Homework12

田野

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(a)

There is actually one explicitly input of those method, which is the state of the queue. So when we consider the characteristics, we need to take the state of the queue into consideration.  
 The characteristics o f queue is:

1. Whether the queue is empty.
2. Whether the queue is full.
3. The size of queue.

The characteristics of Object o is:

1. Whether the input o is null.
2. Whether the input o is already in the queue.
3. Whether the input o is the same class with the object in the queue.

(b)

characteristic : the queue is empty

block 1 : true

block 2 : false

characteristic : the queue is full

block 1 : true

block 2 : false

characteristic : the size of queue

block 1: 0

block 2: more than 0

characteristic : the input o is null:

block 1 : true

block 2 :false

characteristic : the input o is already in the queue

block 1 : true

block 2 :false

characteristic : the input o is the same class with the object in the queue.

block 1 : true

block 2 : false

characteristic : the queue is

(c)

For the queue is empty

block1 : queue = [], o = 1

block2 : queue = [1], o = 1

For the queue is full

block 1 : queue = [1,2], o = 1

block 2 : queue = [1], o = 1

For the size of queue

block 1 : queue = [] o = 1

block 2: queue = [1] o = 1

For the input o is null:

block 1 : queue = [] o = null

block 2 : queue = [] o = 1

For the input o is already in the queue

block 1 : queue = [1] o = 1

block 1 : queue = [1] o = 2

For the input o is the same class with the object in the queue.

block 1 : queue = [1] o = 1

block 2 : queue = [1] o = “1”