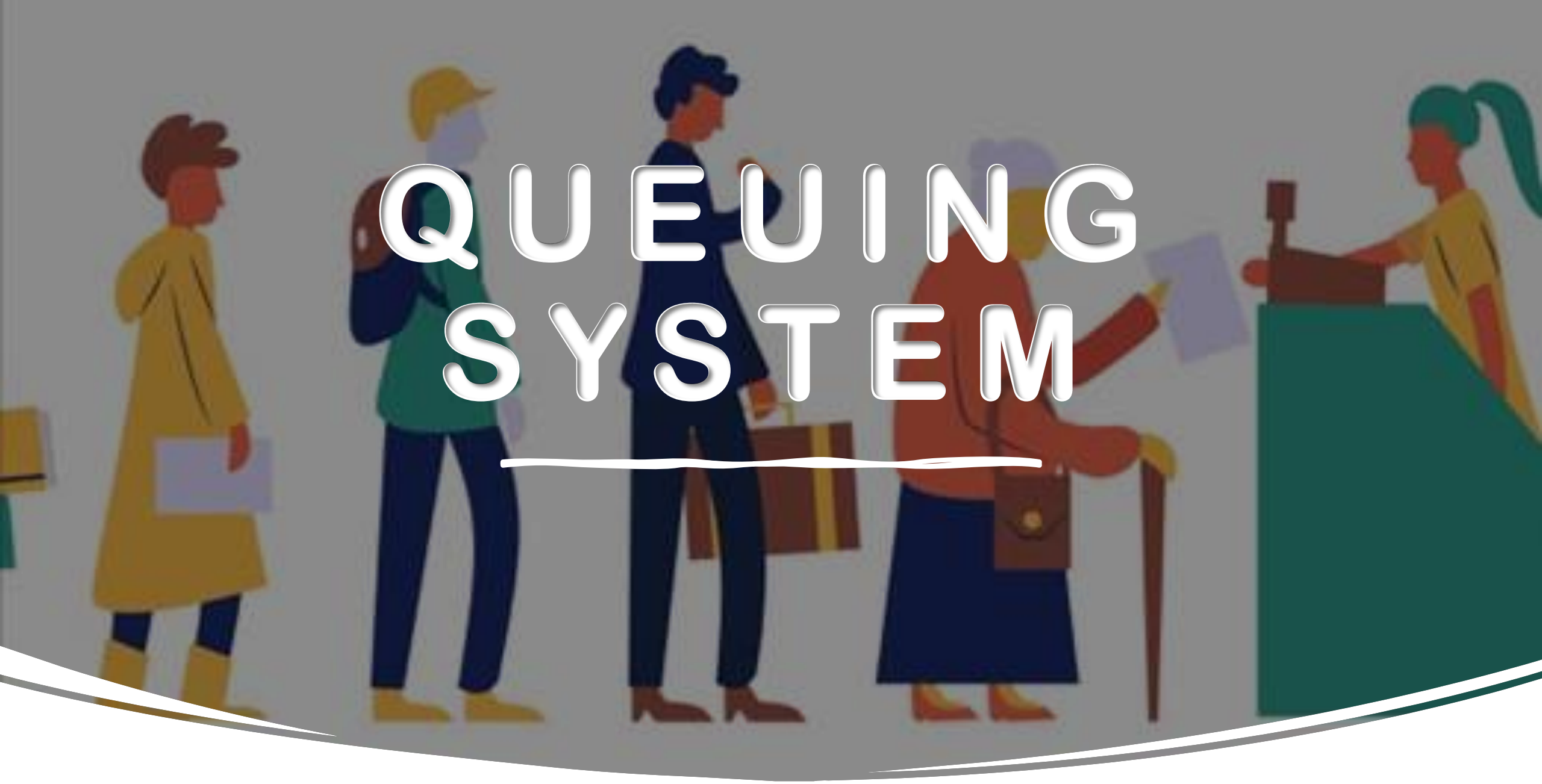
