Tutorial Worksheet 4: Programs

- **Include comments at the top of your program**
  Type up programs from the notes and get them to run first.

1. Write a program to print the sum of the even integers between 1 and 40 using a For Loop.
   Save the program as **P1LoopEven.java**

2. Write a program that prints all odd numbers from 20 to 1 using a For Loop.
   Save this program as **P2LoopOdd89.java**

3. Write a program that prompts the user to input two values- a start value and a finish value. The first value is the initial / lower value in the range and the second value is the finish/larger value in the range. Add up all even numbers between the initial value and the finish value.
   Save this program as **P3LoopRange.java**

4. Write a program that prints multiples of 5 less than a 100.
   Save this program as **P4Multiples.java**

5. Write a program to calculate the value of 7.5 raised to the power of 3 using the Math.pow method.
   Save this program as **P5Mathpow.java**

6. Create pseudocode and then using pseudocode write code to solve the following:

   Imagine you need to open a standard combination dial lock but don't know the combination and don't have a pair of bolt cutters. Write a program that prints all possible combinations so you can print them on a piece of paper and check off each one as you try it. Assume the numbers on the dial range from zero to thirty-six and three numbers in sequence are needed to open the lock.

   Save the pseudocode as **Pseudo1.doc and** Save this program as **P6Lock.java**

7. Write a program that calculates and displays the miles per gallon obtained from a tankful of diesel. A driver must be prompted to input the miles driven and the gallons used for each empty tankful of diesel(Both as integers). (Take input from the user for emptying the tank on more than one occassion).

   NOTE: Use sentinel-controlled repitition for the input. All averaging calculations should be floating point numbers.
   Save the program as P7DieselCheck.java

8. Consider the following problem:
10 students were asked to input exam percentage.

Create an **application** (counter controlled) that takes as input the grades from the 10 students and produces the average for the group.

Save the program as **P2Counter.java**

9. Consider the following problem:
A number of students were asked to input their grades.

Create an application **(sentinel controlled)** that takes as input the grades from the various students and produces the average grade for the group.

Save the program as **P3Sentinel.java**