Write a program that stores the information about students (name, student id,department and address) in a structure and then transfers the information to a file in your directory. Finally, retrieve the information from your file and print in the proper format on your output screen.

```
#include <iostream>
#include <cstring>
#include <fstream>
using namespace std;
class Student{
 private:
   char name[20], id[10], department[20], address[20];
 public:
  Student(){};
  Student(char n[], char i[], char d[], char a[])
  {
    strncpy(name,n,20);
    strncpy(id,i,20);
    strncpy(department,d,20);
    strncpy(address,a,20);
  }
  void display(){
    cout << "Name: " << name << endl;
    cout << "Id: " << id << endl ;
    cout << "Department: " << department << endl;
    cout << "Address: " << address << endl;
  }
};



int main()
{
  ofstream data;
  data.open("Student.dat",ios::out|ios::binary);

  char name[20], id[10], department[20], address[20];
  char ans;

  do
```

```
 {
  cout << "Enter Student information" << endl;
  cout << "Name: ";
  cin >> name;
  cout << "Id: " ;
  cin >> id;
  cout << "Department: " ;
  cin >> department;
  cout << "Address: " ;
  cin >> address;

  Student newStudent(name,id,department,address);

  data.write(reinterpret_cast<char *>(&newStudent),sizeof(newStudent));
  cout << "Do you want to continue adding student data y/n";
  cin >> ans;
 }
 while(ans == 'y');
 data.close();

 ifstream info;
 info.open("Student.dat",ios::in|ios::binary);
 while(!info.eof())
 {
  Student newStudent;
  info.read(reinterpret_cast<char *>(&newStudent),sizeof(newStudent));
  if (info)
    newStudent.display();
 }
 info.close();

 return 0;
}

#include<iostream>//or
#include<fstream>
#include<iomanip>
using namespace std;
class student
{
```

```
   char name[20],department[20],address[20];
   int id;
public:
   void getdata()
   {
      cout<<endl<<"Name:\t";
      cin.getline(name,20);
      cout<<endl<<"Address:\t";
      cin.getline(address,20);
      cout<<endl<<"Department:\t";
      cin.getline(department,20);
      cout<<endl<<"Id:\t";
      cin>>id;
      cin.ignore();
   }
   void displaydata()
   {
cout<<setiosflags(ios::left)<<setw(20)<<name<<setw(20)<<address<<setw(20)<<depar
tment<<setw(20)<<id<<endl;
   }
};
int main()
{
   ofstream file_write;
   student st;
   student disp;
   char c;
   file_write.open("student.txt",ios::out|ios::binary);
   cout<<"Enter students data:"<<endl;
   do
   {
      st.getdata();
      file_write.write(reinterpret_cast<char*>(&st),sizeof (st));
      cout<<"Do you want to add more(y/n)?";
      cin>>c;
      cin.ignore();
   }while(c!='n');
   file_write.close();
   ifstream file_read;
   file_read.open("student.txt",ios::in|ios::binary);
```

```
   cout<<endl<<setiosflags(ios::left)<<setfill('*')<<setw(62)<<'*'<<endl;
   cout<<setfill('
')<<setw(20)<<"Name"<<setw(20)<<"Address"<<setw(20)<<"Department"<<setw(20)
<<"Id"<<endl;
   cout<<setiosflags(ios::left)<<setfill('*')<<setw(62)<<'*'<<setfill(' ')<<endl;
   while(file_read.read(reinterpret_cast<char*>(&disp),sizeof(disp)))
   {
         disp.displaydata();
   }
   file_read.close();
}
```