CS-681

Assignment - 2

- Input - number of runs, number of cores, number of threads, maximum queue length, timeout, distribution type of time , number of users, and number of delays in the order mentioned.
- Output - average response time, Goodput, Badput, Throughput, Average Core Utilization, Request Drop rate.
- To run the code use the command python SimulationCode.py
- Different variations can be performed by changing the modes of service time.
- Think time 1sec
- To get the confidence intervals we needed the following things:
    - Parameters are kept constant.
    - A number of simulation runs denoted by n.
    - Recording values for each run i as Ri.
    - Calculating sample mean of the n estimates denoted by X(n).
    - Calculating sample variance of the n estimates denoted by V(n).
    - Finally, calculating a 95 % confidence interval by applying the formula - (X(n) ± 1.96 * (V(n)/n)½)

  We repeated the above steps for different values of the number of users to get the desired graph.

- All times in the code are in milliseconds.
- All times in sheet and graphs are in milliseconds.
- Number of runs = 100
- Sheet 1 has all the readings with timeout =1000 millisec.