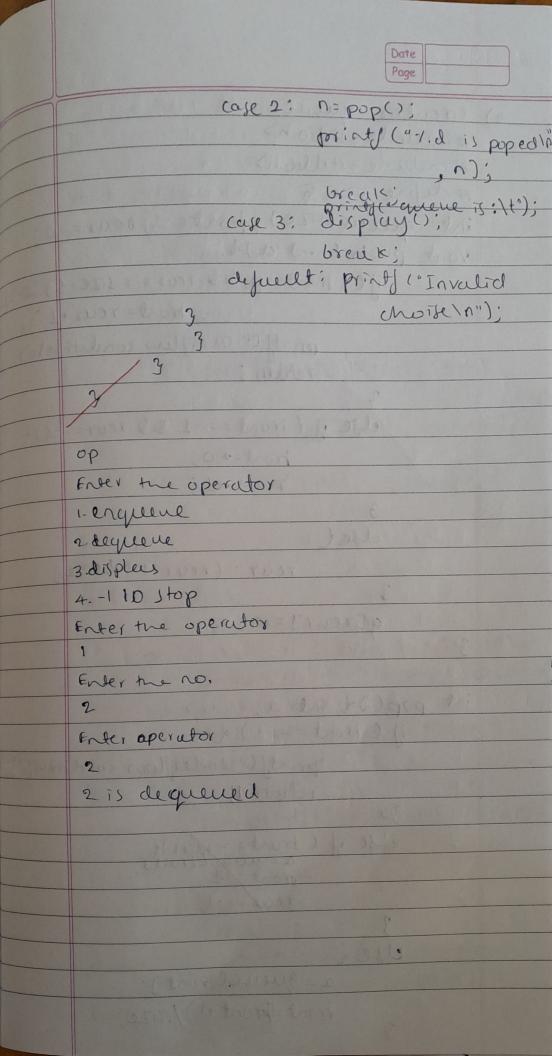
108/01/2024 Page Lab-4 Standard queuls. #include Estatio. h> #inchede < stdlib.h> # define sile 5 int queue [size], front=-1, rear=-1; void push (int a) & if ( rear = = 512e-1) 4 return: else if ( front == -1 de reur == -1) d ront = 0; rear = 0', queull rear J= a; int pop() & int n; if ( hort = = -1 && rear == -1) & paint ("underflow conditionin"); if ( front = = 0 shrear = = 0){ front = = 1; // reset yelle rear = = -1; elfl & pequetront ]; front = front +1; return n; 1

void display () & if ( bront == -1 && rear == -1)4 print (" Queue is empty In") return: elge d int i: Jos ( i = front; ; <= sear si++) + print ("1.1 1t" queues void main (1) int op, n: while print (" Enter 1. PUSHIN 2. POP in 3. Display in 4.-1 to Stop enicution \n"); while (1) d print MnEnter the operatorin" scan ("7.d", & op) il (0p==1) { printf ("Fricution is stopped In"); break; else d switch(OP)d (ase 1: print) ("Enter the number in"); scay ("10", &n); push(n); break;



2) Circular queul #include < stdio. h> #include < stdlib.h> # define size 5 int queuelsize), front=-1, dear=-1. void push ( int a)d if (( tront==0 && rear = = size-1) &11 prove= rear +1:) & print (" Overflow conditionin"); return: else ij ( mont == -1 & & reur == -1) { tront=0; rear = - 1; elsed rear = (rear +1) 1. size q[rear]=n; int pop() & int a; i) ( tront == -1) dialongo print ("Underflow wordshonin"); returny; else if ( bront = = seas) {

a = queuel bront;

bront == 1 rear == -1 a = queue [front]: tront=(front+1)/,612e;

|    | Date   |
|----|--|
|    | Page   |
| ال | return a;  |
|    | (n) dog  |
| -  | 3  |
|    | void display   |
| -  | if (hort == -1){   |
| -  | printft" Queue is empty In");  |
| -  | rehiro;  |
| -  | 3/10/1925  |
| +  | else ( inti;   |
| +  | Laci : Kont : it= reax; intered  |
| +  | i=(i+1)/1.5i2e)1   |
| -  | print ("1.d It", queueliJ);  |
| -  |  |
| _  | mint ("1.01+", queue [i]);   |
|    | 3  |
|    | 3 Maria Mari |
|    | The last of the la |
|    | void main()(   |
|    |  |
|    |  |
|    | 3. Dilliag   |
|    | while (1) 1  print ("Enter the operator In"):  |
|    | scan ("1.d", HOP);   |
|    | 7 ( 0 0 = = -1) d  |
|    | ij (op == -1) d  printj ("Enicution is Stopped In"   |
|    | ming);   |
| -  | break;   |
|    | 7  |
|    | else discheop) ( switchcop) ( s |
|    | elge distriction) ( switch cop) ( switch cop) ( reader the reader In");  |
|    | number In");   |
|    |  |

scanf(4-1.d", &n); push(n); breuk; case 2: n = pop(); printfluid is poped"n). break; cose 3: print (" greene is 1+11). diplay() defuelt: print ("Invalid choicely break) Enter 1 Enqueul 2. Dequeue 3. Display 4. - 1 to stop enclusion Enteroperator 2 Queue is empty lunder flow. -1 1) decued Enteroperator Enter no 2

## Standard queues output:

```
C:\Users\bmsce\Desktop\1BM22CS291\standardq.exe
                                                                                                                                                                                                                                                   nter the operation:
  Enter the operation
1.enqueue
2.dequeue
3.display
4.-1 to stop
Enter the operator
 queue underflow
Enter the operator
  z
successfully enqueued
Enter the operator
   nter the number:
 successfully enqueued
Enter the operator
  Enter the number:
 4
successfully enqueued
Enter the operator
  Enter the number:
 successfully enqueued
Enter the operator
  o
successfully enqueued
Enter the operator
 ,
queue overflow
Enter the operator
  Elements are:
  .
Enter the operator
  z
deleted element is=2
Enter the operator
```

## Circular queues output:

```
"C:\C LAB PROGRAMS 243\circularq.exe"
                                                                                                                                                                         ×
 nter 1.Enqueue
2.Dequeue <sup>'</sup>
3.Display
4.-1 to stop execution
Enter operator
Queue is empty/underflow
-1 is Dequeued
Enter no
Enter operator
Enter no
4
Queue is full/overflow
Enter operator
Queue : 2 3
Enter operator
2 is Dequeued
Enter operator
Process returned -1 (0xFFFFFFF) execution time : 26.744 s
Press any key to continue.
```