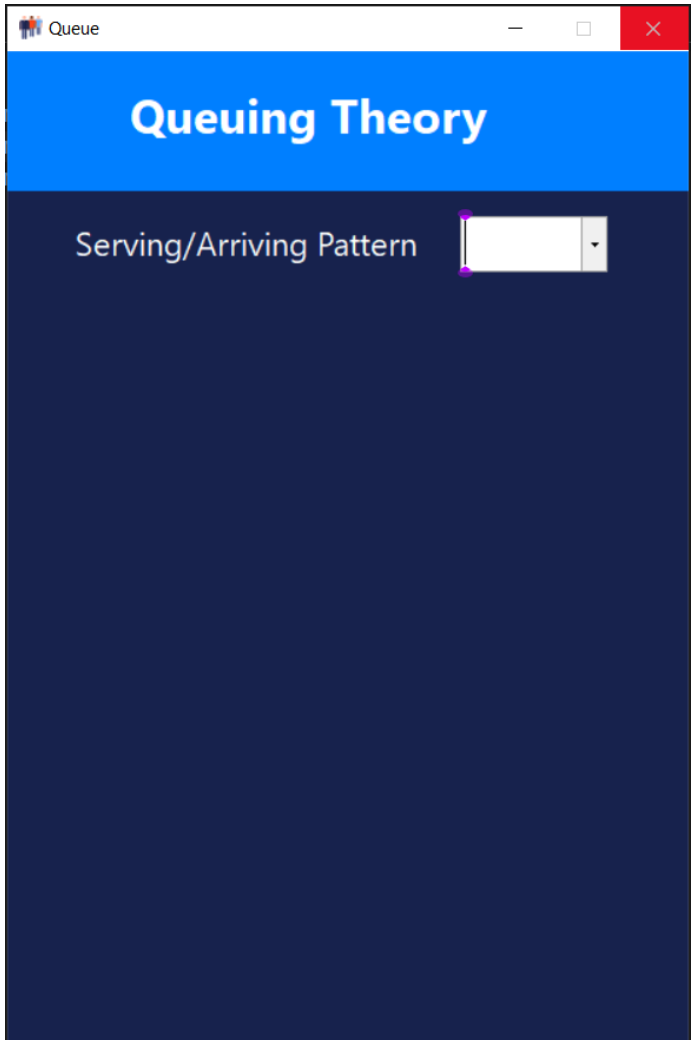

