4. Waiting Line Theory or Queueing Model

Waiting Line Theory or Queueing Model

Definitions :

$(M/N/S) : (C/D)$

M - Arrival Pattern
N - Service Pattern
S - Service Channels
C - Service Capacity
D - Service Decipline

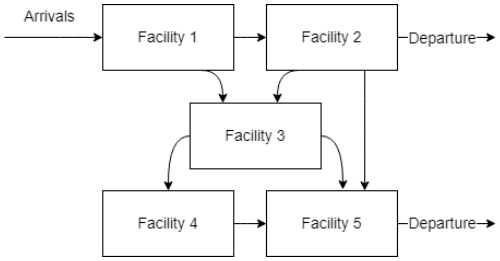
e.g., $(M/N/1) : (\infty/FIFO)$

A queue is formed when there is disbalance between number of servers and number of customers.

A flow of customers from finite or infinite population towards the service facility forms a queue on account of lack of capability to serve them all at a time.

In absence of perfect balence between the service facilities and the customers, waiting time is required either for the service facilities or the customer's arrival.

Customer - An arriving unit waiting to be serviced.
Queue - No of customers waiting to be serviced.
Service Facility - The body providing the service.



Queueing system / process

a> Input (Arrival pattern)
b> Service mechanism / service pattern
c> Queue decipline
d> Customer behaviour