

```
//***** HEADER FILES *****
```

```
#include<fstream.h>
#include<iomanip.h>
#include<stdio.h>
#include<process.h>
#include<string.h>
#include<conio.h>
```

```
//***** passwd() STARTS *****
```

```
void passwd()
{
    char str[20];
    int i=0;
    cout<<"\nEnter the password:";
    while(1)
    {
        str[i]=getch();
        cout<<"*";
        if (str[i]==13 || str[i]==27)
            break;
        i++;
    }
    char wd[20];
    ifstream fin("pass.txt");
    fin>>wd;
    str[i]='\0';
    if(strcmp(str,wd)==0)
    {
        cout<<"\n\nYou are an authorized user.";
        cout<<"\n\n\n\n\n\n\t\t\t*-----*";
        cout<<"\n\t\t\t| WELCOME |";
        cout<<"\n\t\t\t*-----*";
        cout<<"\n\n\n\n\nPress any key to continue...";
        getch();
    }
}
```

```

else
{
    cout<<"\n\nYou are an unauthorized user.\n\n\nSORRY!!";
    cout<<"\n\n\n\nPress any key to exit...";
    getch();
    exit(0);
}
}

```

//***** class of which information is stored *****

```

class stud
{int admno;
char name[15];
char add[20];
char ph[13];
int marks;
public:
void read()
{
    do
    {
        int temp;
        cout<<"\nEnter admission no.-";
        cin>>temp;
        if(temp<=0 || temp>=9999)
            cout<<"Please enter the admission no. between 0 and 9999";
        else
        {
            int f=0;
            stud s;
            ifstream fin("stu.dat",ios::binary);
            fin.read((char*)&s,sizeof(s));
            while(!fin.eof())
            {
                if(s.read()==temp)
                {
                    f=1;
                    break;
                }
                else
                    fin.read((char*)&s,sizeof(s));
            }

```

```

        if(f==0)
        {    admno=temp;
            break;
        }
        else
            cout<<"Admno already exists please try again.";

    }

}while(1);
do
{    cout<<"\nEnter name-";
    gets(name);
    if(strlen(name)>14)
        cout<<"Please enter the name with 14 characters only.";
    else
        break;
}while(1);
do
{    cout<<"\nEnter address-";
    gets(add);
    if(strlen(add)>20)
        cout<<"Please enter the address with 20 characters only.";
    else
        break;
}while(1);
do
{    cout<<"\nEnter phone no.-";
    gets(ph);
    if(strlen(ph)!=8 && strlen(ph)!=10 && strlen(ph)!=11 && strlen(ph)!=13)
        cout<<"Invalid no. Try again.";
    else
        break;
}while(1);

```

```

do
{
    cout<<"\nEnter marks-";
    cin>>marks;
    if(marks<0 || marks>=101)
        cout<<"Please enter the marks between 0 and 100 only";
    else
        break;
}while(1);
}

void display()
{
    cout.setf(ios::left);
    cout<<"\n'<<"| "<<"\t"<<setw(8)<<admno;
    cout<<setw(15)<<name;
    cout<<setw(20)<<add;
    cout<<setw(14)<<ph;
    cout<<setw(5)<<marks<<"\t"<<" |";
}

int red()
{
    return admno;
}

char*red2()
{
    return name;
}

char*red3()
{
    return add;
}

char*red4()
{
    return ph;
}

int red5()
{
    return marks;
}

```

```

void change1(char str[])
{
    strcpy(name,str);
}
void change2(char str[])
{
    strcpy(add,str);
}
void change3(char str[])
{
    strcpy(ph,str);
}
void change4(int x)
{
    marks=x;
}
};

```

//*****create() STARTS *****

```

void create()
{
    clrscr();
    char ch;
    ofstream fout("stu.dat",ios::binary);
    stud s1;
    do
    {
        clrscr();
        s1.read();
        fout.write((char*)&s1,sizeof(s1));
        clrscr();
        cout<<"\nWant to enter more records?(y/n)";
        cin>>ch;
    }while(ch=='y' || ch=='Y');
    fout.close();
}

