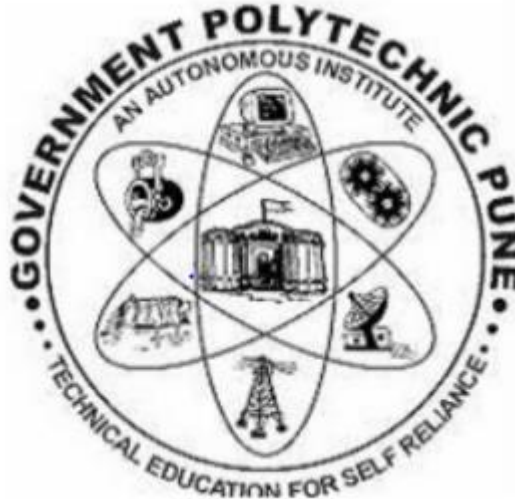


GOVERNMENT POLYTECHNIC, PUNE

(An Autonomous Institute Of Government of Maharashtra)



A MICRO-PROJECT REPORT

ON

“Students Record System”

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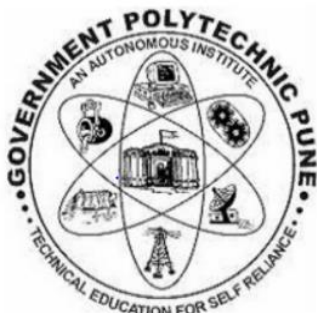
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GOVERNMENT POLYTECHNIC, PUNE

(An Autonomous Institute Of Government of Maharashtra)

Department Of Computer Engineering

ACADEMIC YEAR :2020-21



CERTIFICATE

This is to certified that the mini-project work entitled “ Students Record” is a bona fide work carried out by:

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of class Second Year in partial fulfilment of the requirement for the completion of course- Data structures (CM3103)-ODD2021 of Diploma in Computer Engineering from Government Polytechnic , Pune. The report has been approvals it satisfies the academic requirements in respect of micro-project work prescribed for the course.

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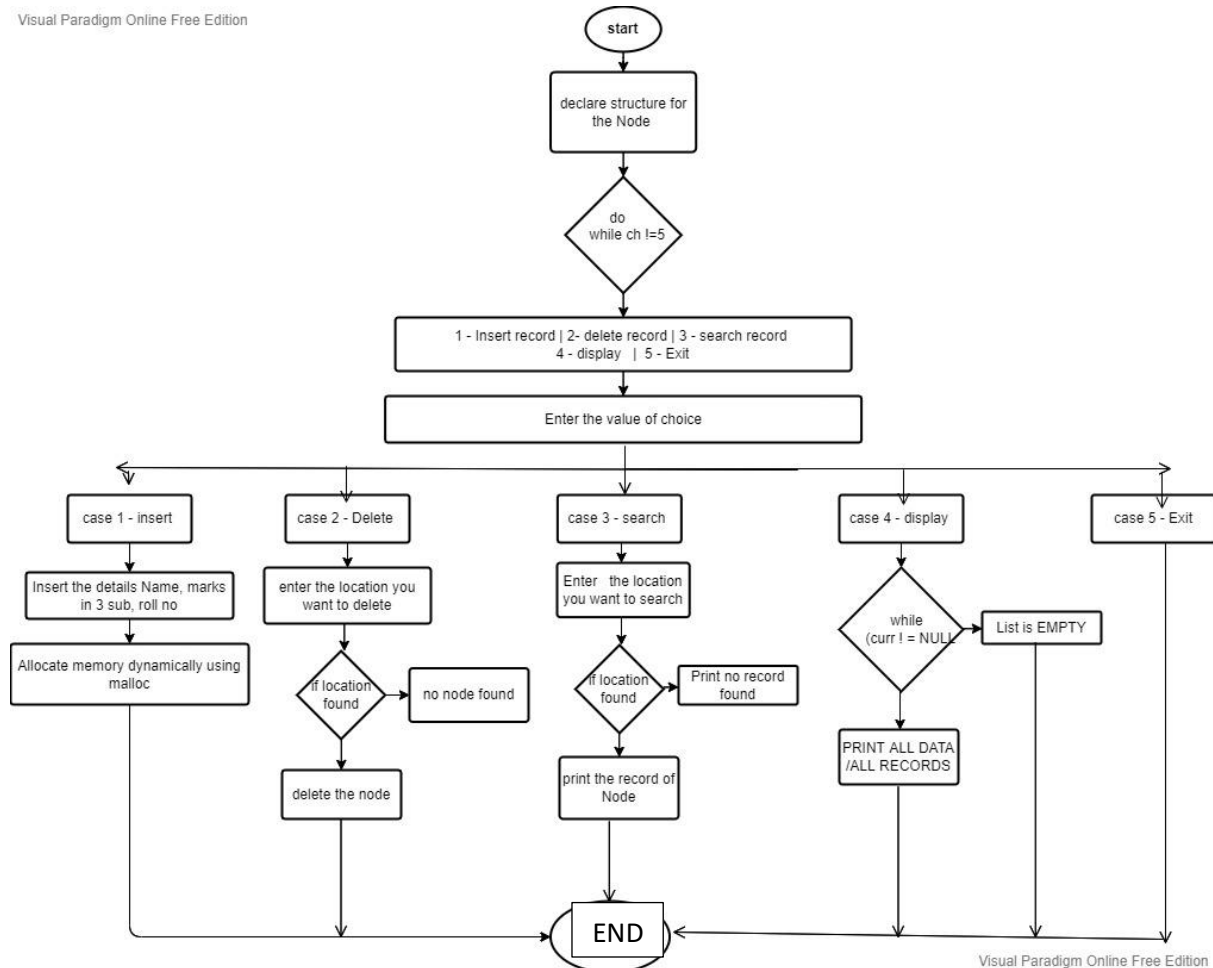
Introduction

