**Practical no. 7**

**FS19CO042**

**Aim:** Generate complete Javadocs for any two of the above experiments

**Tool used:** Editor (Notepad/Intellij IDE), JDK and JRE

**Theory:**

**Javadoc**

Javadoc is a tool which comes with JDK and it is used for generating Java code documentation in HTML format from Java source code, which requires documentation in a predefined format.

Following is a simple example where the lines inside /\*….\*/ are Java multi-line comments. Similarly, the line which preceeds // is Java single-line comment.

Example

/\*\*

\* The HelloWorld program implements an application that

\* simply displays "Hello World!" to the standard output.

\*

\* @author Omkar Phansopkar

\* @version 1.0

\* @since 2014-03-31

\*/

public class HelloWorld {

public static void main(String[] args) {

// Prints Hello, World! on standard output.

System.out.println("Hello World!");

}

}

You can include required HTML tags inside the description part. For instance, the following example makes use of <h1>....</h1> for heading and <p> has been used for creating paragraph break −

Example

/\*\*

\* <h1>Hello, World!</h1>

\* The HelloWorld program implements an application that

\* simply displays "Hello World!" to the standard output.

\* <p>

\* Giving proper comments in your program makes it more

\* user friendly and it is assumed as a high quality code.

\*

\*

\* @author Omkar Phansopkar

\* @version 1.0

\* @since 2014-03-31

\*/

public class HelloWorld {

public static void main(String[] args) {

// Prints Hello, World! on standard output.

System.out.println("Hello World!");

}

}

The javadoc Tags

The javadoc tool recognizes the following tags −

|  |  |  |
| --- | --- | --- |
| **Tag** | **Description** | **Syntax** |
| @author | Adds the author of a class. | @author name-text |
| {@code} | Displays text in code font without interpreting the text as HTML markup or nested javadoc tags. | {@code text} |
| {@docRoot} | Represents the relative path to the generated document's root directory from any generated page. | {@docRoot} |
| @deprecated | Adds a comment indicating that this API should no longer be used. | @deprecated deprecatedtext |
| @exception | Adds a **Throws** subheading to the generated documentation, with the classname and description text. | @exception class-name description |
| {@inheritDoc} | Inherits a comment from the **nearest** inheritable class or implementable interface. | Inherits a comment from the immediate surperclass. |
| {@link} | Inserts an in-line link with the visible text label that points to the documentation for the specified package, class, or member name of a referenced class. | {@link package.class#member label} |
| {@linkplain} | Identical to {@link}, except the link's label is displayed in plain text than code font. | {@linkplain package.class#member label} |
| @param | Adds a parameter with the specified parameter-name followed by the specified description to the "Parameters" section. | @param parameter-name description |
| @return | Adds a "Returns" section with the description text. | @return description |
| @see | Adds a "See Also" heading with a link or text entry that points to reference. | @see reference |
| @serial | Used in the doc comment for a default serializable field. | @serial field-description | include | exclude |
| @serialData | Documents the data written by the writeObject( ) or writeExternal( ) methods. | @serialData data-description |
| @serialField | Documents an ObjectStreamField component. | @serialField field-name field-type field-description |
| @since | Adds a "Since" heading with the specified since-text to the generated documentation. | @since release |
| @throws | The @throws and @exception tags are synonyms. | @throws class-name description |
| {@value} | When {@value} is used in the doc comment of a static field, it displays the value of that constant. | {@value package.class#field} |
| @version | Adds a "Version" subheading with the specified version-text to the generated docs when the -version option is used. | @version version-text |

**Command to generate html pages from javadocs:**  
javadoc -d .\pathToDestination .\pathToSrc.java file.

**Code:**

**File 1, exp7a.java**import java.util.Scanner;

/\*\*  
 \* in this class we are adding the square root of indivisual numbers;  
 \*/  
public class exp7a{  
 /\*\*  
 \* in this method we are taking the numbers as input and returning the addtion to main function;  
 \* @param x;  
 \* @return to main;  
 \*/  
 public static int add(int ...x){  
 return x[0]\*x[0]+x[1]\*x[1];  
 }  
 /\*\*  
 \* this is the main method where the calling to add function is done and printing the result;  
 \* @param args  
 \*/  
 public static void main(String args[]){  
 //creating Scanner class object and passing system.in ;  
 Scanner sc= new Scanner(System.in);  
 System.out.println("enter the first number:");  
 int n1=sc.nextInt();  
 System.out.println("enter the second number:");  
 int n2=sc.nextInt();  
 int a=exp7a.add(n1,n2);  
 System.out.print("the addtion of square root of indivisual is :"+a);  
 }  
}

