Day 7 Assignment

Q-1)#include <stdio.h>

#define SIZE 5

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

lint 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("\n Queue is full!! \n");

else {

if (front == -1) front = 0;

rear = (rear + 1) % SIZE;

items[rear] = element;

printf("\n Inserted -> %d", element);

}

}

int deQueue() {

int element;

if (isEmpty()) {

printf("\n Queue is empty !! \n");

return (-1);

} else {

element = items[front];

if (front == rear) {

front = -1;

rear = -1;

}

else {

front = (front + 1) % SIZE;

}

printf("\n Deleted element -> %d \n", element);

return (element);

}

}

void display() {

int i;

if (isEmpty())

printf(" \n Empty Queue\n");

else {

printf("\n Front -> %d ", front);

printf("\n Items -> ");

for (i = front; i != rear; i = (i + 1) % SIZE) {

printf("%d ", items[i]);

}

printf("%d ", items[i]);

printf("\n Rear -> %d \n", rear);

}

}

int main() {

deQueue();

enQueue(1);

enQueue(2);

enQueue(3);

enQueue(4);

enQueue(5);

enQueue(6);

display();

deQueue();

display();

enQueue(7);

display();

enQueue(8);

return 0;

}