Annotation:

1. Integer is an object while int is a primitive data type

2. how to test runtime of a algorithm?

```
long startTime   = System.currentTimeMillis();
//test function;
long endTime   = System.currentTimeMillis();
long totalTime = endTime - startTime;
System.out.println("\nInsert sort runtime is: " + totalTime + "ms");
```

3. how to copy a array?
we know use assignment statement to copy a array, will not only copy its value, but also its reference. Therefore, we can solve this by using Array.copyOf().

4. String.subString(startIndex, endIndex). Attention that startIndex is the index include, endIndex is the index not include. etc. String str = "12345"; subString(0, 5) == "12345" (index 5 outOfBound)

5. When create random arranged integer array, try to use "recursion"!! ——each time insert a new number in the number string, and grow.
Be careful about the nested for loop, one for the number of return arrangement, one for the length of current returned arrangement(decide how many space to insert)

6. When create a integer array, whose every digit has several choice(like 3), also try use "recursion"!!! ——build() will start from digit 0, use a for loop(for different choice on digit 0) wrap build(digit 0+1) and continue until the sb.length == input.length, means successful build a String.