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LP #3

WAP to simulate the working of queue of integers using an array
Provide the following operations :

a) Insert Rear

b) Delete Front

c) Display the contents of queue

The program should print the appropriate messages for queue empty and queue full condition.

```
#include <stdio.h>
#define que_size 3
int item, front=0, rear=-1, q[10];
void insertrear()
 {
if (rear == que_size-1)
 {
printf("QUEUE OVERFLOW \n");
 return;
 }
return = rear = rear+1;
q[rear] = item;
}

int deletefront()
 {
```

```
if (front > rear)
 {
  front = 0
  rear = -1;
 return -1;
}
return q [front++];
 }


void display Q ()
 {
  int i;
 if (front > rear)
    {
  printf ("QUEU IS EMPTY \n");
   return;
  }
  printf ("contents of the queue \n");
  for (i = front; i <= rear ; i++)
    {
  printf ("%d \n", q[i]);
   }
}
 int main ()
```

```
{
int choice;
do
{
printf("\n1. insert rear \n 2. delete front \n 3. display \n 4. exit\n");
printf("enter the choice \n");
scanf("%d", &choice);
switch(choice)
 {
case 1: printf("enter the item to be inserted \n");
scanf("%d", &item);
insertrear();
break;

case 2: item = deletefront();
if(item == -1)
printf("queue is empty\n");
else
printf("item deleted is %d\n", item);
break;

case 3: displayQ(); break;
default: break;
}
```

```
}
while (choice != 4);
return 0;
}
```