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LAB PROGRAM : 4
CIRCULAR QUEUE PSEUDOCODE

```
int items[SIZE];
int front = -1, rear = -1;

int isFull() {
   if (front == rear+1) || (front == 0 && rear == SIZE-1)
   return 1;
   return 0;
}

int isEmpty() {
   if (front == -1)
      return 1;
      return 0;
}

void enQueue() {
   int element;
   if (isFull())
      printf("Queue is full\n");
   else {
      printf("Enter element to be inserted\n");
      scanf("%d", &element);
      if (front == -1)
         front = 0;
      rear = (rear+1) % SIZE
      items[rear] = element;
   }
}
```

```
int dequeue () {
    int element;
    if (isEmpty ()) {
        printf ("Queue empty\n");
        return -1;
    }
    else {
        element = items[front];
        if (front == rear) {
            front = -1;
            rear = -1;
        }
        else {
            front = (front+1) % SIZE;
        }
    }

void display () {
    int i;
    if (isEmpty ());
        printf ("Empty\n");
    else {
        printf ("Front = %d", front);
        printf ("Items:");
        for (i = front, i != rear; i = (i+1) % SIZE) {
            printf ("%d", items [i]);
        }
        printf ("%d", items[i]);
        printf ("\nrear= %d", rear);
    }
}
```