

Java Fundamentals

4-1: Getting Started with Java

Practice Activities

Lesson Objectives:

- Identify components of a Java IDE
- Identify components of a Java application
- Compile an application
- Test to ensure application is complete
- Write the code for GalToLit.java
- Modify a program to execute error free
- Modify a program to use a formula to convert units of measure

Vocabulary:

Identify the vocabulary word for each definition below.

	A naming convention to eliminate spaces in a name, but to ease readability with capitalization.
	To change the different physical location onto which you will store and save your files.
	Stored inside a project, a mechanism for organizing Java classes into namespaces, or containers.
	The method inside a class that runs when the class is compiled and ran.
	A construct that is used as a blueprint to create objects. Also a construct in which objects are created.
	An option to choose a combination of views and editors.
	Areas within the Java IDE that provide a way to navigate a hierarchy of information and allow modifications to elements.

Try It/Solve It:

1. Create a presentation to highlight five or more Views that may be of interest to a programmer using a Java IDE. Use the help system to learn about the Views available in a Java IDE. Work in teams of two to create and deliver the presentation. The presentation should include the following:
 - a. A presentation introduction defining the presentation purpose and the team members.
 - b. A list of five or more Views in a Java IDE that will be highlighted.
 - c. The reason your team selected the five Views to demonstrate.
 - d. The process your team went through to choose the five Views.
 - e. The actual demonstration and description of the components.
 - f. The presentation summary.

2. The formula for converting gallons to liters is: 1 US gallon = 3.785 liters. This program will convert a specific number of gallons (10) to liters and then display the output. The concepts in this practice will be explored in more detail throughout the course. Create a new project, package, and java class with a main method. Use the code below as a starting point and complete the code for the program. (Name your package galToLit and class GalToLit).

```
package galToLit;

public class GalToLit {

    public static void main(String[] args) {
        // declare variables
        double gallons=10;
        double liters=0;
        // add your calculation here

        //output the result to user
        System.out.println(gallons+" gallons equals "+liters+" liters");
    }
}
```

3. The Scanner class can be used to accept input from the user. Modify the code written in step 2 to prompt a user for the number of gallons to compute. To declare an instance of the Scanner class, use the code below:

```
Scanner in = new Scanner(System.in);
```

Your Java IDE may prompt you to import the java.util.Scanner package, or you can manually enter the import statement between the package name and the class declaration as shown below:

```
package galToLit;

import java.util.Scanner;

public class GalToLit {
```

To get a decimal value from the user, use the `in.nextDouble()` method and assign to the gallons variable.

4. Describe three ways you can test the program that converts gallons to liters.