```
//QUEUE OPERATIONS USING ARRAY

#include <stdio.h>
#include <stdlib.h>

#define MAX 5

int queue[MAX];
int front = -1, rear = -1;

void enqueue(int data)
{
   if (rear == MAX - 1)
   {
      printf("Queue Overflow\n");
      return;
   }
   if (front == -1)
   {
      front = 0;
   }
   rear++;
   queue[rear] = data;
   printf("%d inserted into the queue.\n", data);
}

void dequeue()
{
   if (front == -1 || front > rear)
   {
      printf("Queue Underflow\n");
      return;
   }
   printf("%d removed from the queue.\n", queue[front]);
   front++;
}

void display()
{
   if (front == -1 || front > rear)
   {
      printf("Queue is empty\n");
      return;
   }
   printf("Queue elements are: ");
   for (int i = front; i <= rear; i++)
   {
      printf("%d ", queue[i]);
```

```
    }
    printf("\n");
}

int main()
{
    int choice, value;
    while (1)
    {
        printf("\n--- Queue 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 insert: ");
                scanf("%d", &value);
                enqueue(value);
                break;
            case 2:
                dequeue();
                break;
            case 3:
                display();
                break;
            case 4:
                exit(0);
            default:
                printf("Invalid choice! Please try again.\n");
        }
    }
    return 0;
}
```

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main.c

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```c
            printf("Enter value to insert: ");
            scanf("%d", &value);
            enqueue(value);
            break;
        case 2:
            dequeue();
            break;
        case 3:
            display();
            break;
        case 4:
            exit(0);
        default:
            printf("Invalid choice! Please try again.\n");
        }
    }
    return 0;
}
```

Output | Clear

```
--- Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 3
Queue is empty

--- Queue Menu ---
1. Enqueue
2. Dequeue
3. Display
4. Exit
Enter your choice: 1
Enter value to insert: 7
7 inserted into the queue.

--- Queue Menu ---
```