





```
def size(self):
    return (self.rear - self.front + MAX_QSIZE) % MAX_QSIZE

def display(self):
    out = []
    if self.front < self.rear:
        out = self.items
    else:
        out = self.items[0:self.rear + 1] + self.items[self.front:MAX_QSIZE]
    print(out)

q = CircularQueue()
n = int(input("Number of operations : "))
for i in range(n):
    inputs = input()
    operation = inputs[0]
    if q.isFull():
        if operation == "I":
            print("overflow", q.display())
            break
    elif operation == "I":
        num = int(inputs[2:])
        q.enqueue(num)
    elif operation == "D":
        q.dequeue()
        if q.isEmpty():
            print("underflow")
            break
    elif operation == "P":
        q.display()
```

Project

3.py

4.py

5.py

5thwork.py

6.py

7.py

8.py

9thwork.py

main.py

prc.py

sis.py

test.py

test1.py

External Libraries

Python 3.10 > /Library/Frameworks/Python.framework/Versions/3.10/bin/python3

Binary Skeletons

Extended Definition

lib-dynload

python3.10 library

site-packages

Typeshed Stubs

Scratches and Consoles

Scratches

scratch.py

5thwork.py

6.py

test.py

sis.py

prc.py

main.py

8.py

7.py

9thwork.py

test1.py

```
1 MAX_QSIZE = int(input("size of CircularQueue : "))
2 class CircularQueue:
3     def __init__(self):
4         self.front = 0
5         self.rear = 0
6         self.items = [0] * MAX_QSIZE
7     def isEmpty(self):return self.front == self.rear
8     def isFull(self):return self.front == (self.rear+1)%MAX_QSIZE
9     def enqueue(self, item):
10         if not self.isFull():
11             self.rear = (self.rear+1)%MAX_QSIZE
12             self.items[self.rear] = item
13     def dequeue(self):
14         if not self.isEmpty():
15             self.front = (self.front+1)%MAX_QSIZE
16             self.items[self.front] = 0
17             return self.items[self.front]
18
19     def peek(self):
20         if not self.isEmpty():
21             return self.items[(self.front + 1) % MAX_QSIZE]
22
23     def size(self):
24         return (self.rear - self.front + MAX_QSIZE) % MAX_QSIZE
```

CircularQueue > peek() > If not self.isEmpty()

Run: 9thwork

/Library/Frameworks/Python.framework/Versions/3.10/bin/python3 /Users/cheonjiu/Documents/PycharmProjects/firstProject/9thwork.py

size of CircularQueue : 5

Number of operations : 10

0

underflow

Process finished with exit code 0

Run

TODO

Problems

Terminal

Python Packages

Python Console

Event Log

Python 3.10 has been configured as a project interpreter // Configure a Python interpreter... (today 12:41 오전)

8:1 Python 3.10

Project

3.py

4.py

5.py

5thwork.py

6.py

7.py

8.py

9thwork.py

main.py

prc.py

sis.py

test.py

test1.py

External Libraries

Python 3.10 > /Library/Frameworks/Python.framework/Versions/3.10/bin/python3

Binary Skeletons

Extended Definition

lib-dynload

python3.10 library

site-packages

Typeshed Stubs

Scratches and Consoles

Scratches

scratch.py

5thwork.py

6.py

test.py

sis.py

prc.py

main.py

8.py

7.py

9thwork.py

test1.py

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

```
MAX_QSIZE = int(input("size of CircularQueue : "))

class CircularQueue:

    def __init__(self):
        self.front = 0
        self.rear = 0
        self.items = [0] * MAX_QSIZE

    def isEmpty(self):return self.front == self.rear
    def isFull(self):return self.front == (self.rear+1)%MAX_QSIZE
    def enqueue(self, item):
        if not self.isFull():
            self.rear = (self.rear+1)%MAX_QSIZE
            self.items[self.rear] = item
    def dequeue(self):
        if not self.isEmpty():
            self.front = (self.front+1)%MAX_QSIZE
            self.items[self.front] = 0
            return self.items[self.front]
    def peek(self):
        if not self.isEmpty():
            return self.items[(self.front + 1) % MAX_QSIZE]

    def size(self):
        return (self.rear - self.front + MAX_QSIZE) % MAX_QSIZE
```

CircularQueue

peek()

Run: 9thwork

/Library/Frameworks/Python.framework/Versions/3.10/bin/python3 /Users/cheonjiu/Documents/PycharmProjects/firstProject/9thwork.py

size of CircularQueue : 40

Number of operations : 10

1: 10

1: 20

0

[0, 10, 20, 0, 0, 0]

1: 30

1: 40

0

Run

TODO

Problems

Terminal

Python Packages

Python Console

Event Log

Python 3.10 has been configured as a project interpreter // Configure a Python interpreter... (today 12:41 오전)

20:1 Python 3.10

Users | cheonjiu | Documents

9thwork

9thwork.py

Project

3.py
4.py
5.py
5thwork.py
6.py
7.py
8.py
9thwork.py
main.py
prc.py
sis.py
test.py
test1.py

External Libraries
Python 3.10 > /Libra
Binary Skeletons
Extended Definition
lib-dynload
python3.10 library
site-packages
Typeshed Stubs

Scratches and Consoles
Scratches
scratch.py

5thwork.py | 6.py | test.py | sis.py | prc.py | main.py | 8.py | 7.py | 9thwork.py | test1.py

```
1 MAX_QSIZE = int(input("size of CircularQueue : "))
2 class CircularQueue:
3     def __init__(self):
4         self.front = 0
5         self.rear = 0
6         self.items = [0] * MAX_QSIZE
7     def isEmpty(self):return self.front == self.rear
8     def isFull(self):return self.front == (self.rear+1)%MAX_QSIZE
9     def enqueue(self, item):
10         if not self.isFull():
11             self.rear = (self.rear+1)%MAX_QSIZE
12             self.items[self.rear] = item
13     def dequeue(self):
14         if not self.isEmpty():
15             self.front = (self.front+1)%MAX_QSIZE
16             self.items[self.front] = 0
17             return self.items[self.front]
18
19     def peek(self):
20         if not self.isEmpty():
21             return self.items[(self.front + 1) % MAX_QSIZE]
22
23     def size(self):
24         return (self.rear - self.front + MAX_QSIZE) % MAX_QSIZE
```

CircularQueue > peek()

Run: 9thwork

```
[0, 0, 20, 30, 40, 0]
1: 50
2: 60
3: 50
[60, 0, 20, 30, 40, 50]
overflow None

Process finished with exit code 0
```

Run | TODO | Problems | Terminal | Python Packages | Python Console

Python 3.10 has been configured as a project interpreter // Configure a Python interpreter... (today 12:41 오전)

Event Log | 20:1 Python 3.10