

## Certificate

#### **Department of Computer Engineering**

This is to certify that

- 1. SHASHIKANT GUPTA
- 2. PRADEEP HORE

Have satisfactory completed this mini project entitled

STUDENT RECORD

Towards the partial fulfillment of the

**BACHELOR OF ENGINEERING** 

III<sup>rd</sup> Semester

IN

(COMPUTER ENGINEERING)

as laid by University of Mumbai.

Subject Teacher

### **ABSTRACT**

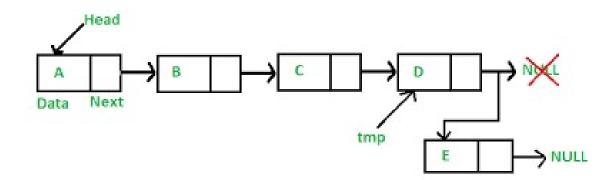
# TITLE: -STUDENT RECORD

**TOPIC :- STUDENT RECORD USING SINGLELINKEDLIST** 

### **SINGLELINKED LIST:-**

Singly Linked Lists are a type of data structure. In a singly linked list, each node in the list stores the contents and a pointer or reference to the next node in the list. It does not store any pointer or reference to the previous node. To store a single linked list, only the reference or pointer to the first node in that list must be stored. The last node in a single linked list points to nothing.

