

Project 2 Learn In Depth

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STUDENT MANAGEMENT SYSTEM

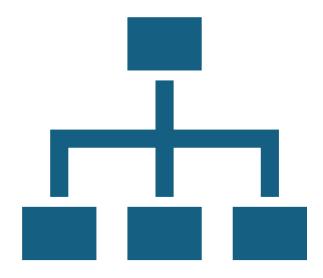


Project Scope / ProblemStatement:-

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 gueue
student queue* init queue();
// Function to add an element to the gueue
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 gueue
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 studen
void display student(int roll num);
// Function to display the queue (all students)
void show students();
```

options:-

```
<<< 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):

```
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:
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:
```

<u> choice(2):</u>

```
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):

```
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):

```
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):

```
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):

```
Enter your choice to perform the task : 7
Enter the Roll Number which you want to delete:

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:

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
```