QUEUING
SYSTEM



Welcome To System Queue Project

User Guide

Developed by:

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- Mohammed Mostafa Sarhan
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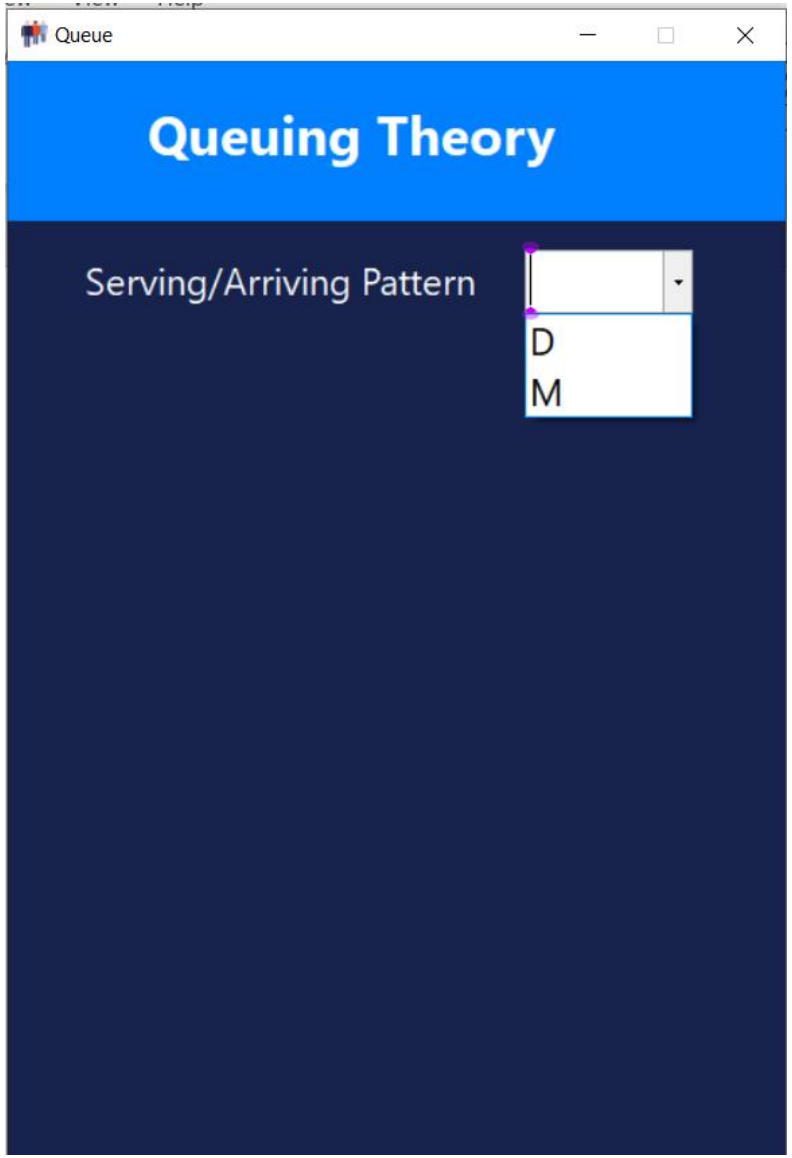
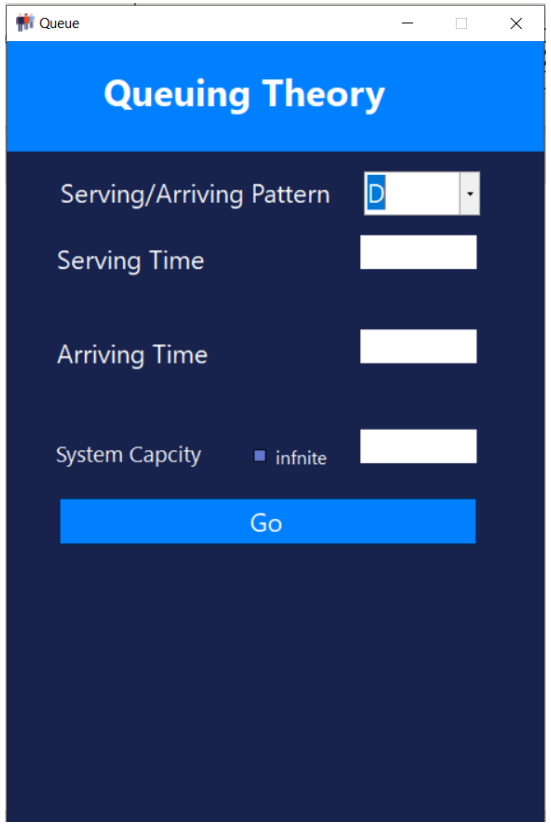
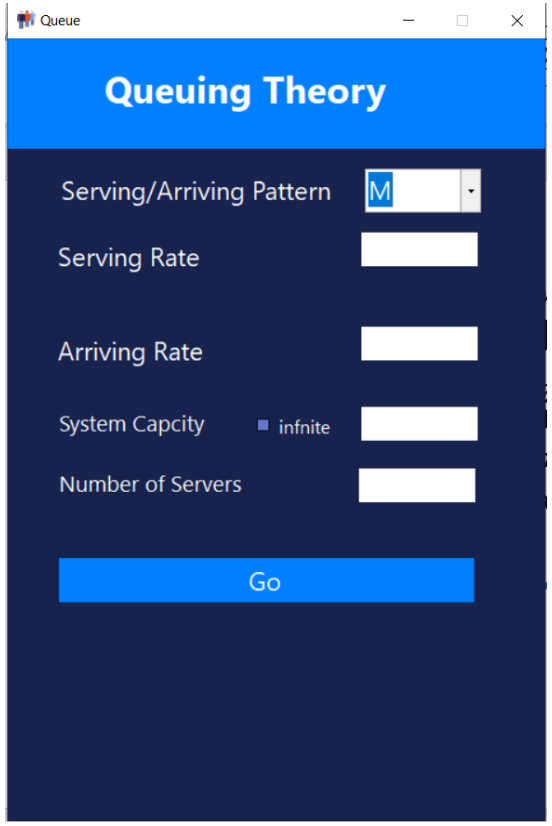


