**Assignment No-4**

**Problem statement :-**

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

**Aim:-**

to understand concept of template function.

**Description:-**

in this problem statement state that how to use template function and how to enter the multiple type of input in one program without define data type.

**OOP concept:-**

**Template function:-**

Template function is used to accept multiple data type of input in one program without defining data type.

**Syntax-**

***template <class variable\_name>***

**Program code:-**

#include<iostream>

using namespace std;

template<class T>

void SelectionSort(T a[], int n)

{

int i,j,min;

float temp;

for (j = 0; j < n-1; j++)

{

min = j;

for ( i = j+1; i < n; i++)

{

if (a[i] < a[min])

{

min = i;

}

}

if(min != j)

{

temp = a[j];

a[j] = a[min];

a[min] = temp;

}

}

}

int main()

{

int x,y;

int a[30];

float b[30];

cout<<"\nEnter no. of integers in the array \n";

cin>>x;

cout<<"\nEnter integers in array \n";

for(int i=0;i<x;i++)

cin>>a[i];

SelectionSort(a,x);

cout<<"\nEnter the no. of float integers \n";

cin>>y;

cout<<"\nEnter floats in array \n";

for(int i=0;i<y;i++)

cin>>b[i];

SelectionSort(b,y);

cout<<"\nSorted Order Integers: ";

for(int i=0;i<x;i++)

cout<<" "<<a[i];

cout<<"\n\n\nSorted Order float: ";

for(int j=0;j<y;j++)

cout<<" "<<b[j];

return 0;

}