**File 2, exp7b.java**

import java.util.Arrays;

/\*\*

\* this is a assignment7 class for sorting the array;

\*/

public class exp7b{

/\*\*

\* This is the main method where the arrays sorted and printed;

\*@param args

\*/

public static void main(String args[]) {

System.out.println("sorting the array.....");

System.out.println("sorted array:");

Arrays.sort(args);

for(String i:args)

System.out.println(i);

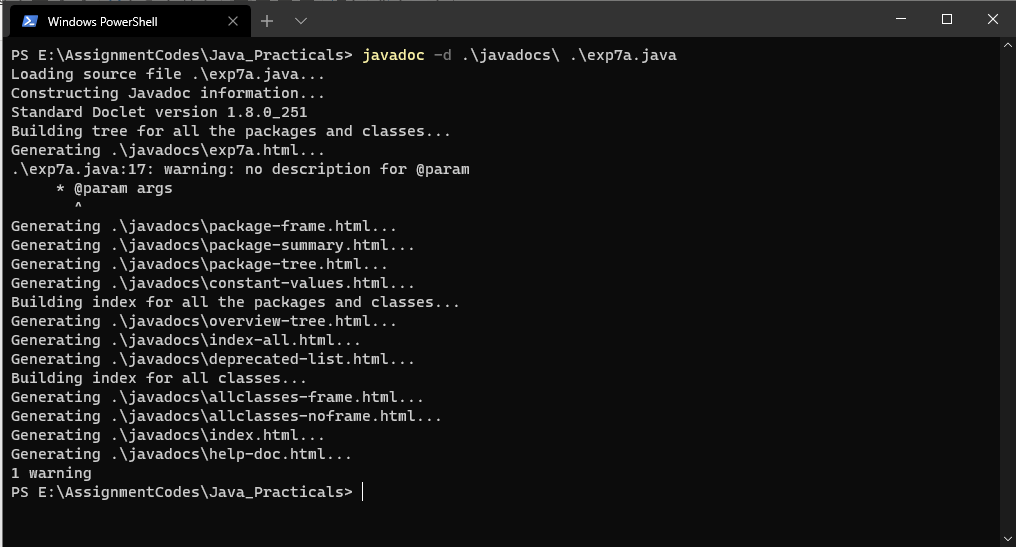
}   
}

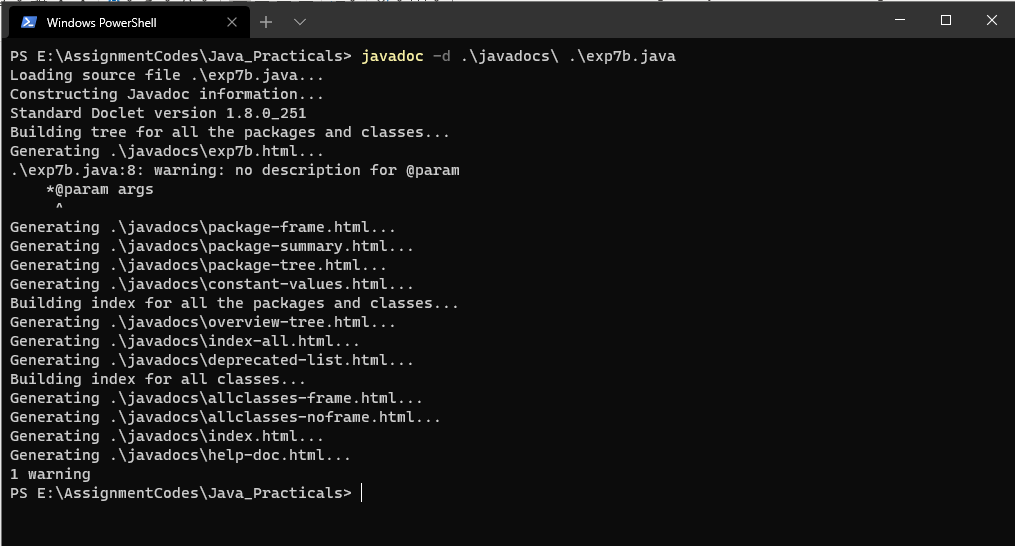
Generating docs:  
Perform following commands to generate doc:  
javadoc -d .\pathToDestination .\pathToSrc.java file.  
  
