

CSCE 155 – Lab: Data Types

Worksheet – Java Version

Name _____

1. The creator of the Java programming language, James Gosling, was born on May 19th, 1955. How old is he today?
2. Java 1, the first stable version, was released on January 23rd, 1996. How old is Java today?
3. Software testing often involves testing code with known “bad” input in an attempt to break it. Try breaking `Birthday_cli.java` by giving it “bad” input and observe the consequences. Give at least two examples of potentially bad input and the results.
4. Complete **all** the size and range entries in the table below from activity 1

Name	Description	Size (bytes)	Range
byte	A single byte of raw data	1	Minimum: -128 Maximum: 127
char	A single character		Minimum: Maximum:
short	Short integer		Minimum: Maximum:
int	Integer		Minimum: Maximum:
long	Long integer		Minimum: Maximum:
float	Floating point number		Minimum: Maximum:
double	Double precision floating point number		Minimum: Maximum:

5. Demonstrate your working currency conversion program to an instructor; use it to determine the exchange amounts for the following inputs:
 - a. \$250.25
 - b. \$1000.52
 - c. \$968410.12
6. Suppose that you had used only `int` types in your conversion program. Would you be able to use it to convert the US national debt (which as of November 25, 2011 was \$16,295,605,724,786.77)? Why or why not?
7. Mixed types
 - a. Run `Area` program with `base = 3` and `height = 4`. What value do you get? Is this result correct? Execute the program again with inputs of your choice. Does the program give correct results? Explain why not.
 - b. Fix the program by editing the `Area.java` source code so that the program produces correct results. Demonstrate your working program to an instructor.

Lab Instructor Signature _____