Assignment 10 for Week 14

1. Program Design 1
   Design a function template to find the max from different data types such as int, char, float, double, long, char*, etc.
   ✓ Hint:
   1) Pass an array as argument by using type template arguments and pass the size of the array by using non-type template arguments;
   2) To find the max in a char* array, function overloading should be adopted, that is, by using the common function overloading.
2. Program Design 2
   Design a class template Queue to realize the operations such as clear, find the first value, empty or full, push into the queue and pop out of the queue. And write a main program to testify your class design.
3. Program Design 3
   Assume that there is a Worker class illustrated as follows:

```
class Worker{
private:
    char *name;
    int age;
    double salary;
public:
    Worker(...)          //Initialization
    void setData(char *Name,int Age,double wage)//Reset the data member
    void display()    //Display the data member
};
```

   Design the Worker class and by using list (or vector or stack or queue) in the STL to manage the objects of the class. At least two lists should be created and at least three objects of the Worker class should be saved in each list. By using the iterator to access and display the object's data member of each node. And merge algorithm should be used to merge this two lists and then display the list node' object after merge.
4. Program Design 4
   Create two vector of int data type and merge them by using the merge algorithm and then sort them by using the sort algorithm.

✧ Note: Submit the above source code with the file name of "***StudentId_Name_10_1.rar***", "***StudentId_Name_10_2.rar***", "***StudentIdName_10_3.rar***", "***StudentId_Name_10_4.rar***".

✧ Note:
Submit your assignment as four attachments before the end of next Tuesday (June 4th) to the Superstar platform!