Actual commands:

javadoc -d .\javadocs\ .\exp7a.java

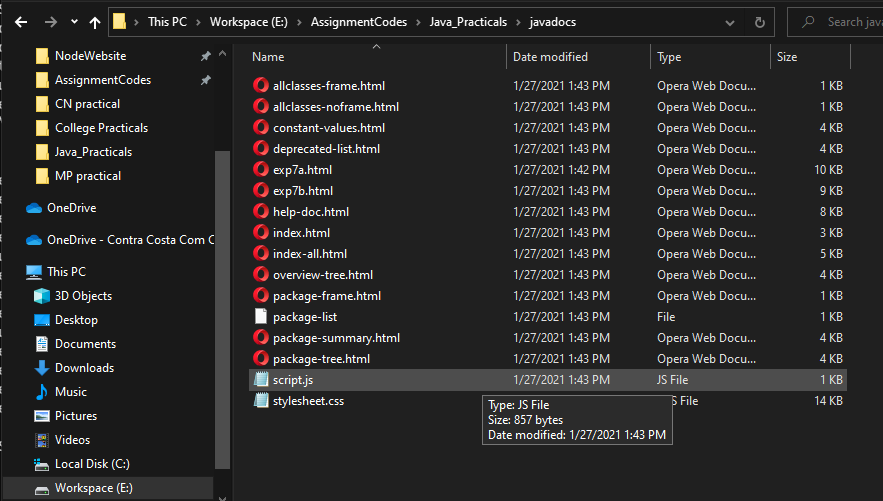
javadoc -d .\javadocs\ .\exp7b.java

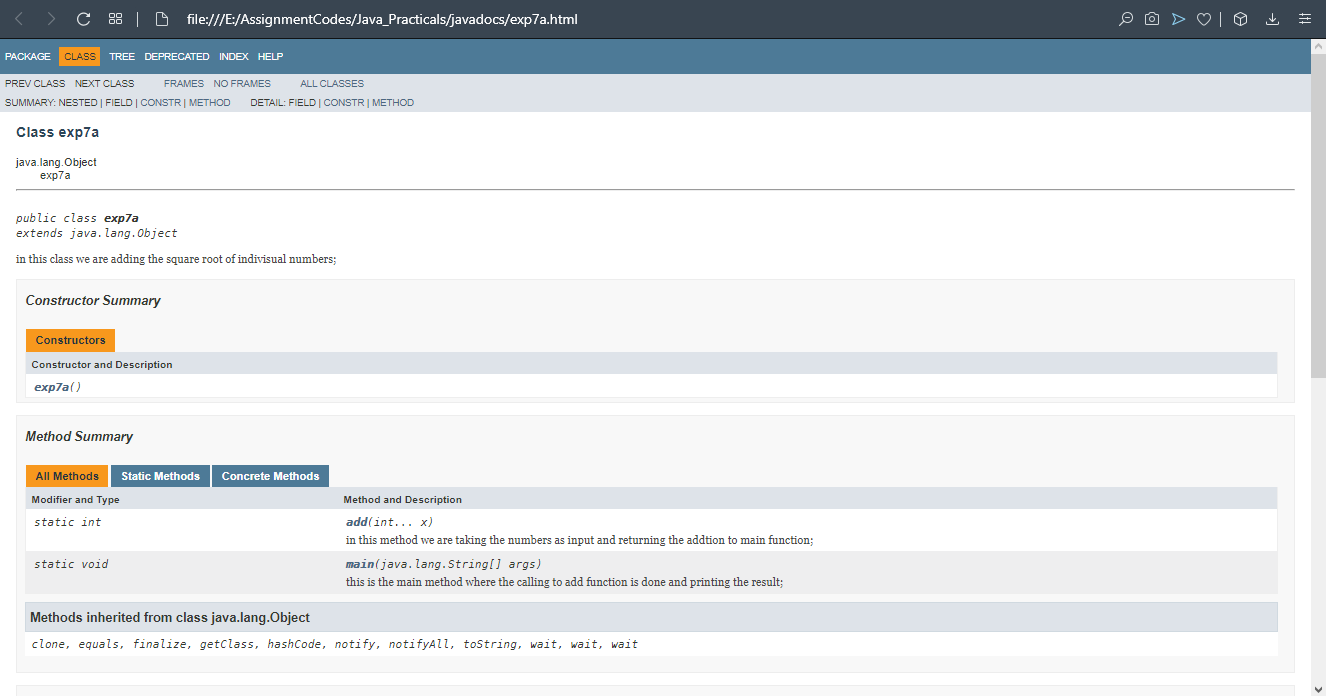
Console output:

