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IDB2
DSALGO1
10/11/2024

Simulation:

```
class Queue:
    def __init__(self):
        self.queue = []

    def enqueue(self, item):
        self.queue.append(item)

    def dequeue(self):
        if self.is_empty():
            return "THE QUEUE IS EMPTY!!!"
        return self.queue.pop(0)

    def first(self):
        if self.is_empty():
            return "THE QUEUE IS EMPTY!!!"
        return self.queue[0]

    def is_empty(self):
        return len(self.queue) == 0

    def __len__(self):
        return len(self.queue)

    def display(self):
        return str(self.queue)
```

```
26
27 # Simulation
28 q = Queue()
29 q.enqueue(5)
30 print("The queue contains: " + q.display())
31 q.enqueue(3)
32 print("The queue contains: " + q.display())
33 print("The length of the queue is: " + str(len(q)))
34 print("Dequeued item: " + str(q.dequeue()))
35 print("Is the queue empty? " + str(q.is_empty()))
36 print("Dequeued item: " + str(q.dequeue()))
37 print("Is the queue empty? " + str(q.is_empty()))
38 print(str(q.dequeue()))
39 q.enqueue(7)
40 print("The queue contains: " + q.display())
41 q.enqueue(9)
42 print("The queue contains: " + q.display())
43 print("The first item in the queue is: " + str(q.first()))
44 q.enqueue(9)
45 print("The queue contains: " + q.display())
46 print("The length of the queue is: " + str(len(q)))
47 print("Dequeued item: " + str(q.dequeue()))
48 print("The final queue is: " + q.display())
49
50
51 print()
52 print("=====")
53 print()
54
55 # Resets the queue
56 q.dequeue()
57 q.dequeue()
58
```

```
The queue contains: [5]
The queue contains: [5, 3]
The length of the queue is: 2
Dequeued item: 5
Is the queue empty? False
Dequeued item: 3
Is the queue empty? True
THE QUEUE IS EMPTY!!!!
The queue contains: [7]
The queue contains: [7, 9]
The first item in the queue is: 7
The queue contains: [7, 9, 9]
The length of the queue is: 3
Dequeued item: 7
The final queue is: [9, 9]
```

Returned values:

```
# Print returned values
q.enqueue(5)
q.enqueue(3)
print("Returned value: " + str(q.dequeue()))
q.enqueue(2)
q.enqueue(8)
print("Returned value: " + str(q.dequeue()))
print("Returned value: " + str(q.dequeue()))
q.enqueue(9)
q.enqueue(1)
print("Returned value: " + str(q.dequeue()))
q.enqueue(7)
q.enqueue(6)
print("Returned value: " + str(q.dequeue()))
print("Returned value: " + str(q.dequeue()))
q.enqueue(4)
print("Returned value: " + str(q.dequeue()))
print("Returned value: " + str(q.dequeue()))
```

```
Returned value: 5
Returned value: 3
Returned value: 2
Returned value: 8
Returned value: 9
Returned value: 1
Returned value: 7
Returned value: 6
```