Introduction to Programming Part 2

Java Control Structures

- Most complex programming logic can be built from the components: sequence, selection and iteration.
- Selection and iteration depend on Boolean conditions, i.e. True/False

Selection

- "if" statement: The "if" statement evaluates a condition and executes a block of code if the condition is true. For example:

```
int num = 10;
if (num > 0) {
   System.out.println("The number is
positive.");
}
```

- "if-else" statement: The "if-else" statement extends the "if" statement by providing an alternative block of code to execute when the condition is false. For example:

```
int num = 10;
if (num > 0) {
   System.out.println("The number is
positive.");
} else {
   System.out.println("The number is non-
positive.");
```

- "switch" statement: The "switch" statement allows for selecting one of many code blocks to execute based on the value of a variable or an expression.

Introduction to Programming Part 2

Iteration

Java provides several iteration structures to repeat a block of code. The main iteration structures in Java are the "while" loop, the "do-while" loop, and the "for" loop.

- "while" loop: The "while" loop repeatedly executes a block of code as long as a given condition is true. For example:

```
int i = 1;
while (i <= 5) {
   System.out.println("Count: " + i);
   i++;
} // This loop will print the numbers 1 to 5.
```

- "do-while" loop: The "do-while" loop is similar to the "while" loop, but it guarantees that the block of code will be executed at least once, even if the condition is initially false. For example:

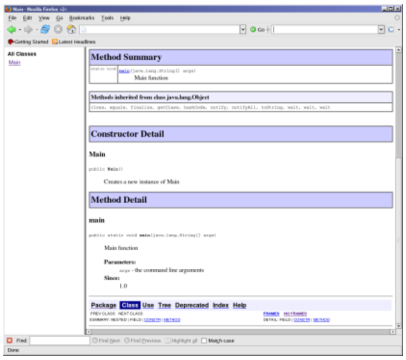
```
int i = 1;
do {
   System.out.println("Count: " + i);
   i++;
} while (i <= 5); // This loop will also print the numbers 1 to 5.
```

- "for" loop: The "for" loop provides a concise way to iterate over a range of values. It consists of three parts: initialization, condition, and increment/decrement. For example:

```
for (int i = 1; i <= 5; i++) {
   System.out.println("Count: " + i);
} // This loop will also print the numbers 1 to 5.
```

Documentation

- The javadoc utility can be used to generate automatically documentation for the class.
- Click for further details



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Main

Method Summary

static void	main(java.lang.String[] args) Main function

Methods inherited from class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

Constructor Detail

Main

public Main()

Creates a new instance of Main

Method Detail

main

public static void main(java.lang.String[] args)

Main function

Parameters:
args - the command line arguments
Since:
1.0

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