CSc 110 Assignment 1
Introduction to Programming

Due:

Friday Sept. 19, 8pm. Submission time will be checked electronically.

How to hand it in:

Submit the requested files through the assignment 1 link on the CSC110 connex site.

Learning Outcomes:

When you have completed this assignment, you should understand:

- How to design, compile, run and check a simple and complete Java program on your own.
- The effect of escape sequences on printed strings.
- The flow of data values (i.e. the effects of assignment statements).
- How to indent and document a Java program.

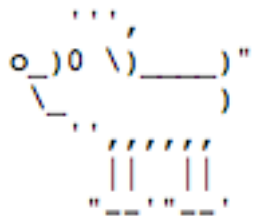
Marking:

You will be marked based on:

- Your code must compile and run.
- Your code should produce the output exactly as requested, and must calculate s correctly in the 2nd part.
- Your code for the position calculation must correctly use variables.
- IMPORTANT: Your code must be formatted nicely (e.g. indentation and spacing) and documented appropriately using comments. Please follow the guidelines in Style_Guidelines.pdf, available in the Resources folder on connex.
- You must use the provided program names: Dog.java and PositionCalculator.java

a) Ascii Art:

Write a complete java program named Dog that produces the following output using System.out.println statements:



Note that the dog looks best when your terminal uses a Courier font. He is composed of the following characters: quote, double quote, dash, comma, | 0, o, backslash, =,), and underscore

Submit: Dog.java

b) Calculating Position

In physics, a common useful equation for finding the position s of a body in linear motion at a given time t, based on its initial position s_0, initial velocity v_0, and rate of acceleration a, is the following:

$$s = s_0 + v_0t + (at^2)/2$$

Write a program called PositionCalculator to calculate and print the value of s. Your code must declare variables for s_0, v_0, a, and t, and then compute s by using these variables.

Test your program using the following values for s_0, v_0, a and t:

$s_0 = 5.0$, $v_0 = 2.0$, $t = 10.0$, $a = 1.5$

Your program with the above test input should print the following, exactly as it appears here (except that the number of decimal places printed does not matter):

```
The new position is 100.0
```

Submit: PositionCalculator.java