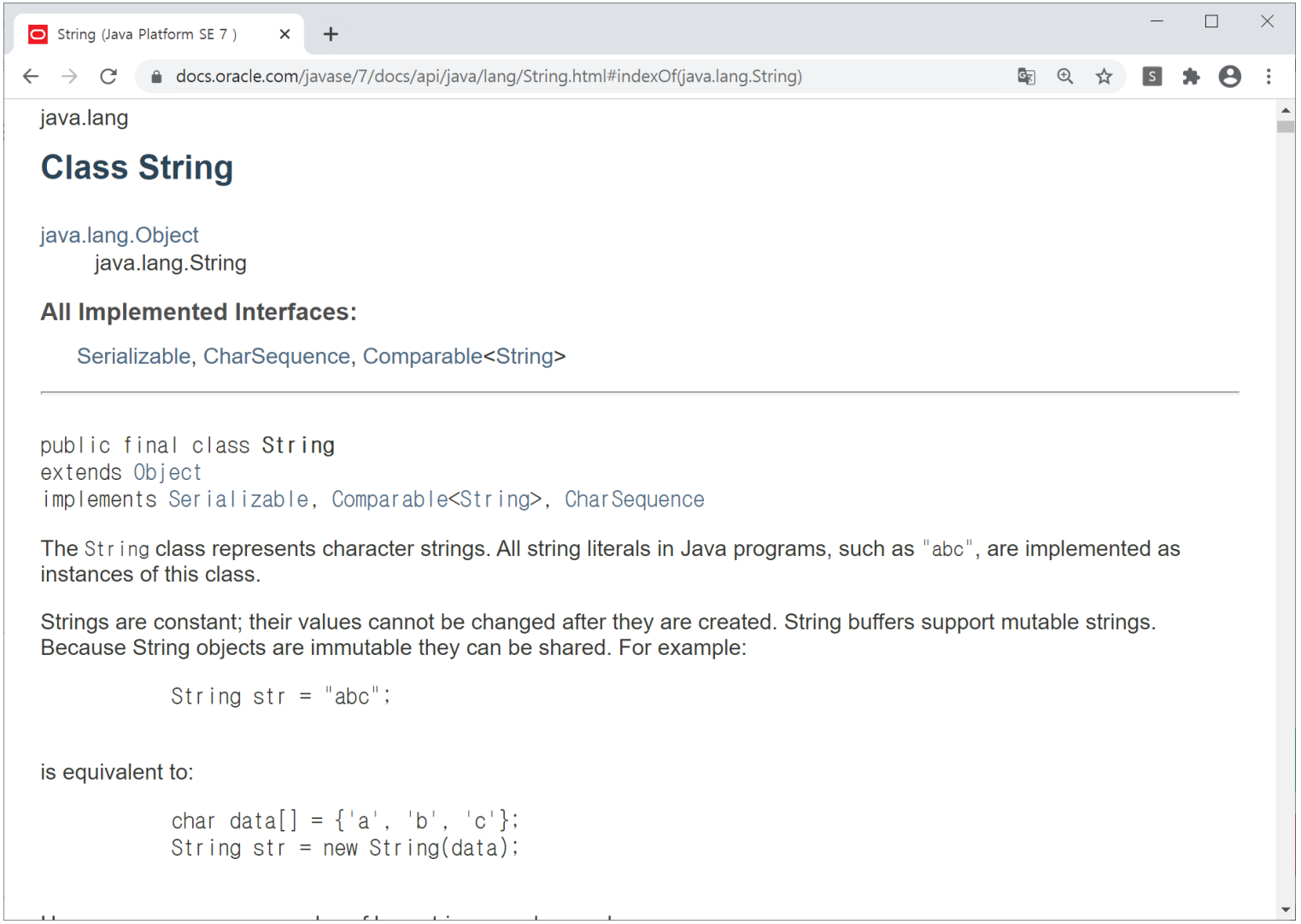
Java Documentation Comments

The javadoc Tags
javadoc Tool

Java comments

- Java Comments
  - /* comments */
  - // line comment
  - **/**** Java documentation comment ***/**
- Java Documentation Comment
  - allow you to embed information about your program into the program itself.
  - Documentation comments make it convenient to document your programs.
  - You can then use the javadoc utility program to extract the information and put it into an HTML file.

