

# Unit 1 Lab 10 - Assignment

class hour \_\_\_\_\_

Name \_\_\_\_\_

Pts: 10

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## I. Assignment

- 0) a) Open **P1ch1lab10.java**
- b) Run the program
- c) Write the exact output below

1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7

- 1) Answer the following based on the program code, not the output above.
  - a) How many declaration statements are there? \_\_\_\_\_
  - b) How many assignment statements are there? \_\_\_\_\_
  - c) Change the line **int x;** to **int x = 7;** and delete the line **x = 7;**
  - d) Run the program. Did output change? Yes / No \_\_\_\_\_
  - e) Change the line **double y;** to **double y = 5.3;** and delete the line **y = 5.3;**
  - f) Run the program. Did the output change? Yes / No \_\_\_\_\_
  - g) Change the line **char z;** to **char z = 'R';** and delete the line **z = 'R';**
  - h) Run the program. Did the output change? Yes / No \_\_\_\_\_
  - i) Combine the last declaration and assignment statements into one "shortcut" statement.
  - j) Write this new statement (Run the program to make sure it works.)  
\_\_\_\_\_
- k) Change the line **int x = 7;** to **int x = 7, a = -10;**  
Change the line **System.out.println("x = " + x);** to **System.out.println("x = " + x + " a is " + a);**  
(Note the space in front of the **a** inside of quotes and the space after the word **is**.)
- l) Run the program. What is the output for this new line?  
\_\_\_\_\_
- m) Change the line **double y = 5.3;** to **double y;**
- n) Run then write what happens  
\_\_\_\_\_
- o) Change the line **double y;** to back to **double y = 5.3;**
- p) Run (there should be no error)

OVER

## Unit 1 Lab 10 - Assignment continued

- q) Change the line **double** y = 5.3; to **double** y = 5;
  - r) Run then write the output for the line `System.out.println("y = " + y);`
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- s) Change the line **int** x = 7, a = -10; to line **int** x = 7.9; **int** a = -10.1;
  - t) Run then write what happens
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- u) Change the line **int** x = 7.9; **int** a = -10.1; back to line **int** x = 7, a = -10;
  - v) Run (there should be no error)
  - w) Change the line **char** z = 'R'; to **char** z = "R";
  - x) Run then write what happens
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- y) Change the **char** z = "R"; back to **char** z = 'R';
  - z) Run (there should be no error)
  - aa) Change the line **double** y = 5; to **double** 5.3 = y;
  - bb) Run then write what happens
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- dd) Change the line **double** 5.3 = y; to back to **double** y = 5.3;
  - ee) Run (there should be no error)
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### II. **import** java.lang.\*;

- a) Before the **public class** p1ch1lab10 line add the statement **import** java.lang.\*;
  - b) Run then write what happens
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Recall: All Java programs automatically import `java.lang.*` which allows a basic Java program to Run using `System.out` and the `+` symbol (plus lots more stuff).

### Summary

Before a variable can be used in a program it must be declared, which reserves a set amount of memory based on its data type - **int**, **double**, **char** (String is not a data type but is an object, but it follows the same rules as data types for declaring it).

After declaring a variable, appropriate data values need to be assigned (stored) in the variable by the using the `=` sign where the *variable must be on the left side of the equal and the data item on the right side*. **ints** can only store integers (negative and positive whole numbers), **doubles** can only store decimal numbers, **char** can only store a *single* character key press put inside single quote marks, and String can store anything inside of double quote marks.

**Turn in this sheet to be graded!**