Know Your Integrated Development Environment

Goal: Become familiar with Java and JGrasp Integrated Development Environment (IDE).

- Use JGrasp to type, compile, and run (execute) the following programs.
- Name and save each program using the class name. Save all programs in one folder for future reference.
- These programs illustrate essential programming features and syntax that you may use in class assignments.

No submission is required. Save all programs in one folder for future reference as these programs presents ideas related to future assignments.

```
================================== Program CountDown.java ==============================
// Program CountDown.java
// Demonstrate the difference between print and println methods.
public class CountDown
{
   // Prints two lines of output representing a rocket countdown.
   public static void main (String[] args)
   {
      System.out.print ("Three... ");
      System.out.print ("Two... ");
      System.out.print ("One... ");
      System.out.print ("Zero... ");
      System.out.println ("Liftoff!"); // appears on first line
      System.out.println ("Houston, we have a problem.");
   }
}
```

```
================================== Program Addition.java ===============================
// Program Addition.java
// Demonstrate the difference between the mathematical addition and string concatenation.
public class Addition
{
   // Concatenates and adds two numbers and prints the results.
   public static void main (String[] args)
   {
      System.out.println ("24 and 45 concatenated: " + 24 + 45);
      System.out.println ("24 and 45 added: " + (24 + 45));
   }
}
```

```
================================== Program Roses.java ==================================
// Program Roses.java
// Demonstrates the use of escape sequences for new line and tabs.
public class Roses
{
   // Prints a poem (of sorts) on multiple lines.
   public static void main (String[] args)
   {
     System.out.println ("Roses are red,\n\tVioletes are blue,\n" +
        "Sugar is sweet,\n\tBut I have \"commitment issues\",\n\t" +
        "So I'd rather just be friends\n\tAt this point in our " +
        "relationship.");
   }
}
```

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```
================================== Program Echo.java ==================================
// Program Echo.java
// Demonstrate reading a string input from the user.
import java.util.Scanner;
public class Echo
{
   // Reads a character string from the user and prints it.
   public static void main (String[] args)
   {
      String message;
      Scanner scan = new Scanner (System.in);
      System.out.println ("Enter a line of text:");
      message = scan.nextLine();
      System.out.println ("You entered: \"" + message + "\"");
   }
}


================================== Program GasMileage.java ============================
// Program GasMileage.java
// Demonstrate the use of the Scanner class to read numeric data from the user.
import java.util.Scanner;
public class GasMileage
{
   // Calculates fuel efficiency based on values entered by the user.
   public static void main (String[] args)
   {
     int miles;
     double gallons, mpg;
     Scanner scan = new Scanner (System.in);
     System.out.print ("Enter the number of miles: ");
     miles = scan.nextInt();

     System.out.print ("Enter the gallons of fuel used: ");
     gallons = scan.nextDouble();

     mpg = miles / gallons;
     System.out.println ("Miles Per Gallon: " + mpg);
  }
}


================================== Program Facts.java ================================
// Program Facts.java
// Demonstrate string concatenation and conversion of an integer to a string.
public class Facts
{
   // Prints various facts.
   public static void main (String[] args)
   {
     // Strings can be concatenated into one long string
     System.out.println ("We present the following facts for your "
       + "extracurricular edification:");
     System.out.println ();

     // A string can contain numeric digits
     System.out.println ("Letters in the Hawaiian alphabet: 12");

     // A numeric value can be concatenated to a string
     System.out.println ("Dialing code for Antarctica: " + 672);
     System.out.println ("Year in which Leonardo da Vinci invented "
         + "the parachute: " + 1515);
      System.out.println ("Speed of ketchup: " + 40 + " km per year");
   }
}
```

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