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## Queue - using Array

classmate

Date \_\_\_\_\_

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#include &lt;stdio.h&gt;

#define MAX 5

void display();

void enqueue(int x);

void dequeue();

int queue[MAX];

int rear = -1;

int front = -1;

void enqueue(int x)

{

if (rear == MAX - 1)

printf("Queue is Full\n");

else

{

if (front == -1)

front = 0

rear = rear + 1

queue[rear] = x;

printf("rear, " is put in queue\n");

}

}

```
void dequeue()
```

```
{
```

```
    int x;
```

```
    if (rear == -1)
```

```
        print("Queue is empty");
```

```
    else
```

```
    {
```

```
        x = queue[front]; x = queue[rear];
```

```
        rear = rear - 1;
```

```
        print(x, " was removed from queue");
```

```
    }
```

```
}
```

```
void display()
```

```
{
```

```
    int i = 0;
```

```
    print("Queue contains
```

```
    if (rear == -1)
```

```
        printf("Queue is empty");
```

```
    else
```

```
    {
```

```
        print("Queue contains : ");
```

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

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

```
    }
```

```
}
```

```
int main()
```

```
{
```

```
    int ele, ch = 0;
```

```
    while (1)
```

```
    {
```

```
        printf("Enter 1 to enqueue\n");
```

```
        printf("Enter 2 to dequeue\n");
```

```
        printf("Enter 3 to display\n");
```

```
        printf("Enter -1 to exit");
```

```
        printf("Enter your choice : ");
```

```
        scanf("%d", &ch);
```

```
        if (ch == -1) break;
```

```
        switch (ch)
```

```
        {
```

```
            case 1:
```

```
                scanf("%d", &ele)
```

```
                printf("Enter element : ");
```

```
                scanf("%d", &ele)
```

```
                enqueue(ele);
```

```
                break;
```

```
            case 2:
```

```
                dequeue(); break;
```

```
            case 3:
```

```
                display(); break;
```

```
            default:
```

```
                printf("Invalid Input");
```

```
                break;
```

```
        }
```

```
    }
```

```
    return 0;
```

```
}
```