The study was conducted to assess the methods and processes used by the Registrar's Office in keeping the student records. The problems encountered by the students and instructors with regards to security of the student records from alteration or loss, submitting error-free grade sheets from the faculty, and requesting student grades at the end of the semester on the current registrar system and the level of need for developing an Student Record Management System for college were determined. The Student Record Management System that is accurate, fast, and accessible for the registrar's office of the college will facilitate the record – keeping and issuance of grades; it will also provide smooth operation and can help the office to be more efficient. The Automated Student Record System is the possible solution to the problems in grade issuance, securing student's grades from alteration or loss, in submitting error-free grades sheets by the faculty, and to maintain relevant, accurate, and confidential student's record.

The college administration is prepared or operates form. Firstly and for admission with the important information about student and retrieve that information to correct it. Student record management deals with all the activities done by computer such as registration.

Flowchart

Visual Paradigm Online Free Edition



Concepts Used along with brief description and syntax

- **Insert Function**

After that, we create a function insert, that will add a new node to the linked list. The insert function accepts student details as an argument. It creates a new node with the student details passed to the function and then inserts the new node at the beginning of the linked list.

- **Search Function**

The search function searches the record based on the roll number. The search function accepts 1 parameter that is the roll number of the student we want to search. The function traverses all the nodes of the linked list to find the required record.

- **Update Function**

The update function first searches for the node with the required roll number. If the node is found, the program asks the user to enter new updated values.

- **Delete Function**

Delete works similar to search. We search for the record by its roll number. If the record is found, we delete it from the linked list.

- **Display Function**

Display function traverse the linked list and print all the details of each node of the linked list.

Define Structures

Before you can create structure variables, you need to define its data type. To define a struct, the `struct` keyword is used.

Syntax of struct

```
struct structureName {  
    dataType member1;  
    dataType member2;  
    ...  
};
```

- **INT**

Int, short for "integer," is a fundamental variable type built into the compiler and used to define numeric variables holding whole numbers.

For example:

```
int age = 10;
```

- **SWITCH**

Switch case statement evaluates a given expression and based on the evaluated value(matching a certain condition), it executes the statements associated with it. Basically, it is used to perform different actions based on different conditions(cases).

Syntax:

```
switch (n)  
{  
    case 1: // code to be executed if n = 1;  
        break;
```

```

    case 2: // code to be executed if n = 2;
        break;
    default: // code to be executed if n doesn't match any cases
}

```

Some important keywords:

1) Break: This keyword is used to stop the execution inside a switch block. It helps to terminate the switch block and break out of it.

