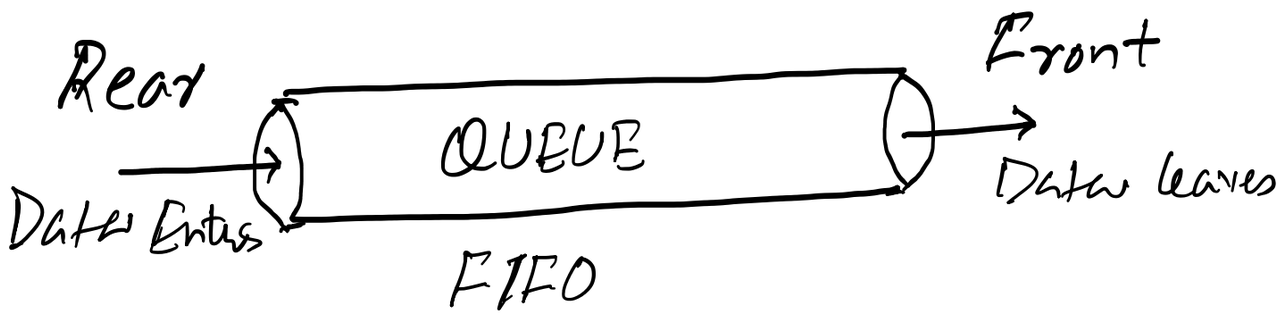
Queue ADT

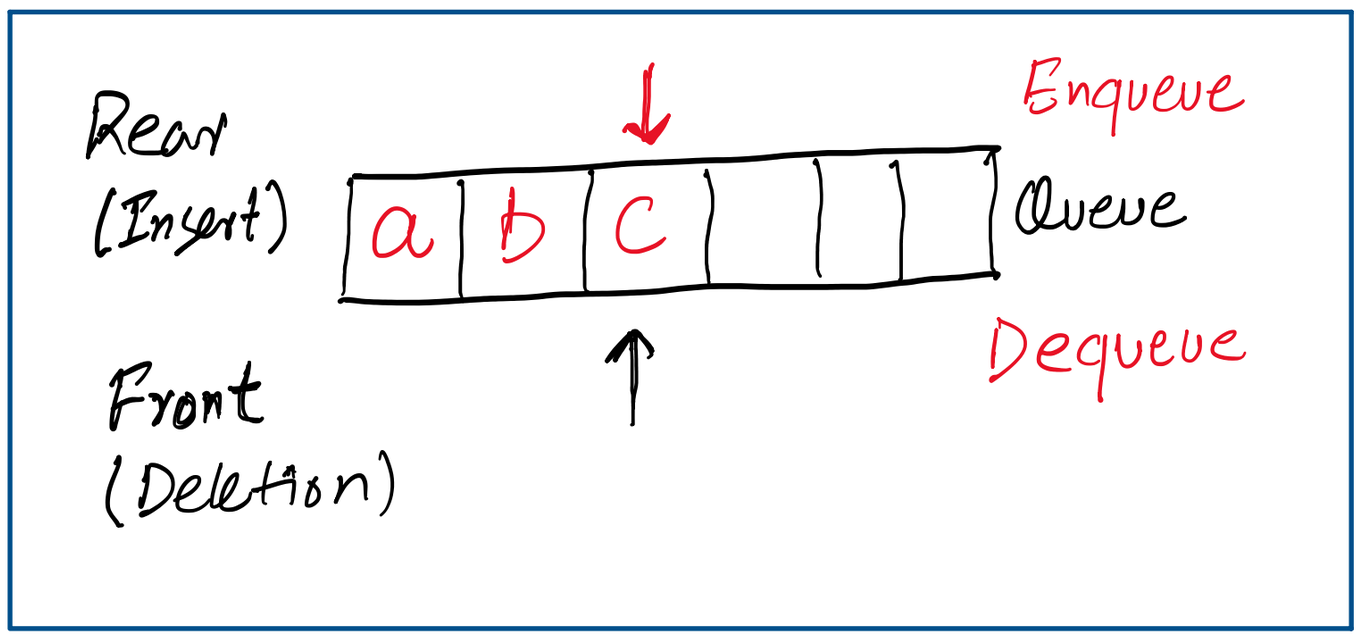
Sunday, 20 December 2020 1:11 PM



Setup Q

Rear ← null (-1)

front ← null (-1)



IF rearPt = UB THEN

?

ENDIF

Adjusting Qs.

Circular Qs.

Add (Enqueue)

INPUT item

RearPtr ← RearPt + 1

Queue [RearPt] ← item

IF FrontPt = RearPt THEN
QUEUE is empty
ENDIF

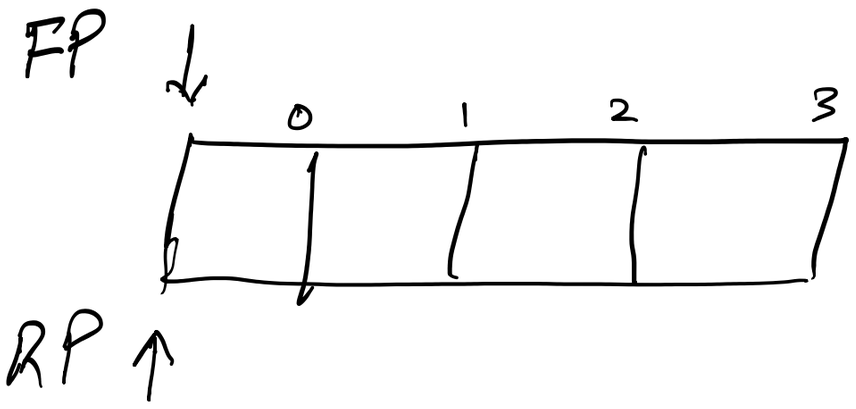
Exception

Underflow

Delete (Dequeue)

FrontPt ← FrontP + 1

x ← Queue [FrontPt]



Overflow

IF RP = UB THEN
OVERFLOW.
ENDIF

Underflow

IF RP = null THEN
UNDERFLOW
ENDIF

Enqueue

INPUT item

IF RP = UB THEN
OUTPUT "Overflow"
End
ELSE
RP ← RP + 1
Queue [RP] ← item
ENDIF.

Dequeue

IF RP = null THEN
OUTPUT "Underflow"
End.
ELSE
FP ← FP + 1
x ← Queue [FP]
For i ← 0 TO (RP - 1)
Queue[i] ← Queue[i+1]
Next i
Queue[RP] ← None
RP ← RP - 1
FP ← FP - 1