In this project, I am using **singlelinkedlist** for storing the student data information and also apart from other, many other c inbuilt function are using like **time**, **delay**, **gotoxy**, and other **back space** are using for designing purpose.



```
#include<stdio.h>
#include<stdlib.h>
#include<windows.h>
#include<string.h>
#include<ctype.h>
#include<dos.h>
#include<time.h>
void delay(unsigned int mseconds){
  clock_t goal = mseconds + clock();
  while (goal > clock());}
COORD coord = \{0,0\};
void gotoxy(int x, int y){
  coord.X = x; coord.Y = y;
  Set Console Cursor Position (Get Std Handle (STD\_OUTPUT\_HANDLE), coord); \}
void search();
void returnfunc();
void mainmenu();
void Password();
void addrecord();
void display();
void deletion();
int length();
void loadingscreen();
void sorting();
struct student{
         int rollno;
         long int mobileno;
         char firstname[20];
         char lastname[20];
```

```
char branch[30];
       char clas[20];
       struct student *next;};
char password[10]={"student"};
struct student *root=NULL;
struct student *newrecord,*p;
int main()
{ Password();
getch();
return 0;
}
void mainmenu()
{ loadingscreen();
 system("cls");
       while(1){}
       int ch;
       gotoxy(20,5);printf("\xDB\xDB\xDB\xDB\xB2 1.Add a Student Information\n");
       gotoxy(20,9);printf("\xDB\xDB\xDB\xDB\xB2 3.Delete the Information\n");
  gotoxy(20,11); printf("\xDB\xDB\xDB\xDB\xB2 4.Search the record\n");
       gotoxy(20,13);printf("\xDB\xDB\xDB\xDB\xB2 5.sort by Rollno\n");
       gotoxy(20,15);printf("\xDB\xDB\xDB\xDB\xB2 6.close the application\n");
        gotoxy(20,25);t();
       gotoxy(20,17);printf("\xDB\xDB\xDB\xDB\xB2 Enter your choice : ");
         scanf("%d",&ch);
         switch(ch)
  {
```

```
case 1: addrecord();break;
         case 2: display(); break;
                   case 3: deletion(); break;
                   case 4: search();
                                      break;
                   case 5: sorting();
                       display();
                                      break;
           case 6: system("cls");
                       gotoxy(30,10);printf("Thank You.....!!!!! For visting");
                                      exit(0);
                   default:{
                   gotoxy(10,23);
                   printf("\aWrong Entry!!Please re-entered correct option");
                   if(getch())
                   mainmenu();
                   }
} }}
void addrecord()
  struct student *newrecord;
         newrecord=(struct student*)malloc(sizeof(struct student));
         gotoxy(70,3);printf("Student Record");
         gotoxy(70,5);printf("\xDB\xDB\xDB\xB2 First Name : \t");
         scanf("%s",newrecord->firstname);
         gotoxy(70,7);printf("\xDB\xDB\xDB\xB2 Last Name : \t");
         scanf("%s",newrecord->lastname);
         gotoxy(70,9);printf("\xDB\xDB\xDB\xB2 Roll NO : \t");
         scanf("%d",&newrecord->rollno);
```

```
gotoxy(70,11);printf("\xDB\xDB\xDB\xB2 Branch : \t");
        scanf("%s",newrecord->branch);
        gotoxy(70,13);printf("\xDB\xDB\xDB\xB2 Class : \t");
        scanf("%s",newrecord->clas);
        gotoxy(70,15); printf("\xDB\xDB\xDB\xB2 Mobile No.: \t");
        scanf("%d",&newrecord->mobileno);
        newrecord->next=NULL;
 if(root==NULL){
                root=newrecord; }
        else{
        p=root;
                while(p->next!=NULL)
                       p=p->next;
                p->next=newrecord;}
        system("cls");
                       }
void display()
{ int j,len;
 system("cls");
 newrecord=root;
        if(newrecord==NULL){
                printf("student Database is Empty\n"); }
        else{
  gotoxy(2,2);printf(" First Name Last Name Roll NO Branch
                                                        Class Mobile No ");
  j=4;
 while(newrecord!=NULL) {
 gotoxy(3,j);printf("%s",newrecord->firstname);
        gotoxy(18,j);printf("%s",newrecord->lastname);
```

```
gotoxy(30,j);printf("%d",newrecord->rollno);
         gotoxy(40,j);printf("%s",newrecord->branch);
         gotoxy(53,j);printf("%s",newrecord->clas);
         gotoxy(66,j);printf("%d",newrecord->mobileno);
         printf("\n\n");
         newrecord=newrecord->next;
         j++; } }
 len=length();
 gotoxy(3,\!20); printf("Number of Students or Location of a Node are \%d\n",len);
 gotoxy(35,25);returnfunc();
}
void deletion()
         system("cls");
         struct student *temp;
         int loc;
         char input='y';
         gotoxy(2,2);printf("which student information you want do delete...please Enter the location:");
         scanf("%d",&loc);
         while(input=='y'){
         if(loc>length()){
           if(getch())
           mainmenu();
                            }
         else if(loc==1){
         temp=root;
         root=temp->next;
         temp->next=NULL;
         printf("\n\n\ Deleted student record is %d",temp->rollno);
```

```
free(temp);
                     }
       else{
               int i=1;
               struct student *p=root,*q;
               while (i < loc-1) \{
                       p=p->next;
                       i++;
                              }
               q=p->next;
               p->next=q->next;
               q->next=NULL;
               printf("\n\n\ Deleted\ student\ record\ is\ \%d",q->rollno);
               free(q); }
       gotoxy(35,25);returnfunc();
}}
void search()
 system("cls");
 int d;
 int flag=0;
 gotoxy(20,10);
 printf("\xDB 1. Search By ROLL NO");
 gotoxy(20,14);
 printf("\xDB 2. Search By Name");
 gotoxy( 15,20);
 printf("Enter Your Choice");
 switch(getch())
        case '1':
```

```
{ system("cls");
                                  gotoxy(25,4);
                                  printf("****Search Student Record By Roll NO****");
                                  gotoxy(20,5);
                                  printf("Enter the Roll No:");
                                  scanf("%d",&d);
                                  gotoxy(20,7);
                                  printf("Searching......");
                                  newrecord=root;
                                  while(newrecord!=NULL){
                                                       if(newrecord->rollno==d){
                                                              delay(2);
                                                              gotoxy(20,7);printf("Record is found");
                                                              gotoxy(20,9); printf("\xB2 Fisrt Name: \%s", new record -> first name); gotoxy(47,9); printf("\xB2");
                                                              gotoxy(20,10); printf("\xB2 Last Nmae:\%s", new record-> last name); gotoxy(47,10); printf("\xB2"); gotoxy(47,10); printf("
                                                              gotoxy(20,11); printf("\xB2 Roll no:\%d", new record->roll no); gotoxy(47,11); printf("\xB2");
                                                              gotoxy(20,12); printf("\xB2 Branch:\%s", new record-> branch); gotoxy(47,12); printf("\xB2");
gotoxy(47,11);printf("\xB2");
                                                              gotoxy(20,13);printf("\xB2 Class%s",newrecord->clas);gotoxy(47,13);printf("\xB2");
                                                              gotoxy(20,14);printf("\xB2 Mobile No:%d ",newrecord->mobileno);gotoxy(47,14);printf("\xB2");
                                                              flag++; }
              newrecord=newrecord->next;}
                                  if(flag==0){
                                  gotoxy(22,9);printf("\aNo Record Found"); }
                                  gotoxy(20,17);
                                  printf("Try another search?(Y/N)");
                                  if(getch()=='y')
                                  search();
                                  else
```

```
break; }
        case '2':
        { char s[15];
          system("cls");
          gotoxy(25,4);
          printf("****Search By Name****");
          gotoxy(20,5);
          printf("Enter Student Name:");
          scanf("%s",s);
          newrecord=root;
          while(newrecord!=NULL){
                if(strcmp(newrecord->firstname,(s))==0) //checks whether a.name is equal to s or not
                  gotoxy(20,7);
                  printf("Record is Found");
                  gotoxy(20,8);
xB2\xB2");
                  gotoxy(20,9);
                  printf("\xB2 First Name:%s",newrecord->firstname);gotoxy(47,9);printf("\xB2");
                  gotoxy(20,10);
                  printf("\xB2 Last Name:\%s",newrecord->lastname);gotoxy(47,10);printf("\xB2");
                  gotoxy(20,11);
                  printf("\xB2 Roll NO:%d",newrecord->rollno);gotoxy(47,11);printf("\xB2");
                  gotoxy(20,12);
                  printf("\xB2 Branch:%s",newrecord->branch);gotoxy(47,12);printf("\xB2");
                  gotoxy(20,13);
                  printf("\xB2 class:Rs.\%s",newrecord->clas);gotoxy(47,13);printf("\xB2");
```

