Loops

Loop for

Syntax

```
for ([инициализация счетчика]; [условие]; [изменение счетчика]) {
    // operators
}
```

```
for (int i = 1; i < 9; i++) {
    System.out.printf("Квадрат числа %d равен %d.\n", i, i * i);
}
```

```
int i = 1;
for (;;) {
    System.out.printf("Квадрат числа %d равен %d.\n", i, i * i);
}
```

```
int i = 1;
for (; i < 9; ) {
    System.out.printf("Квадрат числа %d равен %d.\n", i, i * i);
    i++;
}</pre>
```

```
int n = 10;
for (int i = 0, j = n - 1; i < j; i++, j--) {
    System.out.println(i * j);
}</pre>
```

Loop foreach

Syntax

```
for (тип_данных название_переменной : контейнер) {
    // действия
}
```

```
int[] nums = new int[]{1, 2, 3, 4, 12, 9};
for (int i : array) {
    System.out.println(i);
}
```

```
int[] nums = new int[]{1, 2, 3, 4, 12, 9};
for (int i = 0; i < array.length; i++) {
    System.out.println(array[i]);
}</pre>
```

```
int[] nums = new int[]{1, 2, 3, 4, 12, 9};
for (int i = 0; i < array.length; i++) {
    array[i] = array[i] * 2;
    System.out.println(array[i]);
}</pre>
```

Loop while

Syntax

```
while (условие) {
    //действия
}
```

```
int[] nums = new int[]{1, 2, 3, 4, 12, 9};
for (int i = 0; i < nums.length; i++) {
    if (nums[i] > 10) {
        break;
    }
    System.out.println(nums[i]);
}
```

Loop do .. while

Syntax

```
do {
    //действия
} while (условие);
```

```
int j = 7;
do {
    System.out.println(j);
    j--;
} while (j > 0);
```

```
int j = -1;
do {
    System.out.println(j);
    j--;
} while (j > 0)
```

Operator break

```
int[] nums = new int[]{1, 2, 3, 4, 12, 9};
for (int i = 0; i < nums.length; i++) {
    if (nums[i] > 10) {
        break;
    }
    System.out.println(nums[i]);
}
```

Operator continue

```
int[] nums = new int[]{1, 2, 3, 4, 12, 9};
for (int i = 0; i < nums.length; i++) {
    if (nums[i] > 10) {
        continue;
    }
    System.out.println(nums[i]);
}
```