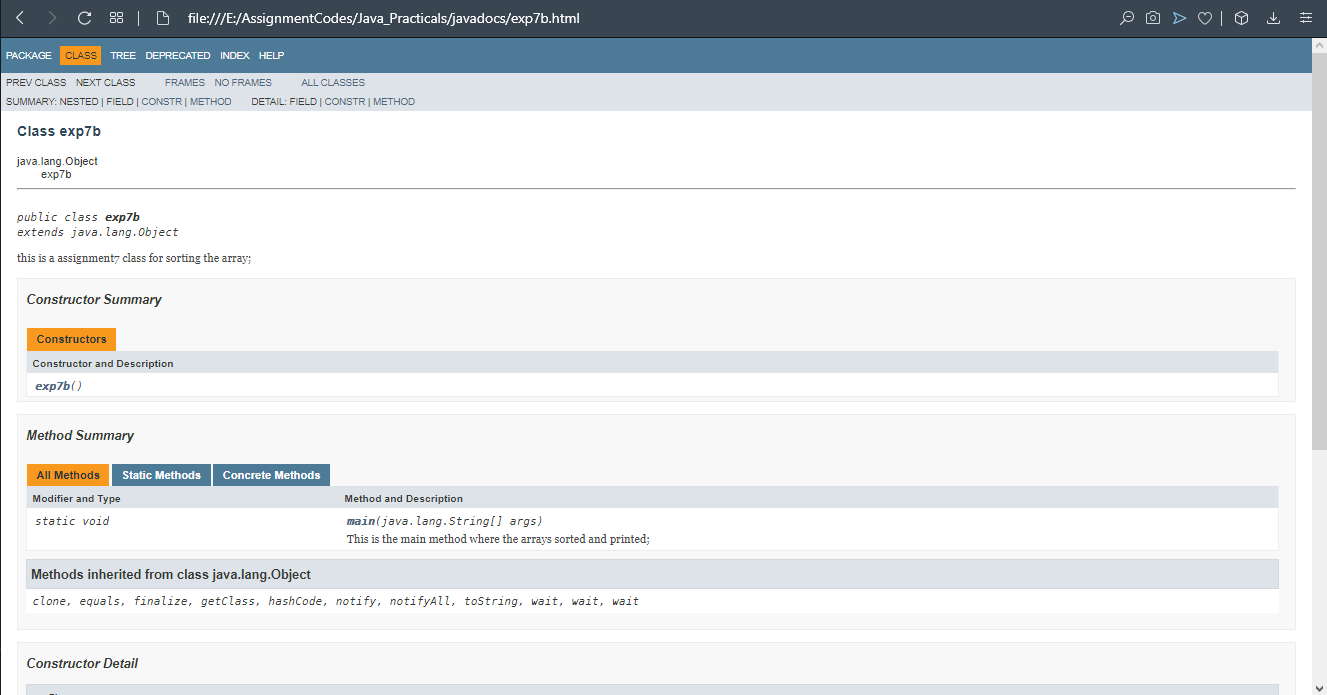




Docs Output:







**Conclusion: Thus we understood and successfully created javadocs for our project using various techniques used for commenting and documenting java experiments.**