

# How to document your programs using Javadoc?

We provide an introduction to javadoc - a tool used to create HTML files that document Java code. This tool is used by Sun to create the Java API documentation.

## Programming Style

- Programming Style deals with the appearance of your program. If you write an entire program on one line, it would be bad programming style because the program would be hard to read. Usually, we **divide our program into several blocks** by using **{}**. **Blank lines** are inserted so that it is easier to read.

- o E.g.

```
public class Car {  
  
    public static void main(String args[]){  
        .....  
    }  
  
    public return_type method1(parameterList){  
        .....  
    }  
}
```

- Documentation consists of explanatory remarks and comments (See the bottom) for the program.

- o There are three types of comments:

- 1) **C++ style comment: //**

- used to comment a single line, cannot span across multiple lines

- 2) **C-style comment: start with /\* and end with \*/**

- can be used to comment multiple lines

- 3) **Documentation comment: start with /\*\* and end with \*/**

- can span across multiple lines, specially handled by the program javadoc to generate HTML documentation of classes, methods and variables

```
/**  
 * Document type comment  
 *  
 */
```

- Good programming style and documentation can reduce the chance of errors and make programs easy to read. There are some points to note:

- Summary**

- Include a **summary** at the beginning of the program **to explain what the program does**.

- Naming conventions**

- For **variables and methods**, always use **lowercase**. If the name consists of several words, concatenate them into one and make the first word lowercase and capitalizing the first letter of each subsequent word.

- E.g. String strPrinciple;  
int firstNumber;

- For **Class name**, capitalize the first letter and the first letter of each subsequent word

- E.g. public class ComputeArea{}

```
public class FirstProgram{}
```

- All **constants** should be capitalized and underscores should be used between words

E.g. `final MAX_VALUE, final PI`

### 3. Proper indentation and spacing

- Block Styles

```
public class HelloWorld {  
    ...  
}
```

### 4. Proper documentation

- Should contain some tags like `@author`, `@version`, `@param`, `@return`

```
* @author      (classes and interfaces only)  
* @version     (classes and interfaces only)  
* @param       (methods and constructors only)  
* @return      (methods only)
```

```
/**  
 * Compound class.  
 * This program is used to calculate compound interest  
 * @author Florence  
 * @version 1  
 */
```

#### 1) Declare instance variables:

```
/**  
 * The number of students in the class. This variable  
 * must not be negative or greater than 200.  
 */  
private int numStudents;  
private double gas Amt;
```

#### 2) Declare instance methods:

```
/*  
 * @param ci the compound interest that will be shown  
 */
```



Using javadoc to compile your program to the documentation in HTML format

o `javadoc Book.java`



#### Reference

<http://java.sun.com/products/JDK/tools/index.html>

<http://java.sun.com/j2se/javadoc/writingdoccomments/index.html>

Document checking tools

<http://java.sun.com/j2se/javadoc/doccheck/index.html>