```

```
//***** app() STARTS *****
```

```
void app()
{
    ofstream fout("stu.dat",ios::binary|ios::app);
    stud s1;
    char ch;
    do
    {   clrscr();
        s1.read();
        fout.write((char*)&s1,sizeof(s1));
        clrscr();
        cout<<"\nWant to enter more records?(y/n)";
        cin>>ch;
    }while(ch=='y' || ch=='Y');
    fout.close();
}
```

```
//***** disp() STARTS *****
```

```
void disp()
{
    cout<<"*----- SCHOOL RECORDS -----*";
    ifstream fin("stu.dat",ios::binary);
    if(!fin)
    {   clrscr();
        cout<<"Empty file !!!";
        cout<<"\n\nPress any key to continue....";getch();
        clrscr();
    }
}
```

```

else
{
    cout.setf(ios::left);
    cout<<"\n"<<"|"<<"\t"<<setw(8)<<"Admno";
    cout<<setw(15)<<"Name";
    cout<<setw(20)<<"Address";
    cout<<setw(14)<<"Phone no.";
    cout<<setw(5)<<"Marks"<<"\t"<<"|";
        stud s1;
        fin.read((char*)&s1,sizeof(s1));
        while(!fin.eof())
        {
            s1.display();
            fin.read((char*)&s1,sizeof(s1));
        }
    }
    fin.close();
    cout<<"\n*-----*";
}

```

//***** del() STARTS *****

```

void del()
{
    stud s1;
    int num,F=0;
    char ch;
    do
    {

        ifstream fin("stu.dat",ios::binary);
        ofstream fout("temp.dat",ios::binary);
        if(!fin)
        {
            clrscr();
            cout<<"\nFile not found.";
            cout<<"\n\nPress any key to continue...";goto c;
        }
    }
}

```

```

cout<<"\n\nEnter admno to be deleted: ";
cin>>num;
fin.read((char*)&s1,sizeof(s1));
while(!fin.eof())
{
    if(s1.red()==num)
        F=1;
    if(s1.red()!=num)
    {
        fout.write((char*)&s1,sizeof(s1));
    }
    fin.read((char*)&s1,sizeof(s1));
}
fin.close();
fout.close();
remove("stu.dat");
rename("temp.dat","stu.dat");

if(F==0)
    cout<<"Record wasn't found or file was Empty!!.";
else
    cout<<"The selected record has been deleted.";

cout<<"\nWant to delete more records?(y/n)";
cin>>ch;
}while(ch=='y' || ch=='Y');
cout<<"\n\nPress any key to continue...";
c:
getch();

```

```

}

```



```
//***** modify() starts *****
```

```
void modify()
{
    stud s1,s;
    int num,F=0,ch,ma;
    long double pos=0;
    char nam[18],addr[30],phn[13];
    cout<<"\nEnter the admission no. whose information you want to modify:";
    cin>>num;
    fstream fin("stu.dat",ios::binary|ios::in|ios::out|ios::noreplace|ios::nocreate);
    fstream f("stu.dat",ios::binary|ios::in|ios::out|ios::noreplace|ios::nocreate);
    while(!f.eof())
    {
        if(s.red()==num)
        {
            F=1;
            break;
        }
        else
            f.read((char*)&s,sizeof(s));
    }
    if(F==0)
    {
        cout<<"\nMatch not found";
        cout<<"\nPress any key to continue...";
        goto c;
    }
    clrscr();
    cout<<"1.To change name";
    cout<<"\n2.To change address";
    cout<<"\n3.To change phone no.";
    cout<<"\n4.To change marks.";
    do
    {
        cout<<"\n\nEnter choice-";
        cin>>ch;
        if(ch<=0 || ch>=5)
            cout<<"\nPlease enter the choice between 1 to 4 only.";
        else
            break;
    }while(1);
}
```

```

if(ch==1)
    do
        {
            cout<<"\nEnter name to be replaced with-";
            gets(nam);
            if(strlen(nam)>14)
                cout<<"\nPlease enter the name with 14 characters only.";
            else
                break;
        }while(1);
else if(ch==2)
    do
        {
            cout<<"\nEnter address to be renamed with-";
            gets(addr);
            if(strlen(addr)>20)
                cout<<"\nPlease enter the address with 20 characters only.";
            else
                break;
        }while(1);
else if(ch==3)
    do
    {
        cout<<"\nEnter the phone no. to be replaced with-";
        gets(phn);
        if(strlen(phn)!=8 && strlen(phn)!=10 && strlen(phn)!=11 && strlen(phn)!=13)
            cout<<"\nInvalid no. Try again.";
        else
            break;
    }while(1);
else if(ch==4)
    do
        {
            cout<<"\nEnter marks to be replaced with-";
            cin>>ma;
            if(ma<0 || ma>=101)
                cout<<"Please enter the marks between 0 and 100 only";
            else
                break;
        }while(1);

```

```

if(!fin)
{
    cout<<"\n\nFile Not Found";
    cout<<"\n\nPress any key to continue...";
    goto c;
}
else
{
    pos=fin.tellg();
    fin.read((char*)&s1,sizeof(s1));
    while(!fin.eof())
    {
        if(s1.red()==num)
        {
            if(ch==1)
                s1.change1(nam);
            else if(ch==2)
                s1.change2(addr);
            else if(ch==3)
                s1.change3(phn);
            else if(ch==4)
                s1.change4(ma);

            cout<<"\nRecord has been modified.";
            cout<<"\n\nPress any key to continue...";
        }

        fin.seekg(pos);
        fin.write((char*)&s1,sizeof(s1));
        pos=fin.tellg();
        fin.read((char*)&s1,sizeof(s1));
    }
}
c:
getch();
}

