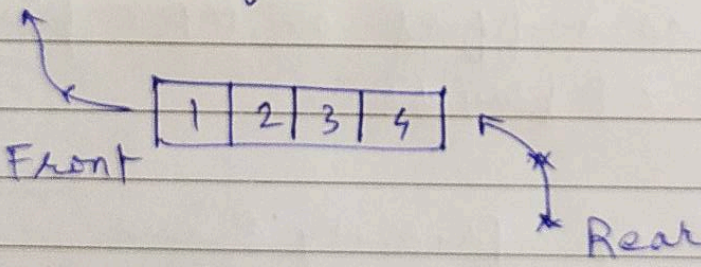
Name :- Anurag Haldey Subject :- Data Structures Lab.
Class :- SY-13
Roll no :- 2215055
Enrolment No :- MITU21BTIT0010

Lab Write-Up (Que-Ans)

Practical No :- 9

Q.1) Explain queue ADT

→ Queue abstract data type follows basic design and principle of FIFO (First In First Out). It creates a list of elements, entering from one end called rear and can be deleted from another end called front.



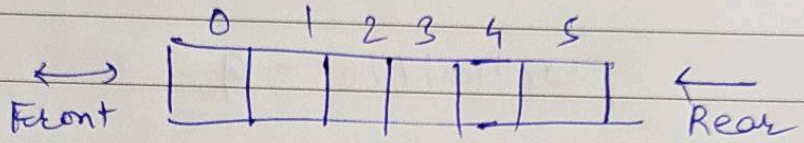
Q.2) Explain Linear and priority queue ADT.

→ Linear queue ADT — In this restriction is done that insertion can be performed at one end and deletion at another.

→ Priority queue ADT — It is an extension of Linear queue, in this every element has a certain priority assigned to it. It will delete the element with higher priority before.

Q. 3) Explain array representation of queue?

→ We can easily represent queue by using linear array. We can enter an element by rear end and delete by front end. Initially front is -1 and rear is -1, when we fill the elements its value increments.



Q. 4) What are the applications of Linear and priority queue?

→ Applications Of Linear queue

i) Used as waiting lists for single shared resource like CPU, disk and printer.

ii) Also as buffers on MP3 players and portable CD players.

→ Application of Priority Queue.

i) It is used in Prim's Algorithm

ii) It is also used in data compression techniques like HUFFMAN code.