

```

1  from gamegrid import *
2  import random
3  def bubbleSize(bubble):
4      return bubble.getImage().getHeight()
5  def updateGrid():
6      removeAllActors()
7      for i in range(len(li)):
8          addActor(li[i], Location(i, 0))
9  def exchange(i, j):
10     temp = li[i]
11     li[i] = li[j]
12     li[j] = temp
13     n = 7
14     li = []
15     makeGameGrid(n, 1, 150, Color.red, False)
16     setBgColor(Color.white)
17     show()
18     for i in range(0, n):
19         bubble = Actor("sprites/bubble" + str(i) + ".png")
20         li.append(bubble)
21         random.shuffle(li)
22         updateGrid()
23         setTitle("Bubble Sort. Press <SPACE> for next step...")
24         k = n - 1
25         i = 0
26         count = 0
27     while not isDisposed() and k > 0:
28         getBg().fillCell(Location(i, 0), makeColor("beige"))
29         getBg().fillCell(Location(i + 1, 0), makeColor("beige"))
30         refresh()
31         c = getKeyCodeWait()
32         if c == 32:
33             count += 1
34             bubble1 = li[i]
35             bubble2 = li[i + 1]
36             refresh()
37             if bubbleSize(bubble1) > bubbleSize(bubble2):
38                 exchange(i, i + 1)
39                 setTitle("Last Action: Exchange. Count: " + str(count))
40             else:
41                 setTitle("Last Action: No Exchange. Count: " + str(count))
42             getBg().clear()
43             updateGrid()
44             if i == k - 1:
45                 k = k - 1
46                 i = 0
47             else:
48                 i += 1
49         getBg().clear()
50         refresh()
51         setTitle("All done. Count: " + str(count))

```

Öffne die beiden Programme SortiereMethodeA.py und SortiereMethodeB.py mit Tigerjython und teste sie.

Welche Sortiermethode wird hier durchgeführt?

Was unterscheidet diese Methode von der anderen Methode?

Was haben beide Programme gemeinsam?