```

```
//***** search() STARTS *****
```

```
void search()
{
    int ch;
    clrscr();
    cout<<"1.According to admission no.\n";
    cout<<"2.According to name\n";
    cout<<"3.According to address\n";
    cout<<"4.According to phone no.\n";
    cout<<"5.According to marks\n";
    cout<<"6.Exit search.\n";
    do
    {
        cout<<"\nEnter choice-";
        cin>>ch;
        if(ch<=0 || ch>=7)
            cout<<"\nPlease enter choice between 1 and 6.";
        else
            break;
    }while(5);
    char str[30];
    int x,count=0;
    stud s;
    ifstream fin("stu.dat",ios::binary);
    if(ch==1)
    {
        cout<<"\nEnter admission no. to be searched for:";
        cin>>x;
    }
    else if(ch==2)
    {
        cout<<"\nEnter name to be searched for:";
        gets(str);
    }
}
```

```

else if(ch==3)
{
    cout<<"\nEnter address to be searched for:";
    gets(str);
}
else if(ch==4)
{
    cout<<"\nEnter phone no. to be searched for:";
    gets(str);
}
else if(ch==5)
{
    cout<<"\nEnter marks to be searched for:";
    cin>>x;
}
else if(ch==6)
    goto c;

if(!fin)
{
    cout<<"\n\nFile not found.";
    goto c;
}
else
{
    fin.read((char*)&s,sizeof(s));
    clrscr();
    cout<<"*----- SEARCH RESULTS -----*";
    while(!fin.eof())
    {
        if(ch==1)
        {
            if(s.red()==x)
            {
                s.display();
                count++;
            }
        }
    }
}

```

```

        else if(ch==2)
        {
            if(strcmpi(s.red2(),str)==0)
            {
                s.display();
                count++;
            }
        }
        else if(ch==3)
        {
            if(strcmpi(s.red3(),str)==0)
            {
                s.display();
                count++;
            }
        }
        else if(ch==4)
        {
            if(strcmpi(s.red4(),str)==0)
            {
                s.display();
                count++;
            }
        }
        else if(ch==5)
        {
            if(s.red5()==x)
            {
                s.display();
                count++;
            }
        }
        fin.read((char*)&s,sizeof(s));
    }
    if(count==0)
    cout<<"\n|\t\t\t\t No results found \t\t\t\t|";
    cout<<"\n*-----*";

```

```

}
c:
cout<<"\n\nPress any key to continue...";
getch();

```

```

}

```

```
void main()
{clrscr();
passwd();
int ch;
clrscr();
disp();
while(5)
{
    clrscr();
    disp();
    cout<<"\n\n";
    cout<<"\n\t1.Create ";
    cout<<"2.Append ";
    cout<<"3.Modify ";
    cout<<"4.Delete ";
    cout<<"5.Search ";
    cout<<"6.Exit\n";
    cout<<"\nEnter choice-";
        cin>>ch;
    switch(ch)
    {
        case 1:create();break;
        case 2:app();break;
        case 3:modify();break;
        case 4:del();break;
        case 5:search();break;
        case 6:clrscr();cout<<"\n\n\n\n\n\n\n\n\t\t\t BYE ";
            getch();exit(0);break;
        default:cout<<"Please enter number between 1 to 6";
            cout<<"Press any key to continue...";
            getch();
    }
}
}
```

//***** END OF PROJECT *****

Coding

Output

OUPUTS-

```
Enter the password:*****  
You are an unauthorized user.  
  
SORRY!!  
  
Press any key to exit..._
```

```
Enter the password:*****  
You are an authorized user.  
  
*****  
: WELCOME :  
*****  
  
Press any key to continue..._
```

Empty file !!!

