```
#include <iostream>
#include <iomanip>

 using namespace std ;

class Weather
{
public:
        int Sno, temp ;
        float time_stamp ;
        string city ;

 void input(int i)
  {
    Sno = i + 1 ;

    cout << "\n\n S No. : " << Sno ;
    cout << "\n\n Enter City Name : " ;
    cin >> city ;

    cout << " Enter Time Stamp : " ;
    cin >> time_stamp ;

    cout << " Enter Temperature : " ;
    cin >> temp ;

  }

 void output()
  {
        cout << Sno << setw(25) << city << setw(25) << time_stamp << setw(25) << temp ;
  }

};

void insertion_sort(Weather arr[], int n)
 {
  int i, j ;
  Weather element ;

  for (i = 1; i < n; i++)
   {
    element = arr[i] ;
    j = i - 1 ;
```

```
      while (j > -1 && arr[j].city > element.city)
       {
          arr[j + 1] = arr[j] ;
          j-- ;
       }

    arr[j + 1] = element;
  }

 }

int main()
{
  int n ;

  cout << "\n\n Program to sort the Weather Data on cities " ;
  cout << "\n\n Enter the no. of rows :" ;
  cin >> n ;

  Weather W[n] ;

  cout << "\n\n Enter Data :  " ;

  for (int i = 0; i < n; ++i)
   {
             W[i].input(i) ;
   }

  cout << "\n Data : \n\n" ;
  cout << "S no." << setw(25) << "City" << setw(25) << "Time Stamp" << setw(25) << "Temp.(C)"
;

  for (int i = 0; i < n; ++i)
  {
           cout << endl ;
    W[i].output() ;
  }

  insertion_sort(W,n) ;

  cout << "\n\n Data after Sorting : \n\n" ;
  cout << "S no." << setw(25) << "City" << setw(25) << "Time Stamp" << setw(25) << "Temp.(C)"
;
```

```
  for (int i = 0; i < n; ++i)
  {
          cout << endl ;
    W[i].output() ;
  }


 return 0;
}
```