

Question2.cpp

```
1  //<----Lab 02- Sorting Techniques---->
2
3  // Q2. Create a Person class which has following attributes:
4
5  // First Name
6  // Last Name
7  // Birth Year
8  // Birth Month
9  // Birth Date
10 // Develop C++ solution such that day month and year are taken as input for N persons and
11 // perform Sorting based on year, month and day using Selection Sort.
12
13 #include<iostream>
14 using namespace std;
15
16 class Person{
17     string FirstName;
18     string LastName;
19     int BirthYear;
20     int BirthMonth;
21     int BirthDate;
22
23     public:
24
25     Person(string f="Random",string l="Person",int by=0,int bm=0,int bd=0):FirstName(f),
        LastName(l),BirthYear(by),BirthMonth(bm),BirthDate(bd){}
26     Person(int by,int bm, int bd):BirthYear(by),BirthMonth(bm),BirthDate(bd){}
27     void display(){
28         cout<<FirstName<<endl<<LastName<<endl<<BirthYear<<"/"<<BirthMonth<<"/"<<BirthDate<
        <endl<<endl;
29     }
30     int getBY(){
31         return BirthYear;
32     }
33     int getBM(){
34         return BirthMonth;
35     }
36     int getBD(){
37         return BirthDate;
38     }
39     void setBY(int by){
40         BirthYear=by;
41     }
42     void setBM(int bm){
43         BirthMonth=bm;
44     }
45     void setBD(int bd){
46         BirthDate=bd;
47     }
48
49 };
50
51 int main(){
52     int n,temp;
```

```
53     cout<<"Enter number of persons:"<<endl;
54     cin>>n;
55     Person people[n];
56     for(int i=0;i<n;i++){
57         cout<<"Enter birthyear"<<endl;
58         cin>>temp;
59         people[i].setBY(temp);
60         cout<<"Enter birthmonth"<<endl;
61         cin>>temp;
62         people[i].setBM(temp);
63         cout<<"Enter birthdate"<<endl;
64         cin>>temp;
65         people[i].setBD(temp);
66     }
67     cout<<endl;
68     for(int i=0;i<n;i++){
69         people[i].display();
70     }
71
72     int i,j,min_index;
73     for(i=0;i<n-1;i++){
74         min_index = i;
75         for(j=i+1;j<n;j++){
76             if((people[j].getBY()<people[min_index].getBY()) ||
77                ((people[j].getBM()<people[min_index].getBM())&&(people[j].getBY()==
people[min_index].getBY())) ||
78                ((people[j].getBD()<people[min_index].getBD())&&(people[j].getBM()==
people[min_index].getBM())&&(people[j].getBY()==people[min_index].getBY()))))
79             {
80                 min_index=j;
81             }
82         }
83         if(min_index!=i){
84             Person temp;
85             temp=people[min_index];
86             people[min_index]=people[i];
87             people[i]=temp;
88         }
89     }
90
91     cout<<endl;
92     for(int i=0;i<n;i++){
93         people[i].display();
94     }
95 }
```