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/*  
Name :      Amit Bandu Swami  
Roll No.:    2221018  
Batch :      A  
Experiment no.: 05  
Title :      Database of students using file operation  
*/
```

```
//Program
```

```
#include<iostream>  
#include<fstream>  
#include<string.h>  
using namespace std;  
class student  
{  
private:  
int roll;  
char name[20];  
public:  
student()  
{ roll=-1;  
strcpy(name,"NULL");  
}  
void getdata();  
void showdata();  
int storedata();  
void viewdata();  
void searchbox();  
void deletedata();  
void edit();  
};  
void student :: getdata()  
{  
cout<<" ENTER THE ROLL NO AND THE NAME OF THE STUDENT \n";  
cin>>roll; cin.ignore(); cin.getline(name,19);  
}  
void student :: showdata()
```

```

{ if(roll==1) {
cout<<" FILE IS EMPTY "<<endl;
}
else
{
cout<<endl;
cout<<roll<<" "<<name<<endl;
}
} int student
::storedata()
{ if(roll==1)
{
cout<<" DATA IS NOT INITIALIZE IN THE FILE \n";
return 0;
}
else
{
ofstream write; write.open("ex2.txt",
ios::app|ios::binary);
write.write((char*)this ,sizeof(*this));
write.close(); return 1; }
}

void student :: viewdata()
{
cout<<"ROLL NAME \n"; ifstream
read;
read.open("ex2.txt",ios::in|ios::binary);
if(!read)
{
cout<<"FILE NOT FOUND !!!\n";
}
else
{ if(roll==1)
{
cout<<" DATA NOT FOUND !!! \n FILE IS EMPTY ... \n";
}
}
}

```

```

else
{ read.read((char*)this,sizeof(*this));
  read.read((char*)this,sizeof(*this));
}
read.close();
}
}

```

```

void student :: searchbox()
{ int x;
  if(roll==-1)
  {
    cout<<" FILE IS EMPTY !!!";
  }
  else
  {
    cout<<" \n ENTER THE DATA WHICH YOU WANT TO SEARCH : \n";
    cin>>x; ifstream read; int flag=0;
    read.open("ex2.txt",ios::in|ios::binary);
    if(!read)
    {
      cout<<" FILE IS NOT OPEN " <<endl;
    }
    else
    { read.read((char*)this,sizeof(*this));
      while(!read.eof())
      {
        if(x==this->roll)
        {
          showdata();
          flag++;
          read.read((char*)this,sizeof(*this));
        } read.read((char*)this,sizeof(*this));
      }
      read.close();
    }
    if(flag==0)
    {
      cout<<" NO DATA FOUND ... \n";
    }
  }
}

```

```

}
}
}
void student :: deletedata()
{ int
x,flag=0;
if(roll==-1)
{
cout<<" FILE IS EMPTY !!!";
}
else
{
cout<<" ENTER THE ROLL NUMBER WHICH YOU WANT TO DELETE
\n"; cin>>x; ifstream read; ofstream write; read.open("ex2.txt",
ios::in|ios::binary); write.open("temp1.txt", ios::out|ios::binary);
read.read((char*)this,sizeof(*this)); while(!read.eof())
{
if(x==this->roll)
{ read.read((char*)this,sizeof(*this));
flag++;
}
else
{ write.write((char*)this,sizeof(*this));
read.read((char*)this,sizeof(*this));
}
}
if(flag==0)
{
cout<<" ROLL NUMBER NOT FOUND \n";
cout<<" PLEASE ENTER THE VALID ROLL NO \n";
}
read.close();
write.close();
remove("ex2.txt");
rename("temp1.txt", "ex2.txt");

}
} void student ::
edit()

```

```

{ int x; if(roll==1)
{
cout<<" DATA NOT FOUND !!!\n FILE IS EMPTY ... \n";
}
else
{
ifstream read; ofstream write;
read.open("ex2.txt",ios::in|ios::binary);
write.open("temp1.txt",ios::out|ios::binary);
read.read((char*)this,sizeof(*this));
cout<<" ENTER THE ROLL NO YOU WANT TO REPLACE \n";
cin>>x; while(!read.eof())
{
if(x==this->roll)
{
getdata();
write.write((char*)this,sizeof(*this));
read.read((char*)this,sizeof(*this));
}
else
{ write.write((char*)this,sizeof(*this));
read.read((char*)this,sizeof(*this));
}
} read.close();
write.close();
remove("ex2.txt");
rename("temp1.txt","ex2.txt");
}
} int
main()
{
student ob;
int ch;
while(1)
{ int choice; cout<<"\n_____MENU
_____ "<<endl; cout<<" "<<endl; cout<<"
1. ADD STUDENT DATA "<<endl; cout<<"
"<<endl; cout<<" 2. DELETE STUDENT DATA
"<<endl; cout<<" "<<endl; cout<<" 3. DISPLAY

```

```

STUDENT DATA "<<endl; cout<<" "<<endl;
cout<<" 4. SEARCH STUDENT DATA "<<endl;
cout<<" "<<endl; cout<<" 5. UPDATE
STUDENT DATA "<<endl; cout<<" "<<endl;
cout<<" 6.Exit "<<endl;
cout<<" "<<endl;
cout<<"enter the choice from the  above"<<endl;
cin>>choice; switch(choice)
{
case 1:
{
ob.getdata();
ob.storedata();
break;
}
case 2:
{
ob.deletedata();
break;
}
case 3:
{
ob.viewdata();
break;
}
case 4:
{
ob.searchbox();
break;
}
case 5:
{
ob.edit();
break;
}
case 6:
{
exit(0);
}
default:

```

```
{  
cout<<" YOU HAVE ENTERED INVALID CHOICE \n";  
}  
}  
} return  
0; }
```

/*

OUTPUT:

_____MENU _____

1. ADD STUDENT DATA
2. DELETE STUDENT DATA
3. DISPLAY STUDENT DATA
4. SEARCH STUDENT DATA
5. UPDATE STUDENT DATA6. EXIT enter the choice from the above

1

ENTER THE ROLL NO AND THE NAME OF THE STUDENT

08 Gayatri

_____MENU _____

1. ADD STUDENT DATA
2. DELETE STUDENT DATA
3. DISPLAY STUDENT DATA
4. SEARCH STUDENT DATA
5. UPDATE STUDENT DATA6. EXIT enter the choice from the above

2

ENTER THE ROLL NUMBER WHICH YOU WANT TO DELETE

03

_____MENU _____

1. ADD STUDENT DATA
2. DELETE STUDENT DATA
3. DISPLAY STUDENT DATA
4. SEARCH STUDENT DATA
5. UPDATE STUDENT DATA6. EXIT enter the choice from the above

4

ENTER THE DATA WHICH YOU WANT TO SEARCH :

30

NO DATA FOUND ...

_____MENU _____

1. ADD STUDENT DATA
2. DELETE STUDENT DATA
3. DISPLAY STUDENT DATA
4. SEARCH STUDENT DATA

5. UPDATE STUDENT DATA6. EXIT enter the choice from the above

5

ENTER THE ROLL NO YOU WANT TO REPLACE

03

_____MENU _____

1. ADD STUDENT DATA

2. DELETE STUDENT DATA

3. DISPLAY STUDENT DATA

4. SEARCH STUDENT DATA

5. UPDATE STUDENT DATA6. EXIT enter the choice from the above 3

07 Ishwari

08 Gayatri

*/