

# Lab Assignment: Multiple Worker Single Queue

This is a generalization of the Single Worker Single Queue Problem. For this experiment, the number of servers is a constant **m**. Thus, you need to write a program to compute the following values.

- Cumulative departure time for each task
- Average queue length
- Average waiting time
- Total idle time of **each** server

Input to the program will be a .txt file with the first line of the file specifying the number of servers and customers and subsequent lines giving the inter-arrival times and Service times of each customer. You may use the following as sample input for your program.

input.txt

```
2 6
0 25
10 30
38 22
7 50
10 45
20 15
```

You need to get the two experiments: Single Worker Single Queue and Multiple Worker Single Queue evaluated in the next LAB (on **14<sup>th</sup> November 2019**). **This is a Firm deadline.**

There will be no explicit Lab exam for this course. You may consider these two experiments (Lab 6: **Single worker single queue** and Lab Assignment: **multiple server single queue**) as Take-Home Exam, but you are expected to implement on your own. To make sure you have implemented the programs yourself, there will be a quiz on 14<sup>th</sup> November 2019 based on all the (Seven) lab experiments.

Thus, the end-sem course evaluation for the Lab will be based on these two experiments (**Single worker single queue** and **multiple server single queue**) and the Quiz. So do not take these assignments lightly.