

```
class Queue:
```

```
    def init(self, max_size):
```

```
        self.max_size = max_size
```

```
        self.Q = [0] * max_size
```

```
        self.num = 0
```

```
        self.first = 0
```

```
    def enqueue(self, item):
```

```
        if self.num >= self.max_size:
```

```
            raise Exception("Queue overflow")
```

```
        self.Q[(self.num + self.first) % self.max_size] = item
```

```
        self.num += 1
```

```
    def dequeue(self):
```

```
        if self.num == 0:
```

```
            raise Exception("Queue empty")
```

```
        item = self.Q[self.first]
```

```
        self.first = (self.first + 1) % self.max_size
```

```
        self.num -= 1
```

```
        return item
```

```
    def front(self):
```

```
        if self.num == 0:
```

```
            raise Exception("Queue empty")
```

```
        return self.Q[self.first]
```

```
    def is_empty(self):
```

```
        return self.num == 0
```

```
    def size(self):
```

```

        return self.num

def is_full(self):
    return self.num >= self.max_size

def dequeue_element(self , element):
    if self.num == 0:
        raise Exception("Queue empty")
    index_list=[]
    for i in range(self.num):
        if self.Q[(self.first + i) % self.max_size] == element:
            index_list.append((self.first + i) % self.max_size)
    for j in index_list:
        self.Q[j]=None
    for k in self.Q:
        if self.Q[k]==None:
            del self.Q[k]
            index=[(self.num + self.first) % self.max_size]
            self.Q.insert(0,index)
            self.num-=1
    print(self.Q)
    return self.Q

def dequeue_i(self , i):
    if self.num == 0:
        raise Exception("Queue empty")
    item=self.Q[i]

```

```
del self.Q[i]
index=[(self.num + self.first) % self.max_size]
self.Q.insert(0,index)
self.num-=1
return item
```

#Example

```
q=Queue(10) # (front of queue)[](back of queue)
q.enqueue("ra'na") # ["ra'na"]
q.enqueue("vez") # ["ra'na", "vez"]
q.enqueue("Arya") # ["ra'na", "vez", "Arya"]
print("queue size is: ",q.size())
print(q.dequeue(), "left the queue") # ["vez", "Arya"]
print("front of queue is:",q.front())
q.enqueue("milda") # ["vez", "Arya", "milda"]
q.dequeue() # ["Arya","milda"]
q.dequeue() # ["milda"]
q.dequeue() # []

print("It was a queue")
```