: 12/10/2020

Q) WAP to simulate the working of a queue of integers using an array. Provide following operations:-
(i) Insert
(ii) Delete
(iii) Display.
The program should print appropriate msg for queue empty & queue full.

Aus: int A[SIZE]
front $\leftarrow$ -1
rear $\leftarrow$ -1


Enqueue (x)
{ if (Is Full ())
    printf ("Queue is Full");
  else if (Is Empty())
    ~~printf ("~~ { front $\leftarrow$ rear $\leftarrow$ 0}
                else
        { rear $\leftarrow$ rear + 1 }
    A[rear] $\leftarrow$ x
}


Dequeue ()
{ if (IsEmpty ())
    printf (" Queue is Empty");
  else if (front == rear)
        { front $\leftarrow$ rear $\leftarrow$ -1}
    else
        { front $\leftarrow$ front +1 }
}

```
Is Full ()
{ if   (rear == size (a) - 1)
       return True
   else
       return False.
   }


Is Empty ()
{ if (front == -1 && rear == -1)
      return True
  else
      return false.
}
```

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