#include <stdio.h>

#define MAX 100

int queue[MAX];

int front = -1, rear = -1;

// ENQUEUE operation

void enqueue(int value) {

if (rear == MAX - 1) {

printf("Queue Overflow! Cannot enqueue %d\n", value);

} else {

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

queue[++rear] = value;

printf("Enqueued %d successfully.\n", value);

}

}

// DEQUEUE operation

void dequeue() {

if (front == -1 || front > rear) {

printf("Queue Underflow! Nothing to dequeue.\n");

} else {

printf("Dequeued %d from the queue.\n", queue[front++]);

}

}

// DISPLAY operation

void display() {

if (front == -1 || front > rear) {

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

} else {

printf("Queue elements: ");

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

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

}

printf("\n");

}

}

int main() {

int choice, value;

while (1) {

printf("\n--- Queue Operations Menu ---\n");

printf("1. ENQUEUE\n");

printf("2. DEQUEUE\n");

printf("3. DISPLAY\n");

printf("4. EXIT\n");

printf("Enter your choice: ");

scanf("%d", &choice);

switch (choice) {

case 1:

printf("Enter value to enqueue: ");

scanf("%d", &value);

enqueue(value);

break;

case 2:

dequeue();

break;

case 3:

display();

break;

case 4:

printf("Exiting program.\n");

return 0;

default:

printf("Invalid choice. Try again.\n");

}

}

}