**Exp 13. Queue Implementation in C**

#include <stdio.h>

#define MAX 5

int queue[MAX];

int front = -1, rear = -1;

void enqueue(int value) {

if (rear == MAX - 1) {

printf("\nQueue Overflow! Cannot insert %d\n", value);

} else {

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

queue[++rear] = value;

printf("\nInserted %d into queue\n", value);

}

}

void dequeue() {

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

printf("\nQueue Underflow! Cannot delete\n");

} else {

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

front++;

}

}

void display() {

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

printf("\nQueue is Empty\n");

} else {

printf("\nQueue Elements: ");

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

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

}

printf("\n");

}

}

int main() {

int choice, value;

while (1) {

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

printf("\n1. ENQUEUE");

printf("\n2. DEQUEUE");

printf("\n3. DISPLAY");

printf("\n4. EXIT");

printf("\nEnter your choice: ");

scanf("%d", &choice);

switch (choice) {

case 1:

printf("Enter value to insert: ");

scanf("%d", &value);

enqueue(value);

break;

case 2:

dequeue();

break;

case 3:

display();

break;

case 4:

return 0;

default:

printf("\nInvalid Choice!\n");

}  
}  
}

