Engreue Double Ended Quieue Enqueue means onserting an eliment on the queue. I There are two ways to insert an eliment in the double ended queue. 1. Insert an element at the front end. 2. Insert an climent at the rear end. + We will be Implementing Enqueue front () Enqueue Front Case 1 - Random Insertion digne [ 20 30 ] MAX=5 7=2,0=3 Enqueue front Shid be done here. \* In order to insert an element in the front, we have ducement the front by 1. \* Here is the code. front = front -1 deque [front] = data; data = 10 MANIS front = 1 rear 3 1 10 20 30

Case 21-front a zero. degne. [20] 30 | 1 MAX=5 == 0, 7= 1 be inserted, it is a double ended queue. + Here to the code for this case of (front == 0) 40 front=MAX-13 date dique [front] =data. 20 30 10 Case 3)- front U-1deque  $\boxed{1}$   $\boxed$ Here to the code for this case if (front = = -1)6 front=0; rear=0; dique [front] = data; 08/08/01/11/1

Care 41- aueue re full. degrue, 10 20 30 40 40 y (afull()) printf ("Queue overfloot");
(nit(1); (1-xam = = 000) p Enqueue la rearc) Case 11- Random Inection degne. 1 20 30 1 front=2, rear = 3 dement will be insulted at the m/m \* Here to the code cell. rear = reartl' digne [rear] = data; 20 30 10 front=2, rear=4,

2

Care 21- Rear to holding the last index. deque 1 20 30 10 1 0 1 2 3 4 1 = 2, 7 = 4 new eliment with be intested on the m/mcell. + Here to the Code y (rear = = MAX-1) rear =0; FRING TO THAM? dique [rear] = data; Case 3 !- Queue te Empty. 7/s(front == -1) & rear = 0; front=0; digne [rear] = data; Queue & tull. Case 41 ufull()

Degrene 1. Delite an element from the front end degreene front () 2. Delute an element from the rear end diquenerear(). dignerie Front () Case 1:- Random Delition degue. 1 1 120/30/ element to be deleted tode !-ITH date; clata = dique[front]; tront = front 1; rution data;

Case 2: front to holding the last under

the (front == mAX-1) r=1 front = 01 rutuan data; Case 31- Single Element in the Queue [ (10) ] element to be delited clata= dique (front)] th (front == rear) of refugues a front=-1; rear=-1; Teltran dato; empty Queue. to Smpty () mer hupita sette 21/19/11

(1- van - 10 + 1) 1.

degreene Riar () Case 1: Random Deletion int data; data = digree [rear]; rear=rear-1; return date; Care 2: Rear to 300. [10] [40] sol element to be deleted data=dequerrear] y (rear == 0) rear = MAX-1) Relian data; Case 3!- Single clement.  $f_{z-1}$   $f_{z}(f==r)$