**Unit 1: Primitive Types**

**Topic 2: Variables & Data Types**

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| **Name:** |  |

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| **Review details on slides 25 through 32 for what you need to know**  **about variables and data types in Java,** then **X** here when done! → |  |

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| **Sample Program** |  |
| **A.**  **Open up** [**this sample Java program**](https://replit.com/@MICHAELMILLER18/U1T2SampleProgram) that uses variables and a constant of different data types and prints them out as part of sentences using string concatenation.  To see the code, click on "**Show Files**":    And then on Main.java:    **Pro Tip!** You will also notice a **Main.class** file -- this is actually the *compiled* version of Main.java that Java *actually* executes! Click on it and you will notice that you can't read it because it's machine-readable **bytecode**. Humans type the **.java** files, which get *compiled* to bytecode **.class** files.  Click on  to make the Main.java file full screen.  Click on Run to run the program:  **Study what it does and how the code is written!** Pay careful attention to how variables are used, how the code is structured, and the use of comments. You will be building a similar program next 😎 | |

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| **Open up U1T2 Lab in Replit.**  Write a brand new Java program in which multiple variables are declared and initialized and then prints them to the console as part of full sentences using string concatenation. *Include the use of a constant as well!* Also, use at least one single line comment (with //) and at least one multi-line comment (with /\* \*/). See Kaufman’s sample program shared above for an example.  Lastly, you will notice on **line 23** the use of a math operation (multiplication)! We haven't discussed these yet, but you can figure them out 😎. In your program, think of a way to use one of the *other* basic math operations -- add, subtract, or divide -- and use it!  ***You should create an entirely different scenario than the one in the example!***  **Program Checklist:**  **X**   |  |  | | --- | --- | |  | Use several different variables, including *at least one of each* of the following data types: int, double, boolean, String | |  | Declare and initialize all variables and constants correctly. | |  | Use proper **camelCaseNaming** for non-constant variables (example: playerName) | |  | Use a constant in a meaningful way (conversions, math constants, etc.) and use proper conventions. Don't forget that *constants* have **final** in front and are all caps with underscores, like: GRAMS\_PER\_POUND | |  | Use good code style conventions (indentations, spacing between sections, etc.) | |  | Uses string concatenation to combine strings with variables, strings, and/or other non-string values. | |  | Includes a math operation other than multiplication (add, subtract, or divide). | |  | Includes print and/or println statements to produce meaningful output. | |  | Use at least one single line comment (//) *and* at least one multi-line comment (/\* \*/) | |
| When you are finished, **copy/paste** your full program code below; use the **Courier New** font. |
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| Insert a **screenshot** of the printed output produced by your program: |
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| **Partner Check-In!**  Show your code to your partner; have your partner review your code to ensure your program meets the requirements and give you one piece of feedback or suggestion.  **When you review your partner’s program code, do the same thing:** Does it meet the requirements? What is one piece of feedback or suggestion you would make? | **What is your partner’s name?**   |  | | --- | |  |     **What piece of feedback did you receive?**   |  | | --- | |  | |

**Done!**

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