Press any key to continue...._

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit

Enter choice-1_

Enter admission no.-1234

Enter name-Shashank

Enter address-Dwarka

Enter phone no.-9540848407

Enter marks-100

Want to enter more records?(y/n)y_

```
Enter admission no.-10000
Please enter the admission no. between 0 and 9999
Enter admission no.-1222

Enter name-Amit Dalal Sharma
Please enter the name with 14 characters only.
Enter name-Amit

Enter address-Bahadurgarh

Enter phone no.-2344
Invalid no. Try again.
Enter phone no.-9876543122

Enter marks-350
Please enter the marks between 0 and 100 only
Enter marks-98_
```

```
Want to enter more records?(y/n)n
```

```
*----- SCHOOL RECORDS -----*
|      Admno   Name      Address      Phone no.   Marks   |
|      1234    Shashank   Dwarka      9540848407   100    |
|      1222    Amit      Bahadurgarh  9876543122   98     |
*-----*

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit
Enter choice-2_
```

```
Enter admission no.-1234
Admno already exists please try again.
Enter admission no.-1212

Enter name-Mohit

Enter address-Uasant kunj

Enter phone no.-9835732915

Enter marks-97
```

```
Want to enter more records?(y/n)n
```

----- SCHOOL RECORDS -----					
Admno	Name	Address	Phone no.	Marks	
1234	Shashank	Dwarka	9540848407	100	
1222	Amit	Bahadurgarh	9876543122	98	
1212	Mohit	Vasant kunj	9835732915	97	

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit

Enter choice-3

Enter the admission no. whose information you want to modify:1213

Match not found

Press any key to continue...

----- SCHOOL RECORDS -----					
Admno	Name	Address	Phone no.	Marks	
1234	Shashank	Dwarka	9540848407	100	
1222	Amit	Bahadurgarh	9876543122	98	
1212	Mohit	Vasant kunj	9835732915	97	

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit

Enter choice-3

Enter the admission no. whose information you want to modify:1212_

- 1.To change name
- 2.To change address
- 3.To change phone no.
- 4.To change marks.

Enter choice-2

Enter the address to be replaced with:Janakpuri

Record has been modified.

Press any key to continue...

----- SCHOOL RECORDS -----					
Admno	Name	Address	Phone no.	Marks	
1234	Shashank	Dwarka	9540848407	100	
1222	Amit	Bahadurgarh	9876543122	98	
1212	Mohit	Janakpuri	9835732915	97	

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit

Enter choice-3

Enter the admission no. whose information you want to modify:1222

- 1.To change name
- 2.To change address
- 3.To change phone no.
- 4.To change marks.

Enter choice-3

Enter the phone no. to be replaced with-9443

Invalid no. Try again.

Enter the phone no. to be replaced with-9990486464

Record has been modified.

Press any key to continue...

----- SCHOOL RECORDS -----					
Admno	Name	Address	Phone no.	Marks	
1234	Shashank	Dwarka	9540848407	100	
1222	Amit	Bahadurgarh	9990486464	98	
1212	Mohit	Janakpuri	9835732915	97	

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit

Enter choice-4

Enter admno to be deleted: 213

Record wasn't found or file was Empty!!.

Want to delete more records?(y/n)n

Press any key to continue..._

```

*----- SCHOOL RECORDS -----*
:      Admno   Name      Address      Phone no.   Marks   :
:      1234    Shashank   Dwarka      9540848407   100     :
:      1222    Amit      Bahadurgarh  9990486464   98      :
:      1212    Mohit      Janakpuri    9835732915   97      :
*-----*

```

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit

Enter choice-4

Enter admno to be deleted: 1212

The selected record has been deleted.

Want to delete more records?(y/n)n

Press any key to continue..._

```

*----- SCHOOL RECORDS -----*
:      Admno   Name      Address      Phone no.   Marks   :
:      1234    Shashank   Dwarka      9540848407   100     :
:      1222    Amit      Bahadurgarh  9990486464   98      :
*-----*

```

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit

Enter choice-5

1.According to admission no
2.According to name
3.According to address
4.According to phone no.
5.According to marks
6.Exit search.

Enter choice-4

Enter phone no. to be searched for-9650181620

```

*----- SEARCH RESULTS -----*
:                               No results found                               :
*-----*

```

Press any key to continue..._

```

*----- SCHOOL RECORDS -----*
:      Admno   Name      Address      Phone no.   Marks   :
:      1234    Shashank   Dwarka      9540848407   100    :
:      1222    Amit      Bahadurgarh  9990486464   98     :
*-----*

```

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit

Enter choice-5

1.According to admission no
2.According to name
3.According to address
4.According to phone no.
5.According to marks
6.Exit search.

Enter choice-4

Enter phone no. to be searched for-9540848407_

```

*----- SEARCH RESULTS -----*
:      1234    Shashank   Dwarka      9540848407   100    :
*-----*

```

Press any key to continue..._

```

*----- SCHOOL RECORDS -----*
:      Admno   Name      Address      Phone no.   Marks   :
:      1234    Shashank   Dwarka      9540848407   100    :
:      1222    Amit      Bahadurgarh  9990486464   98     :
*-----*

```

1.Create 2.Append 3.Modify 4.Delete 5.Search 6.Exit

Enter choice-6

BYE

**Project By-
Shashank Singh**