Homework 2

- Write simulation program to examine the performance of queuing system as follows:
  - M/M/1 v.s. M/M/2
  - M/M/1/k
- Due date: 2021/12/10

Homework 2

- M/M/1, M/M/2: λ=1, 1.5, 2, 2.5; $\mu = 4$ for M/M/1, $\mu = 2$ for M/M/2
- M/M/1/k: λ=2, 3; μ=3 ; for k= 2, 4, 6
- Please provide the following simulation results
  - M/M/1, M/M/2:
    - Mean waiting time v.s. λ
    - Mean Queue length v.s. λ
  - M/M/1/k:
    - Mean Queue length v.s. λ
    - Mean Blocking rate v.s. k (with λ=2 and 3)

Delivery

- Software code with description comments (file 1)
- Generated first 100 inter arrival time and generated first 100 service time (file 2):
- Simulation results (shall also compare to the numerical results in the figures (file 3)
  - Report with simulation figures with discussion
- Please zip all your document into one file with the student ID for the file name.
- Mail (Subject: Queuing-2) to ywchen@ce.ncu.edu.tw before 2021/12/10