mainmenu();

```
gotoxy(20,14);
                 printf("\xB2\ Mobile\ No:\%d\ ",newrecord->mobileno); gotoxy(47,14); printf("\xB2");
                 gotoxy(20,15);
xB2\xB2");
                 flag++; }
newrecord=newrecord->next; }
         if(flag==0){
          gotoxy(22,9);printf("\aNo Record Found"); }
         gotoxy(20,17);printf("Try another search?(Y/N)");
         if(getch()=='y')
         search();
         else
         mainmenu();
         break; }
       default :
       getch();
       search();
 }}
int t()
{ time_t t;
time(&t);
printf("Date and time:%s\n",ctime(&t));
return 0;}
void returnfunc()
{{
 printf(" Press ENTER to return to main menu");}
 a:
```

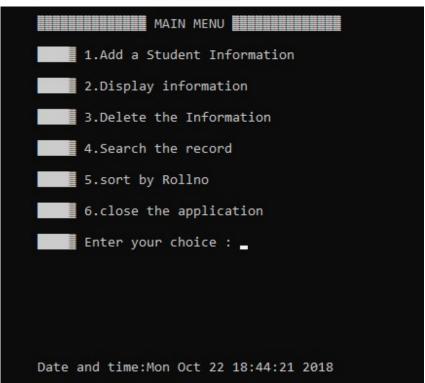
```
if(getch()==13)
  mainmenu();
  else
  goto a;}
int length()
{
         int count=0;
         struct student *temp;
         temp=root;
         while(temp!=NULL){
                   count++;
                   temp=temp->next;}
         return count;}
void loadingscreen()
int loader;
system("cls");
gotoxy(20,10);
printf("LOADING......Please Wait");
printf("\n\n");
gotoxy(22,11);
for(loader=1;loader<20;loader++) {</pre>
  delay(100);printf("%c",219); }
}
void Password()
```

```
system("cls");
char d[25]="Password Protected";
char ch,pass[10];
int i=0,j;
gotoxy(25,2);
for(j=0;j<61;j++){
delay(50);
printf("%c",t[j]); }
gotoxy(25,6);
for(j=0;j<20;j++){}
delay(50);
printf("*"); }
for(j=0;j<20;j++){}
delay(50);
printf("\%c",d[j]);\}
for(j=0;j<20;j++){}
delay(50);
printf("*"); }
gotoxy(10,10); printf("\xDB\xDB\xDB\xDB\xB2 Enter Password: ");
while(ch!=13) {
      ch=getch();
              if(ch!=13 && ch!=8){
      putch('*');
      pass[i] = ch;
              }}
      i++;
pass[i] = '\0';
if(strcmp(pass,password)==0) {
      gotoxy(25,13); printf("\xDB\xDB\xDB\xDB\xB2 PASSWORD MATCH \xDB\xDB\xDB\xDB\xB2"); \\
```

```
gotoxy(17,15);printf("Press any key to countinue....");
         getch();
         mainmenu(); }
 else{
          gotoxy(15,16);printf("\aWarning!! Incorrect Password");
          getch();
          Password();}}
void sorting()
{
  int swap, i;
  struct student *temp,*ptr;
  if (root == NULL)
    return;
  do { i = 0;
    temp = root;
    while (temp->next!=NULL) \{
      if (temp->rollno>temp->next->rollno) {
        swap=temp->rollno;
        temp->rollno=temp->next->rollno;
        i=1; }
      temp= temp->next; }
    ptr=temp; } while(i);
  }
```

#### **OUTPUT:-**





First Name	Last Name	Roll NO	Branch	Class	Mobile No
Shashikant	Gupta	331	Computer	SE	1452365
Pradeep	Hore	334	Computer	SE	142533
rohit	rohit	312	Computer	SE	14265
atif	UV	345	IT	SE	14253
Raj	Hadav	371	Mechanical	SE	145236
Sumit	jhadhav	352	instru	SE	975632

Number of Students or Location of a Node are 6

Press ENTER to return to main menu