{ Data Structure & Algorithm 4(3-1) }

MIDS ANSWER SHEET

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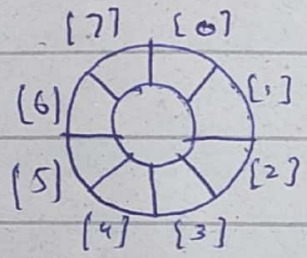
QUESTION # 01

Circular Queue.

The queue is considered as a circular queue when the position 0 and MAX-1 are adjacent. Any position before front is also after rear.



Enque. Enque value is used to insert an element in the circular ~~circle~~ queue. The element is always inserted at the rear end of the queue.

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INSERT (QUEUE, R, F, X, N)

1- If (F = 0 and R = N+1) or F = R+1 Then
(Q queue already filled)!
write: Queue is full.
else if R = 0 then
set R = F = 1
Else if R = N-1:
set R := 0
Else
set R := R+1 (or set R := (R+1) % N)
[increasing rear by 1]
- set QUEUE[R] := X
[End of If structure]

2- Return.

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DELETE (QUEUE, R, F, N)

1- If F = -1 THEN.

write: Queue Empty

Return

Else

i- set X := QUEUE [F]

ii- If F = R Then:

set F = R = 0

Else if F = N-1 then:

set F = 0

Else

set F := F + 1

iii - Return X.

[end of if statement.

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QUESTION # 02.

3 5 + (3 - 6) * 8 .

Expression	stack	Postfix
3	(	3
5	(	35
+	(+	35
(	(+(	35
3	(+(	353
-	(+(-	353
6	(+(-	3536
)	(+	3536-
*	(+*	3536-
8	(+*	3536-8
)		3536-8
		3536-8*+

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