- **WHILE LOOP**

A **while** loop in C programming repeatedly executes a target statement as long as a given condition is true.

The syntax of a **while** loop in C programming language is –

```

while(condition) {
    statement(s);
}

```

Void as a Function Return Type

Void functions, also called nonvalue-returning functions, are used just like value-returning functions except void return types do not return a value when the function is executed.

```

void printmessage (void )
{
    cout << "I'm a function that prints a message!";
}

```


Program Code

```
#include <stdio.h>

#include <stdlib.h>

struct Node{

    int rno;

    char name[20];

    int s1,s2,s3;

    float total, per;

    struct Node *addr_next;

}*newnode, *start, *curr, *prev;

//void create(char ,int ,int ,int ,int );

void Delete(int );

void display();

void search(int );

int main()

{

    int ch,n,rolln,sub1,sub2,sub3,del,s;

    char sname[20];

    float sum,p;

    start=NULL;

    do

    {

        printf("\n-----:Student

record MENU:-----");
```

```
printf("\n(1)-Insert the record\n(2)-Delete the
record\n(3)-Search the record\n(4)-Display\n(5)-Exit");
```

```
printf("\nEnter your choice ::");
```

```
scanf("%d",&ch);
```

```
switch(ch)
```

```
{
```

```
case 1://insert
```

```
printf("\n-----Insert
the record-----");
```

```
printf("\n=====Enter the
students INFO to create the record=====");
```

```
printf("\nEnter the student's
Name::");
```

```
scanf("%s",&sname);
```

```
printf("\nEnter the student's Roll
No::");
```

```
scanf("%d",&rolln);
```

```
printf("\nEnter the student's marks
in subject-1 ::");
```

```
scanf("%d",&sub1);
```

```
printf("\nEnter the student's marks
in subject-2 ::");
```

```
scanf("%d",&sub2);
```

```
printf("\nEnter the student's marks
in subject-3 ::");
```

```
scanf("%d",&sub3);
```

```
create(rolln,sname,sub1,sub2,sub3);
```

```
//printf("\ntotal = %f",sum);
```

```
//printf("\nPER = %.2f",p);
```

```
break;
```

```
case 2://delete
```

```
printf("\n-----Delete
```

```
the record-----");
```

```
printf("\nEnter the record (roll no)
```

```
You want to delete::");
```

```
scanf("%d",&del);
```

```
Delete(del);
```

```
break;
```

```
case 3://search
```

```
printf("\n-----Search
```

```
the record-----");
```

```
printf("\nEnter the record (roll no)
```

```
You want to Search::");
```

```
scanf("%d",&s);
```

```
search(s);
```

```
break;
```

```
case 4://display
```

```
printf("\n-----Display
```

```
the record-----");
```

```
display();
```

```
break;
```

[illegible]

```

        start=newnode;
    }
else
{
    curr=start;
    while(curr->addr_next!=NULL)
    {
        curr=curr->addr_next;
    }
    curr->addr_next=newnode;
}

}

void search(int s)
{
    curr=start;

    while(curr!=NULL)
    {
        if(curr->rno==s)
        {
            printf("Roll Number\t: %d\n", curr->rno);
            printf("Name\t: %s\n",curr->name);
            printf("Sub-1\t: %d\n", curr->s1);
            printf("Sub-2\t: %d\n", curr->s2);
            printf("Sub-3\t: %d\n", curr->s3);
            printf("Total\t: %,2f",curr->total);
            printf("Perc\t\t: %.2f\n", curr->per);

```

```

        printf("\n-----");
    }
    curr = curr->addr_next;
}

}

void display()
{
    if(start==NULL)
    {
        printf("\n There is no record found");
    }
    else
    {
        curr=start;
        while(curr!=NULL)
        {
            printf("\n=====Student
details=====");

            printf("\nRoll Number: %d", curr->rno);
            printf("\nName\t: %s", curr->name);
            printf("\nSub1\t: %d", curr->s1);
            printf("\nSub2\t: %d", curr->s2);
            printf("\nSub3\t: %d", curr->s3);
            printf("\nTotal\t: %.2f",curr->total);
            printf("\nPer\t: %0.2f", curr->per);

