Exercise 1: Output to the Console Window

1. Sketch the component of the eclipse IDE. Label all the sections you will be using this unit.

2. Using you IDE, create a new Java Project called 'Unit_5'.

3. In the 'src' create a new class called 'Exercise_1_{your name}'. Be sure to include 'public static void main(String[] args)'. Confirm that 'Exercise_1_{your name}.java' was created in the project.

For this exercise, enter the following examples in Java and answer the questions that follow the example(s).

Example 1: Hello World!

```
public static void main(String[] args)
{
        System.out.println("Hello World!");
}
```

4. What happens if I change the case on the commands from lower case to upper case and vise-versa?

```
Eg.          From →     System.out.println("Hello World!");
             To   →     system.out.println("Hello World!");
```
Exception in thread "main" java.lang.Error: Unresolved compilation problem:
    system cannot be resolved

    at Excercise_1_GurpreetSingh.main(Excercise_1_GurpreetSingh.java:4)

5. What happens if I place two forward slashes before a line.

```
Eg.          // System.out.println("Hello World!");
```
    Nothing happens as it reads the two slashes as a comment.

6. What does System.out.println do?
   System.out.println is the command that allows the information to be outputted.

7. What happens if you omit the semicolon at the end of each line?
   Exception in thread "main" java.lang.Error: Unresolved compilation problem:
       Syntax error, insert ";" to complete BlockStatements

       at Excercise_1_Gurpreet.main(Excercise_1_Gurpreet.java:6)

8. What happens if you omit the brackets?

If you omit the brackets this error appears

Exception in thread "main" java.lang.Error: Unresolved compilation problems:
      Syntax error on token ")", { expected after this token
      Syntax error, insert "}" to complete MethodBody

      at Exercise_1_Gurpreet.main(Exercise_1_Gurpreet.java:4)

9. What happens if you omit the quotation marks in Hello World!
Exception in thread "main" java.lang.Error: Unresolved compilation problems:
      Syntax error on token(s), misplaced construct(s)
      Syntax error, insert "VariableDeclarators" to complete
LocalVariableDeclaration
      Syntax error, insert ";" to complete BlockStatements
      Hello cannot be resolved

      at Excercise_1_Gurpreet.main(Excercise_1_Gurpreet.java:6)

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Example 2:

```java
public static void main(String[] args)
{
      System.out.println("Hello");
      System.out.println("World");
}
```

Example 3:

```java
public static void main(String[] args)
{
    System.out.println("              Hello     World");
    System.out.println("      World");
}
```

Example 4:

```java
public static void main(String[] args)
{
      System.out.print("Hello");
      System.out.print("World");
}
```

Example 5

```java
public static void main(String[] args)
{
      System.out.print("Hello     ");
      System.out.print("   World");
}
```

10. What is the difference between System.out.print and System.out.println?

The difference between the System.out.print and System.out.println is that System.out.print prints on the same line whereas the System.out.println prints on a new line.

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Example 6:

```
public static void main(String[] args)
{
        System.out.print("Hello");
        System.out.print("\n");
        System.out.print("World");
}
```

11. What does "\n" do?
    "\n" inserts a new line in the text.

12. Remove the quotes from \n, what happens?
    The two words are on the same line "HelloWorld" instead of being
"Hello
    World

13. Compare and describe the output of example 6 with example 2.
    The outputs are the same.

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Enter the following examples:

Example 7:

```
public static void main(String[] args)
{
        System.out.print("Hello\t");
        System.out.print("\tWorld");
}
```

Example 8:

```
public static void main(String[] args)
{
        System.out.print("Hello");
        System.out.print("\t");
        System.out.print("World");
}
```

14. What does "\t" do?

    "\t" adds a space between two character.

15. Compare and describe the output of this example 8 with example 5
    The output on example 8 had only 1 space between the "Hello World"
    whereas example 5 had 10 spaces between "Hello World"

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16. Create a new Class named A003. Add two "System.out.println()" statements,
    one printing your first name, the second printing your last name. Run the
    program to see what happens. How many lines are printed?
    When I run the program it prints my name on 2 separate lines.

17. Change the program by replacing the "println" methods with "print". Run the
    program to see what happens. What can you say is the difference between
    println and print? Does the output look okay? See if you can fix the output so
    it looks better.
    The difference between "println" and "print" is that "println" outputs the
    program on a new line whereas "print" outputs the program on the same line
    without any spaces.
    Both outputs do not look okay as I want the output to be on the same line but
    with a space between my first name and last name.
    The fixed output would look like this:
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