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| 13) | Write a C program to implement Queue operations such as ENQUEUE, DEQUEUE and Display |

#include <stdio.h>

#include <stdlib.h>

#define MAX 5

int queue[MAX];

int front = -1;

int rear = -1;

void enqueue(int data) {

if(rear == MAX-1) {

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

} else {

if(front == -1) {

front = 0;

}

rear++;

queue[rear] = data;

}

}

void dequeue() {

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

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

} else {

printf("Dequeued element: %d\n", queue[front]);

front++;

}

}

void display() {

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

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

} else {

int i;

printf("Queue elements: ");

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

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

}

printf("\n");

}

}

int main() {

int choice, data;

while(1) {

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 data to enqueue: ");

scanf("%d", &data);

enqueue(data);

break;

case 2:

dequeue();

break;

case 3:

display();

break;

case 4:

exit(0);

default:

printf("Invalid choice!\n");

break;

}

}

return 0;

}

