

**Name: Priyanka B (192421206)**

**Course Name: DATA STRUCTURES FOR MODERN COMPUTING SYSTEMS**

**Course Code: CSA0302**

**Question : WRITE A C PROGRAM TO PERFORM QUEUE USING ARRAY.**

**C PROGRAMMING CODE:**

#include <stdio.h>

#define MAX 5

int queue[MAX];

int front = -1, rear = -1;

void enqueue(int x) {

if(rear == MAX - 1) {

printf("Queue Overflow\n");

}

else {

if(front == -1)

front = 0;

rear++;

queue[rear] = x;

printf("%d inserted into queue\n", x);

}

}

void dequeue() {

if(front == -1) {

printf("Queue Underflow\n");

}

else {

printf("%d deleted from queue\n", queue[front]);

if(front == rear) {

front = rear = -1;

}

else {

front++;

}

}

}

void display() {

if(front == -1) {

printf("Queue is Empty\n");

}

else {

printf("Queue Elements: ");

for(int i = front; i <= rear; i++) {

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

}

printf("\n");

}

}

int main() {

enqueue(10);

enqueue(20);

enqueue(30);

display();

dequeue();

display();

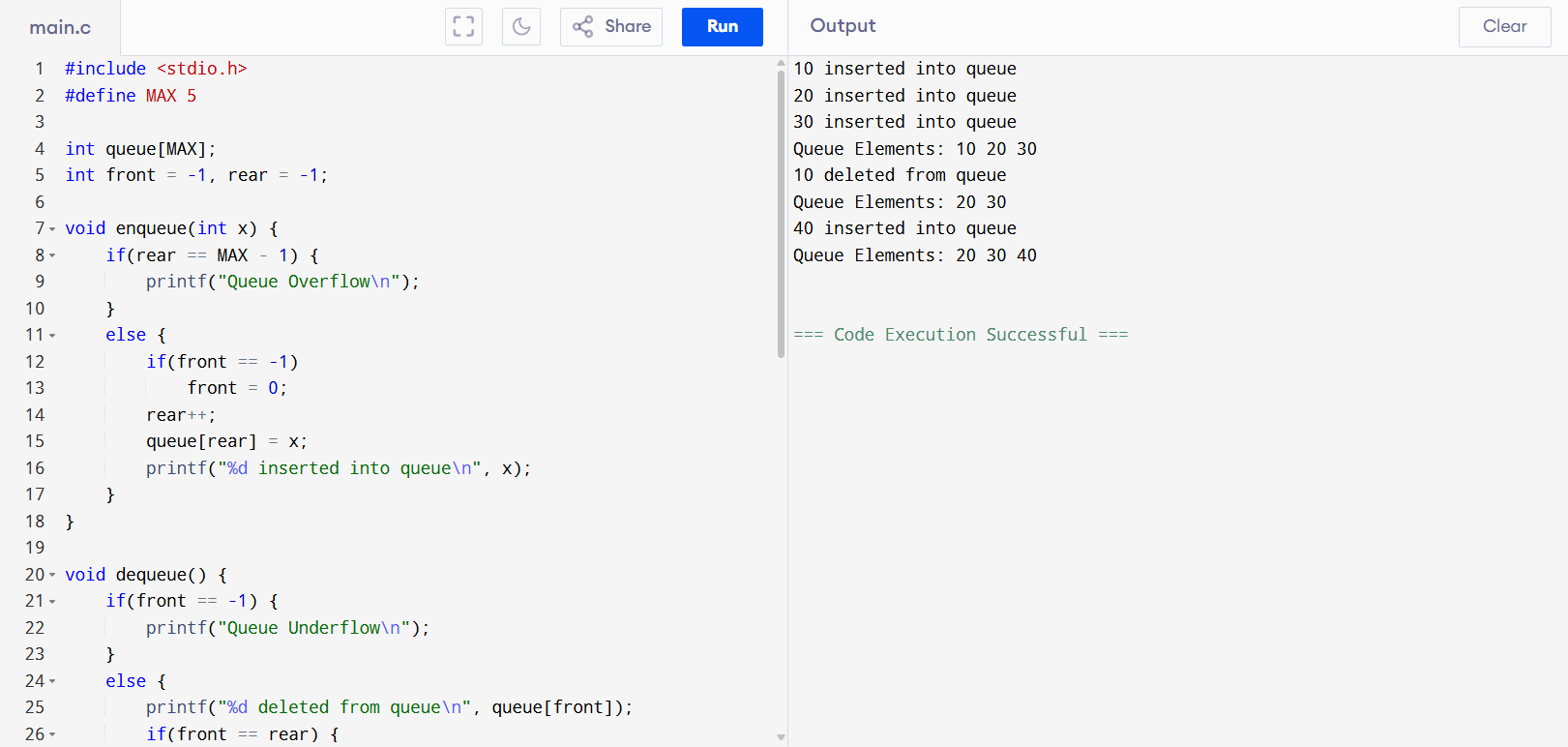
enqueue(40);

display();

return 0;

}

**OUTPUT:**

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