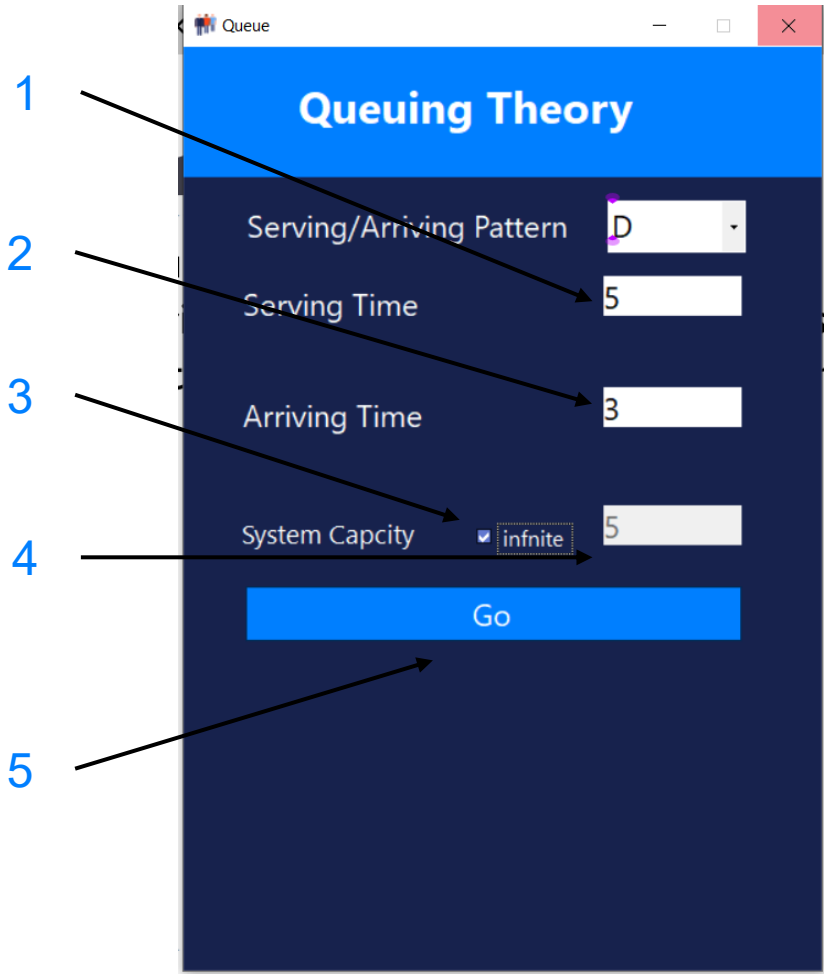
First of all, You have you determine the system pattern





Depending on your system pattern you will find the needed system properties to emulate your system

For Deterministic Systems



You must fill all the system properties so the emulation can be start

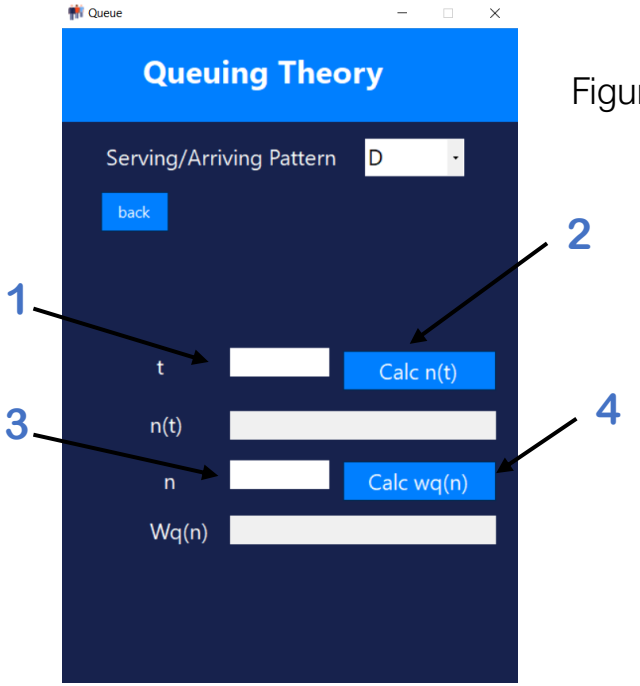
1. The serving time is the full time the system takes to serve a client

2. The arriving time is the time between every arriving clients

3. The capacity of your system which is may be infinite or not,

4. if not you have to set the limited capacity of your system.

5. After completing all system properties with a numbers(note: all fields do not accept any character except numbers and dot sign) go will run system.



Figure(1)

On pressing go the program will determine the module of your Deterministic system and run it.

