Welcome to the event-driven, single server restaurant simulation!
You will need to enter simulation parameters such as:
Simulation end time, random # generator seed
The uniform distribution minimum and maximum ranges to decide random customer arrival times
The normal distribution mean and standard deviation to decide random server service times.

Please input simulation time: 60

Please input random number generator seed: 5

Please input minimum and maximum values for uniform distribution respectively: 1 5

Please input a mean and standard deviation for normal distribution respectively: 4 2

Simulation parameters are as follows:
Simulation End Time: 60
Seed value: 5
Uniform Distribution Min Value: 1
Uniform Distribution Max Value: 5
Normal Distribution Mean Value: 4
Normal Distribution Std Value: 2

Please press the (r) key to start the simulation.
r
Customer 1 has arrived at the restaurant at time unit 1
Server is free and started to serve Customer 1 at time unit 1
Customer 2 has arrived at the restaurant at time unit 2
Server is currently busy. Customer 2 started to wait in queue.
Customer 3 has arrived at the restaurant at time unit 3
Server is currently busy. Customer 3 started to wait in queue.
Customer 1 is done being served by the Server at time Unit 4. Customer 1 is leaving the restaurant.
Customer 2 goes to the server and starts getting served at time unit 4
Customer 4 has arrived at the restaurant at time unit 4
Server is currently busy. Customer 4 started to wait in queue.
Customer 2 is done being served by the Server at time Unit 7. Customer 2 is leaving the restaurant.
Customer 3 goes to the server and starts getting served at time unit 7
Customer 5 has arrived at the restaurant at time unit 7
Server is currently busy. Customer 5 started to wait in queue.
Customer 6 has arrived at the restaurant at time unit 10
Server is currently busy. Customer 6 started to wait in queue.
Customer 3 is done being served by the Server at time Unit 11. Customer 3 is leaving the restaurant.
Customer 4 goes to the server and starts getting served at time unit 11
Customer 7 has arrived at the restaurant at time unit 14
Server is currently busy. Customer 7 started to wait in queue.
Customer 4 is done being served by the Server at time Unit 14. Customer 4 is leaving the restaurant.
Customer 5 goes to the server and starts getting served at time unit 14
Customer 5 is done being served by the Server at time Unit 15. Customer 5 is leaving the restaurant.
Customer 6 goes to the server and starts getting served at time unit 15
Customer 6 is done being served by the Server at time Unit 17. Customer 6 is leaving the restaurant.
Customer 7 goes to the server and starts getting served at time unit 17

Customer 8 has arrived at the restaurant at time unit 18
Server is currently busy. Customer 8 started to wait in queue.
Customer 7 is done being served by the Server at time Unit 20. Customer 7 is leaving the restaurant.
Customer 8 goes to the server and starts getting served at time unit 20
Customer 9 has arrived at the restaurant at time unit 22
Server is currently busy. Customer 9 started to wait in queue.
Customer 8 is done being served by the Server at time Unit 22. Customer 8 is leaving the restaurant.
Customer 9 goes to the server and starts getting served at time unit 22
Customer 10 has arrived at the restaurant at time unit 25
Server is currently busy. Customer 10 started to wait in queue.
Customer 9 is done being served by the Server at time Unit 26. Customer 9 is leaving the restaurant.
Customer 10 goes to the server and starts getting served at time unit 26
Customer 11 has arrived at the restaurant at time unit 30
Server is currently busy. Customer 11 started to wait in queue.
Customer 10 is done being served by the Server at time Unit 30. Customer 10 is leaving the restaurant.
Customer 11 goes to the server and starts getting served at time unit 30
Customer 12 has arrived at the restaurant at time unit 33
Server is currently busy. Customer 12 started to wait in queue.
Customer 11 is done being served by the Server at time Unit 35. Customer 11 is leaving the restaurant.
Customer 12 goes to the server and starts getting served at time unit 35
Customer 13 has arrived at the restaurant at time unit 35
Server is currently busy. Customer 13 started to wait in queue.
Customer 12 is done being served by the Server at time Unit 40. Customer 12 is leaving the restaurant.
Customer 13 goes to the server and starts getting served at time unit 40
Customer 14 has arrived at the restaurant at time unit 40
Server is currently busy. Customer 14 started to wait in queue.
Customer 13 is done being served by the Server at time Unit 43. Customer 13 is leaving the restaurant.
Customer 14 goes to the server and starts getting served at time unit 43
Customer 15 has arrived at the restaurant at time unit 44
Server is currently busy. Customer 15 started to wait in queue.
Customer 14 is done being served by the Server at time Unit 47. Customer 14 is leaving the restaurant.
Customer 15 goes to the server and starts getting served at time unit 47
Customer 16 has arrived at the restaurant at time unit 47
Server is currently busy. Customer 16 started to wait in queue.
Customer 17 has arrived at the restaurant at time unit 48
Server is currently busy. Customer 17 started to wait in queue.
Customer 15 is done being served by the Server at time Unit 49. Customer 15 is leaving the restaurant.
Customer 16 goes to the server and starts getting served at time unit 49
Customer 16 is done being served by the Server at time Unit 51. Customer 16 is leaving the restaurant.
Customer 17 goes to the server and starts getting served at time unit 51
Customer 18 has arrived at the restaurant at time unit 52
Server is currently busy. Customer 18 started to wait in queue.
Customer 19 has arrived at the restaurant at time unit 53
Server is currently busy. Customer 19 started to wait in queue.
Customer 20 has arrived at the restaurant at time unit 57
Server is currently busy. Customer 20 started to wait in queue.
Customer 17 is done being served by the Server at time Unit 58. Customer 17 is leaving the restaurant.
Customer 18 goes to the server and starts getting served at time unit 58

Now printing statistics...
Total # customers simulated: 20
Percentage of time server was busy: %95
Percentage of customers that the server completed serving: %85
Average service time: 2.85 time units.
Percentage of customers waited in the line: %95
Average waiting time: 3.42105 time units.
The longest line during the simulation had 3 number of customers.

Output of memory error detector program "valgrind" to check for memory leaks due to dynamic memory allocation used:

```
==5140== HEAP SUMMARY:
==5140==     in use at exit: 0 bytes in 0 blocks
==5140==   total heap usage: 82 allocs, 82 frees, 3,014 bytes allocated
==5140==
==5140== All heap blocks were freed -- no leaks are possible
```