Java API Documentation



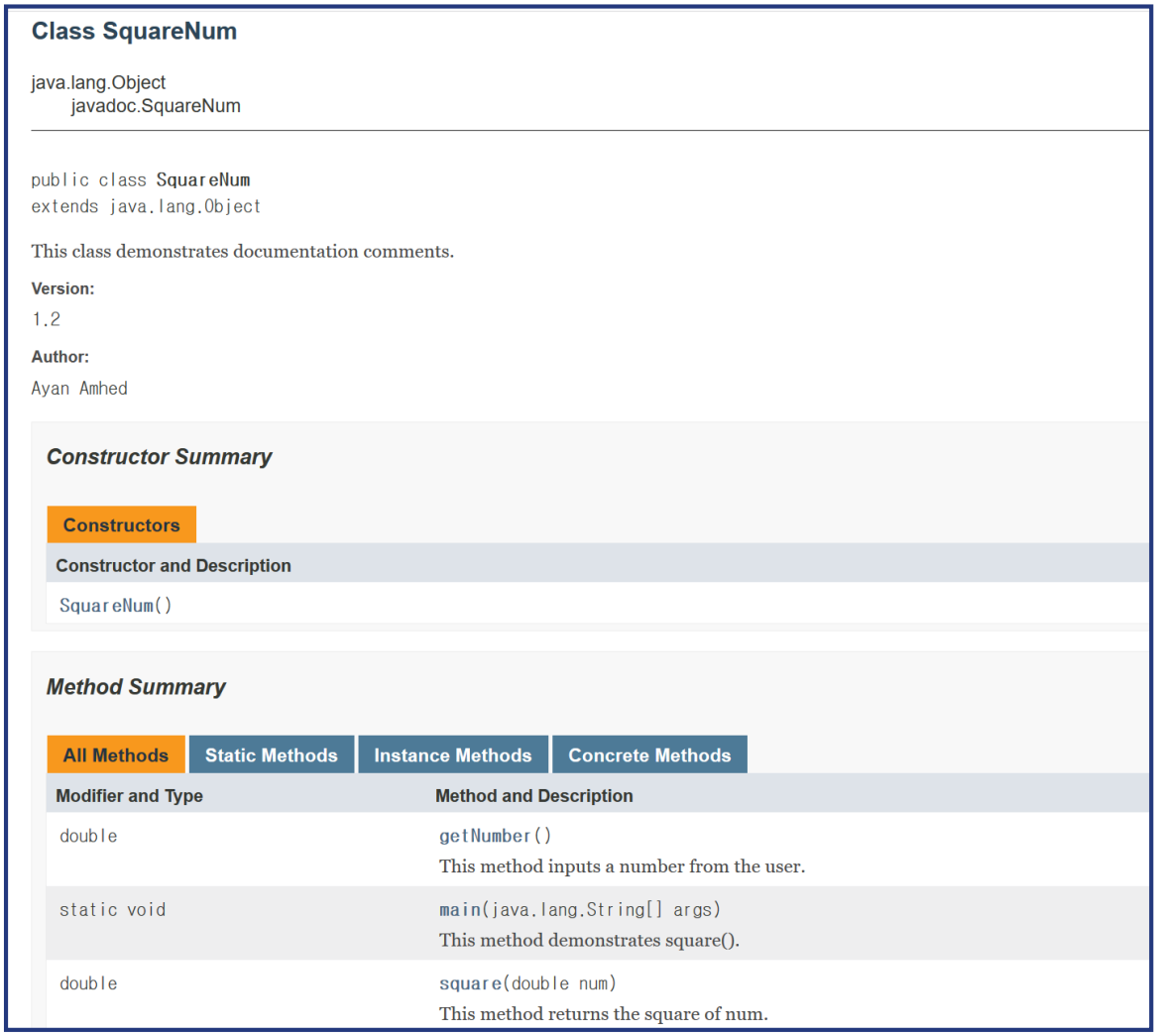
```java
package javadoc;
import java.io.*;

/**
* This class demonstrates documentation comments.
* @author Ayan Amhed
* @version 1.2
*/
public class SquareNum {
    /**
    * This method returns the square of num.
    * This is a multiline description. You can use
    * as many lines as you like.
    * @param num The value to be squared.
    * @return num squared.
    */
    public double square(double num) {
        return num * num;
    }
```

```
    /**
    * This method inputs a number from the user.
    * @return The value input as a double.
    * @exception IOException On input error.
    * @see IOException
    */
    public double getNumber() throws IOException {
       InputStreamReader isr = new InputStreamReader(System.in);
       BufferedReader inData = new BufferedReader(isr);
       String str;
       str = inData.readLine();
       return (new Double(str)).doubleValue();
    }
    /**
    * This method demonstrates square().
    * @param args Unused.
    * Omit @return for methods that return void and for constructors;
    * @exception IOException On input error.
    * @see IOException
    */
    public static void main(String args[]) throws IOException
    {
       SquareNum ob = new SquareNum();
       double val;
       System.out.println("Enter value to be squared: ");
       val = ob.getNumber();
       val = ob.square(val);
       System.out.println("Squared value is " + val);
    }
}
```

How to use javadoc tool

- javadoc –d doc SquareNum.java

The Generated Documentation



Class SquareNum

java.lang.Object
    javadoc.SquareNum

public class **SquareNum**
extends java.lang.Object

This class demonstrates documentation comments.