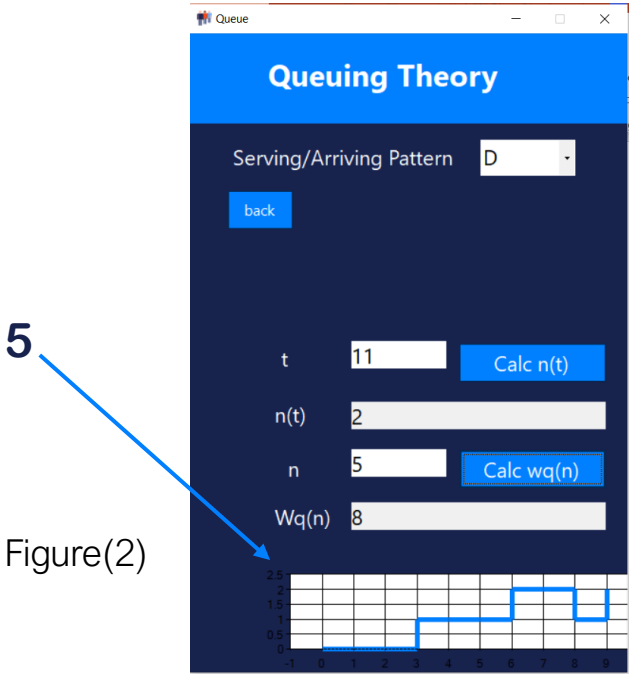
1. To know the number of clients in the system fill the t field.

2. Then press Calc n(t) the value of n(t) will be calculated.

3. To know the number of waiting clients in a specific time. fill the field n.

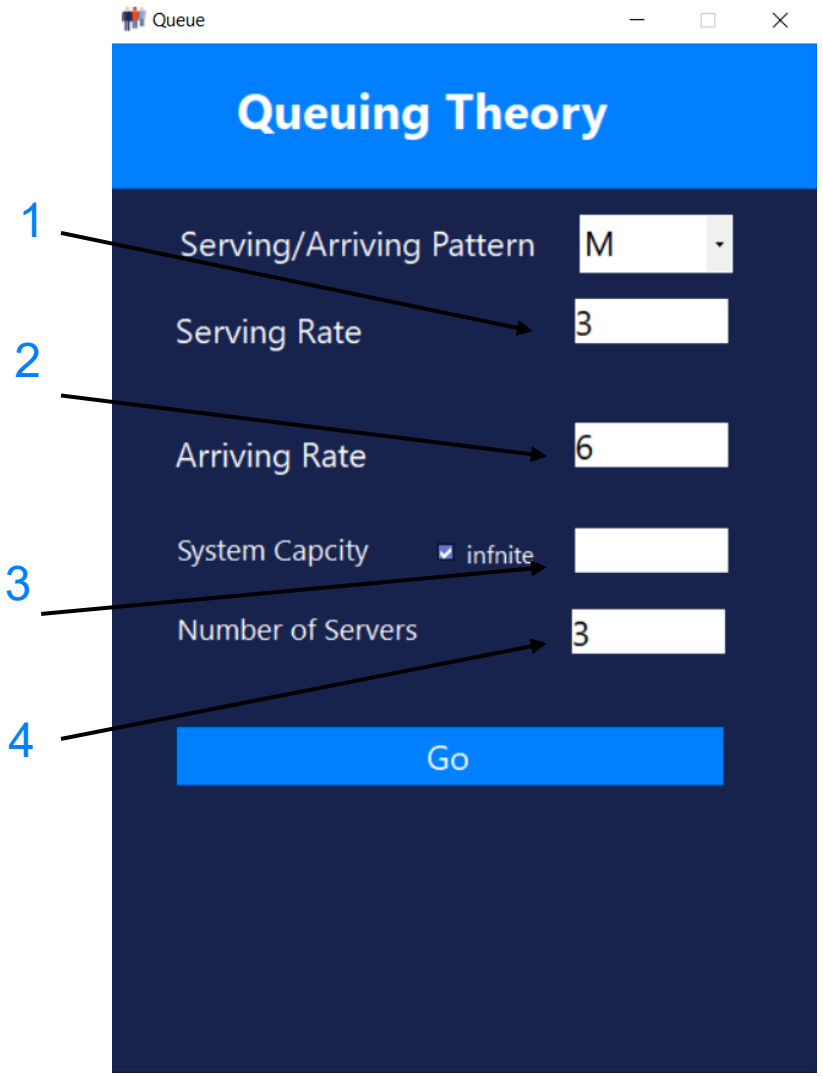
4. Then press Calc Wq(n). The value of Wq(n) will be calculated as shown in figure(2).

