SE1 Tutorial Worksheet 2

- **Include comments at the top of your program and after each line**

1   Write a program (using print and println) that will print your initials to standard output in letters that are 10 lines tall. Each capital letter should be made up of a bunch of *'s.

Save this program on your X drive within the Software Engineering 1/Lect2 folder as **P1Initials.java**

2   Write a program that prompts the user to input a number and displays the number to the screen.
Note: Choose appropriate whole number data type.

Save this program on your X drive within the Software Engineering 1/Lect2 folder as **P2Num.java**

3   Write a program that asks the user's name, and then greets the user by name. Before outputting the user's name. For example, if the user's name is Joe, then the program should respond "Hello Joe, nice to meet you!".

Hint: String username = input.nextLine ///takes in a String and places it in username variable

Save this program on your X drive within the Software Engineering 1/Lect2 folder as **P3Greeting.java**

4   Write a program that takes the following input from a user:
     Total students in Group A

     Total students in Group B

Display the total number of students from both groups together and output to the screen.

Save this program on your X drive within the Software Engineering 1/Lect2 folder as **P4Student.java**

5   Write a program that calculates an employee's gross pay.
Input to the program is the hourly rate and the number of hours worked.

Hint: use input.nextDouble to input hourly rate

Save this program on your X drive within the Software Engineering 1/Lect2 folder as **P6Grosspay.java**

Answer the following questions:

Q1: End-of-line comments that should be ignored by the compiler are denoted using
a. a. Two forward slashes (`//`).
b. b. Three forward slashes (`///`).
c. c. A slash and a star (`/*`).
d. d. A slash and two starts (`/**`).

Q2: Which of the following is not a valid Java identifier?
a. a. `my Value`
b. b. `$_AAA1`
c. c. `width`
d. d. `m_x`

Q3: Which of the following cannot cause a syntax error to be reported by the Java compiler?
a. a. Mismatched `{}`
b. b. Missing `*/` in a comment that begins with `/*`
c. c. Missing `;`
d. d. Extra blank lines.

Q4: Which of the following is not a syntax error?
a. a. `System.out.println( 'Hello world!' ):`
b. b. `System.out.println( "Hello                    world!" );`
c. c. `System.out.println( "Hello world!" );`
d. d. `System.out.println( Hello world! );`

Q5: Which command compiles the Java source code file `Welcome.java`?
a. a. `cd Welcome.java`
b. b. `javac Welcome.java`
c. c. `java Welcome.java`
d. d. `compile Welcome.java`

Q6: Which command executes the Java class file `Welcome.class`?
a. a. `javac Welcome.class`
b. b. `java Welcome.class`
c. c. `java Welcome`
d. d. `run Welcome.class`

Q7: Which is the output of the following statements?
```
System.out.print( "Hello " );
System.out.println( "World" );
```
a. a. `Hello World`
b. b. `HelloWorld`
c. c. `Hello World`
d. d. `World Hello`

Q8: Which of the following characters is the escape character?
a. a. `*`

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```
b.  b.  \
c.  c.  \n
d.  d.  "
```

Q9: Which of the following statements will print a single line containing `"hello there"`?

```
a.  a.  System.out.println( "hello" );System.out.println( " there" );
b.  b.  System.out.println( "hello" ,  " there" );
c.  c.  System.out.println( "hello" );System.out.print( " there" );
d.  d.  System.out.print( "hello" ); System.out.println( " there" );
```

Q10: Which of the following escape sequences represents carriage return?

a. e. \n.

b. f. \r.

c. g. \cr.

d. h. \c.

Q11: Which of the following statements would display the phase `Java is fun`?

```
a.  a.  System.out.println( "hellois fun\rJava " );
b.  b.  System.out.println( 'Java is fun' );
c.  c.  System.out.println( "\"Java is fun\"" );
d.  d.  System.out.println( Java is fun );
```

Q12: When method `printf` requires multiple arguments, the arguments are separated with _____.

a. a. colons (:).

b. b. semicolons (;).

c. c. commas (,).

d. d. periods (.).

Q13: Which of the following statement displays `Hello World`?

```
a.  a.  System.out.printf( "%2s", "Hello " "World" );
b.  b.  System.out.printf( "%s %s", "Hello", "World" );
c.  c.  System.out.printf( "%s%s", "Hello, World" );
d.  d.  System.out.printf( "s% s%", "Hello", "World" );
```

Q14: All `import` declarations must be placed

a. a. inside the class declaration's body.

b. b. before the class declaration.

c. c. after the class declaration.

d. d. all of the above will work.

Q15: Which of the following is a variable declaration statement?

```
a.  a.  int total;
b.  b.  import java.util.Scanner;
c.  c.  public static void main( String args[] )
d.  d.  // first string entered by user
```

Q16: A(n) _____ enables a program to read data from the user.

a. a. `printf`.

b. b. `import` declaration.

c. c. `Scanner`.

d. d. `main`.

Q17: Which of the following is not a Java primitive type?
```
a.  a.  char
b.  b.  byte
c.  c.  real
d.  d.  double
```

Q18: The format specifier _____ is a place-holder for an `int` value?

a. a. `%a`.

b. b. `%d`.

c. c. `%int`.

d. d. `%s`.

Q19: Which of the following statements does not alter a memory location?
```
a.  a.  int a;
b.  b.  number = 12;
c.  c.  y = y + 2;
d.  d.  width = Integer.parseInt(input);
```

Q20: What is the value of `result` after the following Java statements execute?
```
int a, b, c, d, result;
a = 4;
b = 12;
c = 37;
d = 51;
result = d % a * c + a % b + a;
```
a. a. 119

b. b. 51

c. c. 127

d. d. 59

Q21: List the following operators in the order that they will be evaluated: `-`, `*`, `/`, `+`, `%`. Assume that if two operations have the same precedence, the one listed first will be evaluated first.
```
a.  a.  +, -, /, *, %.
b.  b.  -, +, %, *, /.
c.  c.  -, *, %, +, /.
d.  d.  *, /, %, -, +.
```

Q22: Which of the following is not an arithmetic operator?
```
a.  a.  +
b.  b.  -
c.  c.  .
d.  d.  %
```