Flow Control

Switch Statement

```java
public void greet(int a) {

  if (a == 0) {
    System.out.println("Good morning");
  } else if (a == 1) {
    System.out.println("Good afternoon");
  } else if (a == 2) {
    System.out.println("Good evening");
  } else {
    System.out.println("Hello");
  }
}
```

```java
public void greet(int a) {

  switch(a) {
    case 0:
      System.out.println("Good morning");
      break;
    case 1:
      System.out.println("Good afternoon");
      break;
    case 2:
      System.out.println("Good evening");
      break;
    default:
      System.out.println("Hello");
  }
}
```

```java
greet(1);  // "Good afternoon"
greet(7);  // "Hello"
```

The Syntax of Switch Statement

```
switch(variable) {

  case constantExpression1:

      // code

      break;

  case constantExpression2:

      // code

      break;

  ...

  default:

      // code
}
```

- curly brace is required { }

- break statement is optional

- default block is optional

  - can be placed anywhere in statement

- you don't need { } for the command block

- allowed variable types: int (Integer), byte (Byte), short (Short), char (Character), String, enum type

  - **<u>not</u>** boolean, long, float and double !!

```java
// if we remove break

public void greet(int a) {

  switch(a) {
    case 0:
      System.out.println("Good morning");
    case 1:
      System.out.println("Good afternoon");  ✓
    case 2:
      System.out.println("Good evening");     ✓
    default:
      System.out.println("Hello");            ✓
    }
}

greet(1);
```

```
Good afternoon
Good evening
Hello
```

```java
// combining values (before Java 14)

public void greet(int a) {

  switch(a) {
    case 0:
    case 1:
      System.out.println("Good afternoon");
      break;
    case 2:
      System.out.println("Good evening");
      break;
    default:
      System.out.println("Hello");
      break;
  }
}
```

```java
// cases could be in the same line

public void greet(int a) {

  switch(a) {
    case 0: case 1: case 2:
      System.out.println("Good day");
      break;
    default:
      System.out.println("Hello");
      break;
  }
}
```

```java
// default could be anywhere in the block
// be careful if there are no break statements

public void greet(int a) {

  switch(a) {
    case 0:
      System.out.println("Good morning");
    default:
      System.out.println("Hello");          ✓
    case 1:
      System.out.println("Good afternoon"); ✓
    case 2:
      System.out.println("Good evening");   ✓
  }
}

greet(5);
```

```
Hello
Good afternoon
Good evening
```