5. The graph shows the number of the clients during the period



Figure(2)

For Markov model Systems



You must fill all the system properties so the emulation can be start

1. The serving rate is the number of successfully served clients in the period of time unit.

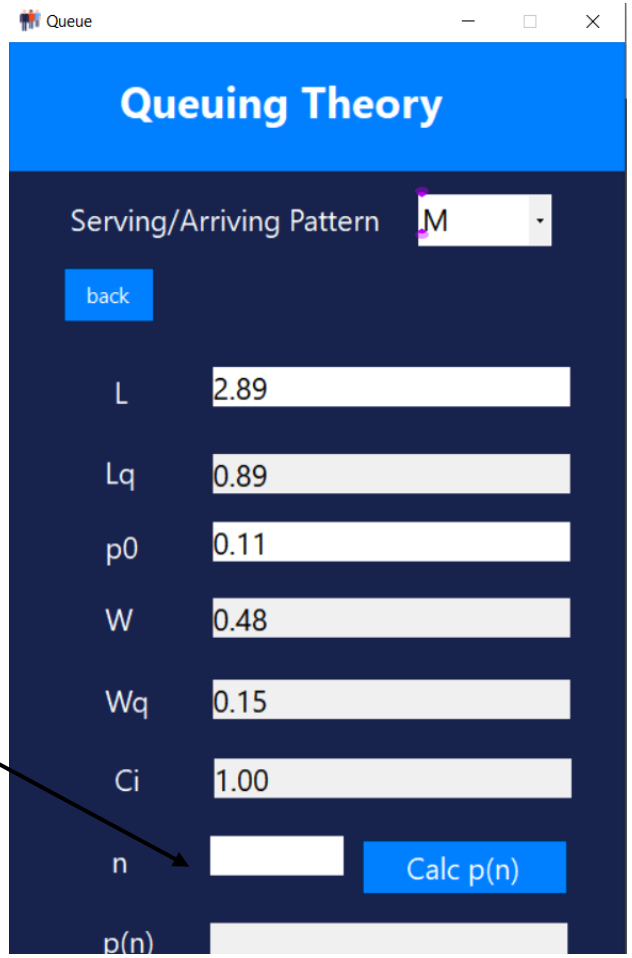
2. The arriving rate is the number of arrived clients per time unit.

3. The system capacity may be infinity or not.
If not you must specify the limited capacity.

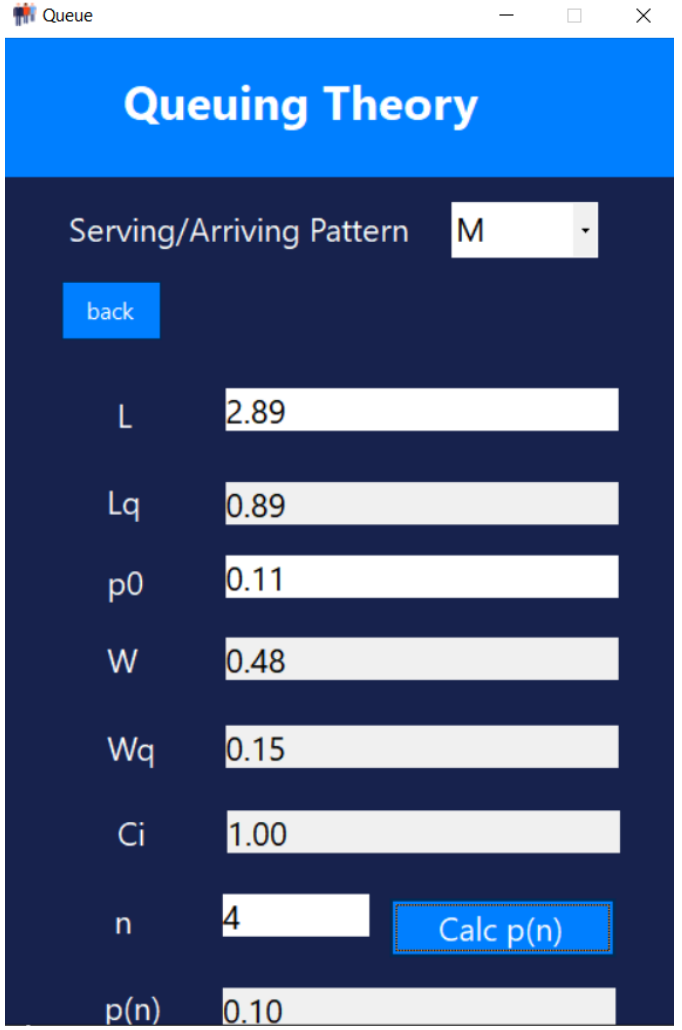
4. Number of parallel servers.

5. On pressing “Go” button the program will determine which Markov module:
M/M/1 , M/M/1/k , M/M/C or M/M/C/k.

After pressing go the program shows the system properties and provide you with the P(n)



1



1.Set the number of the clients then press Calc P(n).