```

```

printf("\n===== \n");

        curr = curr->addr_next;
    }
}
}

```

```

void Delete(int del)
{
    curr= start;
    prev= start;
    while(curr!=NULL)
    {
        if(curr->rno==del)
        {
            printf("Record with roll number %d Found !!!\n", del);
            if(curr==prev)
            {
                start = start->addr_next;
                free(curr);
            }
            else
            {
                prev->addr_next = curr->addr_next;
                free(curr);
            }
            printf("Record Successfully Deleted !!!\n");

```

```
    return;  
}  
prev= curr;  
curr = curr->addr_next;  
}  
  
}
```


Outputs

```
C:\Users\DELL\Downloads\DS-macriproject.exe

-----:Student record MENU:-----
(1)-Insert the record
(2)-Delete the record
(3)-Search the record
(4)-Display
(5)-Exit
Enter your choice ::1
```

```
C:\Users\DELL\Downloads\DS-macriproject.exe

-----Display the record-----
=====Student details=====
Roll Number: 71
Name   : Pratiksha
Sub1    : 89
Sub2    : 98
Sub3    : 87
Total   : 274.00
Per     : 91.33
=====

=====Student details=====
Roll Number: 72
Name   : Yuvraj
Sub1    : 80
Sub2    : 79
Sub3    : 95
Total   : 254.00
Per     : 84.67
=====

=====Student details=====
Roll Number: 88
Name   : Yogita
Sub1    : 83
Sub2    : 97
Sub3    : 78
Total   : 258.00
Per     : 86.00
=====

=====Student details=====
Roll Number: 111
Name   : Snehal
Sub1    : 76
Sub2    : 87
Sub3    : 91
Total   : 254.00
Per     : 84.67
=====

=====Student details=====
Roll Number: 114
Name   : Soham
Sub1    : 78
Sub2    : 87
Sub3    : 98
Total   : 263.00
Per     : 87.67
```

```

-----:Student record MENU:-----
(1)-Insert the record
(2)-Delete the record
(3)-Search the record
(4)-Display
(5)-Exit
Enter your choice ::4

-----Display the record-----
=====Student details=====
Roll Number: 72
Name   : Yuvraj
Sub1    : 80
Sub2    : 79
Sub3    : 95
Total   : 254.00
Per     : 84.67
=====

=====Student details=====
Roll Number: 88
Name   : Yogita
Sub1    : 83
Sub2    : 97
Sub3    : 78
Total   : 258.00
Per     : 86.00
=====

=====Student details=====
Roll Number: 111
Name   : Snehal
Sub1    : 76
Sub2    : 87
Sub3    : 91
Total   : 254.00
Per     : 84.67
=====

=====Student details=====
Roll Number: 114
Name   : Soham
Sub1    : 78
Sub2    : 87
Sub3    : 98
Total   : 263.00
Per     : 87.67
=====

```

```
-----:Student record MENU:-----
(1)-Insert the record
(2)-Delete the record
(3)-Search the record
(4)-Display
(5)-Exit
Enter your choice ::3

-----Search the record-----
Enter the record (roll no) You want to Search::88
Roll Number      : 88
Name       : Yogita
Sub-1      : 83
Sub-2      : 97
Sub-3      : 78
Total      : ,2fPerc           : 86.00

-----
-----:Student record MENU:-----
(1)-Insert the record
(2)-Delete the record
(3)-Search the record
(4)-Display
(5)-Exit
Enter your choice ::3

-----Search the record-----
Enter the record (roll no) You want to Search::72
Roll Number      : 72
Name       : Yuvraj
Sub-1      : 80
Sub-2      : 79
Sub-3      : 95
Total      : ,2fPerc           : 84.67
```

Conclusion

Student record System can be used by educational institutions to maintain their student records easily. Achieving this objective is difficult using the manual system as the information is scattered, can be redundant, and collecting relevant information may be very time-consuming. All these problems are solved by this project. This system helps in maintaining the information of pupils of the organization. It can be easily accessed by the manager and kept safe for a long period of time without any changes. The objective of the study had been achieved, that is to develop an automated student record system for college level that is fast, accurate, and accessible.

Reference

1. <https://www.youtube.com/>
2. <https://www.google.com/>
3. <https://slaystudy.com/student-management-system-using-linked-list-in-c/>