**Guided Exploration 01 Create Compile Run Java Program**

Purpose: Gain experience using an integrated development environment (IDE) to create, compile and run a Java program.

Effort: Collaborate ([Academic Integrity](https://docs.google.com/document/d/1vfCpxFGn-7Ru5fplmD7lK1n_cSFvhtMtsVQg4SCs2OU/edit?usp=sharing))

Points: **20pts (See Rubric in Canvas)**

Due Date: **See Canvas and put on your calendar**

Deliverables: **Upload this document as word doc or pdf with your answers and your .java file as separate files. Do not upload as a zip file.**

**Description**

Create a java program using your environment.

I encourage you to collaborate with others on Guided Explorations but each write your own code and answer the questions individually in your own words. When you ask questions and explain with others you get a deeper understanding but handing in the same exact explanations is not beneficial and not acceptable.

**Exploration: Code Debug Learn Concepts**

Read Lecture 1, Chapter 1 and Chapter 1 Summary. Complete the following.

1. Complete [Survey](https://docs.google.com/forms/d/e/1FAIpQLScXag7adNNu8_YVr3aeyXkZ13tSPtNwMjLnLEqGrgDnnSrdsg/viewform)
2. Follow instructions to set up your environment [Spring 2023 Environment Setup Eclipse and JDK 18](https://docs.google.com/document/d/1X4P2bzWduS3L8LLHYYS2YOs_QeJwr3rc34jpCFeNO0k/edit?usp=sharing)
3. Set up a second  [Java Project](https://docs.google.com/document/d/1ZmJeR-GPzek-M-E31-Zkb2g5rmajlwzFzhJrfysQkwc/edit#heading=h.4jaeaq6jjzs0) for guided explorations called **CS1150GE**
   1. File -> New -> Java Project
   2. This project is created once and is where all your programming guided exploration assignments and other code explorations will be stored.

1. [Create, Compile and Run a Java Class](https://docs.google.com/document/d/1ZmJeR-GPzek-M-E31-Zkb2g5rmajlwzFzhJrfysQkwc/edit#heading=h.x09mmyuor1aa) (File->New->Class) within that project called **LastNameFirstNameGE01**
   1. For example, I would name my java class HardingDebGE01
   2. Please use this naming convention on all assignments.
2. Update the code to add an initial comment.
   1. Your name
   2. Class name
   3. Section (M/W) or (T/R)
   4. Due date
   5. Assignment #
   6. Short description of what the assignment is about
   7. **This initial comment is required on all assignments**.
   8. This initial comment should be the **first lines** in your java file, before any code.

/\*

\* Name: [YOUR NAME]

\* Class: CS1150 (M/W or T/TH)

\* Due: [FILL IN]

\* Description: Guided Exploration 01

\* This program will print a couple paragraphs about my passions and interests.

\* The program will calculate my age doubled. Optional

\*/

public class LASTNAMEFIRSTNAMEGE01 {

public static void main(String[] args) {

}//main

}//Class GE01

1. Add code to the **main** method to print 2 or 3 paragraphs about yourself. Some ideas: what you’re passionate about, what degree you’re working on, favorite hobbies, where you like to travel, etc. Only add a little bit of code at a time, run and compile to help you find errors if they occur.
2. Answer the following

| What is an operating system? What operating system are you using?  An operating system is a software that manages the basic functions of your computer.  Both of my computers run windows 10 |
| --- |
| What is a computer program? What type of programming language is java?  A computer program is software that instructs the computer to complete a task  Java is a High level language |
| What is source code? What does an interpreter/compiler do? What is the file extension for java source code and what is the file extension for your bytecode? Include a screenshot of your two files created for this program that are in your JavaDev\CS1150GE directory. |
| What is an IDE? What IDE are you using?  An IDE is an integrated development environment for writing and compiling code. I use Eclipse and Spyder |
| What is a reserved (key) word in a programming language? List keywords from your program.  Key words are words that have a meaning imbedded in the compiler and cannot be used for other purposes with some keywords being break, double and else. |
| What is a comment? Why do you think comments are important? What are two different ways to write comments in Java - include examples from your code? Comments are used as notes or to document a program, and are ignored by the compiler. You can start a comment with // for a line or /\*  \*/ for multiple |
| List the special characters used in your program and include a description. |
| What is a syntax error? Create a syntax error and run your program. Take a screenshot of the error and put it below.  A syntax error is when your syntax is incorrect, like missing a semi colon at the end of a line. |
| What is a runtime error? Create a runtime error and run your program. Take a screenshot of the error and put it below.  A runtime error is an error in the code itself, like attempting to divide by zero, which will cause the code to crash. |
| What java method did you use to display a message “string” on the console? What are the arguments you are passing to the method? Find a resource for this method and paste the url.  system.out.println(“kAJShdkjahsd”); |
| Why is it important to back up your work? What will you use to back up your work?  It is important to backup work incase your computer shuts down or a program crashes. I have my school drive in raid 0 for backups. |
| **Programming is full of terminology!**  A good study technique for learning terminology is using notecards – start creating a stack of terminology cards now! Here is an example. What other vocabulary is important from the lecture for you to know? List at least 3 with a brief description and if helpful include an example.  Vocabulary  1. High Level Languages - A language that is easy for humans to read like Java that uses a compiler to translate high-level language into machine language  2. Compiler- Responsible for translating High level language into machine code for the computer to read, is often done by your IDE Automatically.  3. JDK- the software for compiling and running java programs  4. Main Method- contains statements that performs a task, Main is where java program starts executing. |