Version:

1.2

Author:

Ayan Amhed

Constructor Summary

Constructors

Constructor and Description
SquareNum()

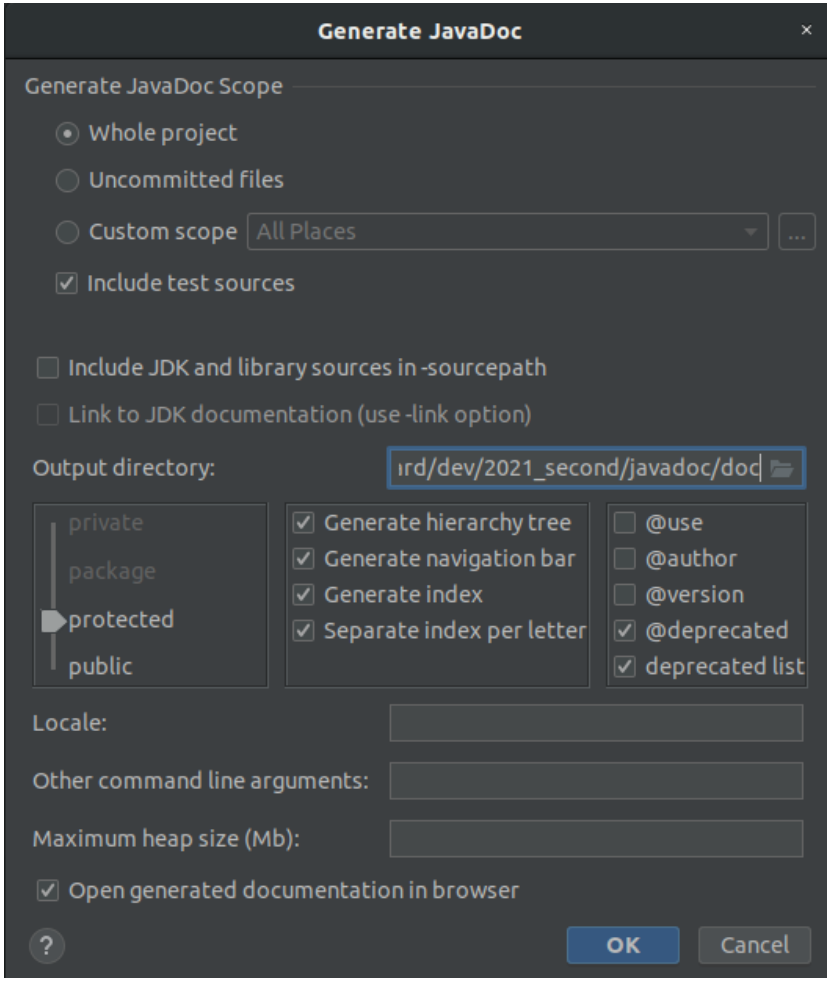
Method Summary

All Methods | **Static Methods** | **Instance Methods** | **Concrete Methods**

Modifier and Type	Method and Description
double	getNumber() This method inputs a number from the user.
static void	main(java.lang.String[] args) This method demonstrates square().
double	square(double num) This method returns the square of num.

Invoking javadoc in IntelliJ

- Tools – Generate JavaDoc …



JavaDoc Tags: Summary

Tag & Parameter	Usage	Applies to
@author *name*	Describes an author.	Class, Interface, Enum
@version *version*	Provides software version entry. Max one per Class or Interface.	Class, Interface, Enum
@since *since-text*	Describes when this functionality has first existed.	Class, Interface, Enum, Field, Method
@see *reference*	Provides a link to other element of documentation.	Class, Interface, Enum, Field, Method
@param *name description*	Describes a method parameter.	Method
@return *description*	Describes the return value.	Method
@exception *classname description* **@throws** *classname description*	Describes an exception that may be thrown from this method.	Method

Doclet

- Doclets are programs written in the Java™ programming language that use the doclet API to specify the content and format of the output of the Javadoc tool.
- By default, the Javadoc tool uses the "standard" doclet to generate API documentation in HTML form.
- However, you can supply your own doclets to customize the output of Javadoc as you like
- New "Doclet API" to supersede the previous API, which was becoming increasingly difficult to update to support new language features (Since JDK 9)

References

- **Java Documentation Comments** from Tutorials Point
  - http://www.tutorialspoint.com/java/java_documentation.htm
- **How to Write Doc Comments for the Javadoc Tool**
  - http://www.oracle.com/technetwork/java/javase/documentation/index-137868.html
- **Javadoc Tool**
  - http://www.oracle.com/technetwork/java/javase/documentation/index-jsp-135444.html
- **Doclet Overview**
  - https://openjdk.java.net/groups/compiler/using-new-doclet.html