

NAME:SHRUTI MUKUND PAWAR
DIV:C
BATCH:C1
ROLL NO S213003
SUBJECT:OOP

PROBLEM STATEMENT:

Write a function template selection Sort. Write a program that inputs, sorts and outputs an integer array and a float array.

CODE:

```
#include <iostream>
using namespace std;
int n;
#define size 10
template <class T>
void sel(T A[size])
{
    int i,j,min;
    T temp;
    for(i=0;i<n-1;i++)
    {
        min=i;
        for(j=i+1;j<n;j++)
        {
            if (A[j]<A[min])
            {
                min=j;
            }
        }
        temp=A[i];
        A[i]=A[min];
        A[min]=temp;
    }
    cout<<"in sorted array:";
    for(i=0;i<n;i++)
    {
        cout<<" "<<A[i];
    }
}

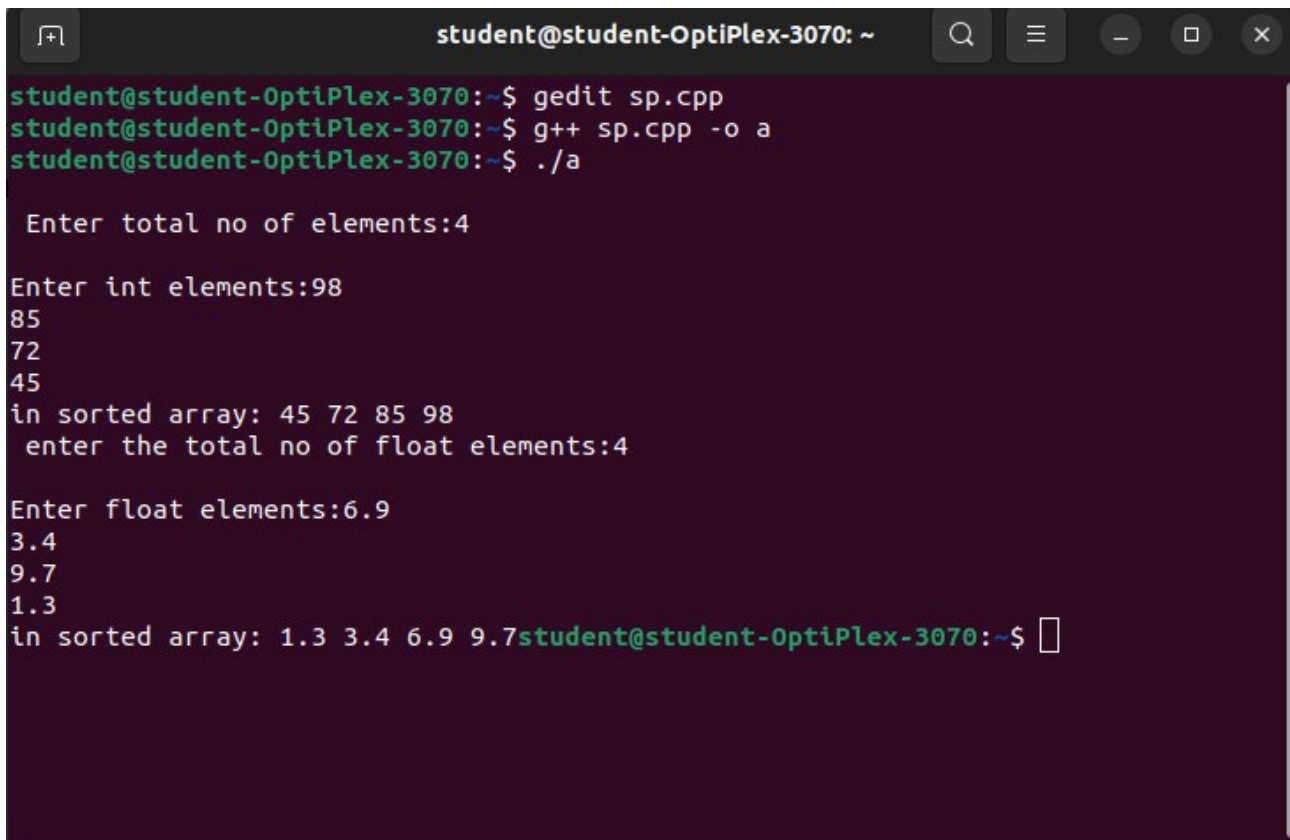
int main()
{
    int A[size];
    float B[size];
    int i;
    cout<<"\n Enter total no of elements:";
    cin>>n;
    cout<<"\nEnter int elements:";
    for (i=0;i<n;i++)
```

```

{
cin>>A[i];
}
sel (A);
cout<<"\n enter the total no of float elements:";
cin>>n;
cout<<"\nEnter float elements:";
for (i=0;i<n;i++)
{
cin>>B[i];
}
sel(B);
}

```

INPUT/OUTPUT:



A terminal window titled 'student@student-OptiPlex-3070: ~' showing the execution of a C++ program. The user enters '4' for the total number of elements, then '98' for the total number of float elements. The program then prompts for 'Enter float elements:' and the user enters '6.9', '3.4', '9.7', and '1.3'. The program outputs 'in sorted array: 45 72 85 98' and 'enter the total no of float elements:4'. Finally, the program outputs 'in sorted array: 1.3 3.4 6.9 9.7' and the prompt returns to the user.

```

student@student-OptiPlex-3070: ~
student@student-OptiPlex-3070:~$ gedit sp.cpp
student@student-OptiPlex-3070:~$ g++ sp.cpp -o a
student@student-OptiPlex-3070:~$ ./a

Enter total no of elements:4

Enter int elements:98
85
72
45
in sorted array: 45 72 85 98
enter the total no of float elements:4

Enter float elements:6.9
3.4
9.7
1.3
in sorted array: 1.3 3.4 6.9 9.7student@student-OptiPlex-3070:~$ 

```