CSA = 0389 Datastructure Joh Slackoverflow Ssignment -3

> B · MALLIKA 192324234 —A18 DS

Illustrate the queue operation using following function calls of size = 5 enqueue (25), enqueue (37), enqueue (90), Dequeue (), enqueue (15), enquel 40), enqueue (12), dequel(1), dequeue() Queue 1 113 4 To Enqueue on dequeue Front Rear Enqueue (25) Enqueue (37) 25 25 37 Front Rear Front Rear Erqueue (90) Dequeue () 25 37 90 37 90 Front Rear Front Rear Enqueue (15) Enqueue (40) 5 37 90 15 90 15 37 40 1 Front rear Front Pear Enqueue (12) bequeue () 5 3 37 90 15 40 12 15. 90 12 40 1 1 1 Front Rear dequeue Front Rear Dequeue () Dequeue () 15 40 12 40 12 Front rea 7 Front dequeue rear rue (90)

(15)

```
(isempti
                                                                printf (" or
                                                                  return;
  Write a C program to implement queue operations such as
                                                                  print ( 1.1
   enqueue, display dequeue.
                                                                         di
                                                                    poid
  # include estatio. h)
                                                                         if
 # include Lstalib h)
 # define Lmax 5>
 type def struct f
        int items [MAX];
        int front : rear; Equeue
 void initialize (queue * q) {
     q \rightarrow front = -1;
     q \rightarrow recar = -1; 
void enqueue (queue *a, int value) {
  if (is full (9)) {
     print f("queue is full!\n");
     return;
 2
  if (q \rightarrow front = -1) {
    a > front = 0;
    9 > items [++9 > rear] = value;
  printf (" · 1 · d enqueued to queue In", value);
```

```
void dequeue (queue *a) {
  if (isempty(9)) f
  printf (" queue is empty ! In");
 return;
printf ("1.d dequeued from queue In", q > items [q > front++]
void display (queue *9) {
   if (icempty (9)) {
   printf ("queue is empty!\n");
   return;
  printf ("queue elements are: ");
  for (int i= 9 \rightarrow front; ik = 9 \rightarrow rear; i++) {
    printf(".1.d; 9 > items[i]);
  brintt ("In");
 3
 int main() {
     Pueue 9;
     Shitialize (+2);
     Charm
```

display () return o;

Petrolic Petrolic Const