choice to perform the task : 4
Enter the First Name of the student to find:Magdy
The Students Details are
The First name is : Magdy
The Last name is : mohamed
The GPA is 3.200
The Course IDs are 15
The Course IDs are 2
The Course IDs are 6
The Course IDs are 7
The Course IDs are 8
```

choice(5):

```
107 EXIT
Enter your choice to perform the task : 5
Enter the Course ID to find:30
The Students Details are
The First name is : Abdullah
The Last name is : ghazal
The GPA is 3.600
[INFO] Total Number of Students Enrolled: 1
```

choice(6):

```
107 EXIT
Enter your choice to perform the task : 6
You can add up to 50 students.
The total number of students: 4
the available number of students to add:
```

choice(7):

```
10. EXIT
Enter your choice to perform the task : 7
Enter the Roll Number which you want to delete:
3
This Roll Number 3 is removed successfully!
```

choice(8):

```
Enter your choice to perform the task : 8
Enter the Roll Number to update the entry:
1
Enter the option:
[1] FirstName
[2] LastName
[3] Roll
[4] GPA
4
Enter the New GPA: 3.8
Updated Successfully!!!
```


choice(9):

```
Enter your choice to perform the task : 9
The First name is : Abdullah
The Last name is : ghazal
The GPA is 3.50
The Course IDs are 10
The Course IDs are 15
The Course IDs are 2
The Course IDs are 8
The Course IDs are 9
-----
The First name is : Magdy
The Last name is : mohamed
The GPA is 3.20
The Course IDs are 15
The Course IDs are 2
The Course IDs are 6
The Course IDs are 7
The Course IDs are 8
-----
The First name is : Nabil
The Last name is : Rashed
The GPA is 3.80
The Course IDs are 10
The Course IDs are 8
The Course IDs are 4
The Course IDs are 5
The Course IDs are 2
-----
The First name is : marwan
The Last name is : ayman
The GPA is 3.70
The Course IDs are 5
The Course IDs are 7
The Course IDs are 8
The Course IDs are 12
The Course IDs are 14
-----
```