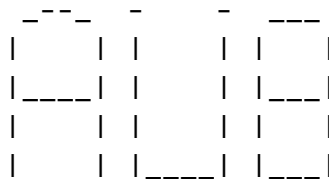




Assignment 1
Due Thursday June 11, 2015 at 11:55 pm

Exercises

1. Write a program, `Hello`, that prints the `Hello, CMPS 200!` message.
2. Write a program, `HelloManyTimes`, that prints the `Hello, CMPS 200!` message 5 times.
3. Write a program, `Logo`, that draws the following logo.



4. Write a program, `Arrows`, that draws the following sequence of forward and back arrows. Use static methods when appropriate.



5. Write a program called, `CalorieAnalyzer`, that takes 5 integer arguments from the command line as follows: number of calories for breakfast, number of calories for lunch, number of calories for dinner, number of calories for snack1, and number of calories for snack2. The program should first display the input you entered on the command line followed by the sum of the calories you consumed.

Sample Run

```
C:\> java CalorieAnalyzer 180 220 200 90 60
Breakfast: 180 kcal.
Lunch: 220 kcal.
Dinner: 200 kcal.
Snack1: 90 kcal.
Snack2: 60 kcal.
Total: 750 kcal.
```

6. The java program given below assigns different values to the integer variable called "value" and then prints out the results on the screen. The program contains some syntax errors. Your job is to fix the syntax errors so that the program will compile and run. Use comments (inside the code) to explain the error and the way you correct it.

```
public class SyntaxErrors
```

```
{
    public static void main(String[] args)
    {
        System.out.println(value);
        int value = 100;
        value = 50;
        System.out.println(value);
        printValue();
    }

    printValue() {
        System.out.println("The final value of value is: " + value);
    }
}
```

7. Write a Java program, `SalesCalculator`, that accepts from command line an integer value representing an amount of a certain purchase. The program should then compute the state and country sales tax. Assume the state sales tax is 4 percent and the country sales tax is 2 percent. The program should display:

- The amount of purchase
- The state sales tax
- The country sales tax
- The total sales tax
- And the total of the sales (the sum of the amount of the purchase plus the total sales tax)

Hint: use the value 0.02 to represent 2 percent and 0.04 to represent 4 percent.

Sample Run

```
C:\> Java SalesCalculator 200
Amount of purchase: 200
State sales tax: 8.0
Country sales tax: 4.0
Total sales tax: 12.0
Total: 212.0
```

8. 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:
- $$s = s_0 + v_0 t + \frac{1}{2} a t^2$$
- Write a java program, `Position`, to declare variables for s_0 with a value of 12.0, v_0 with a value of 3.5, a with a value of 9.8, and t with a value of 10, and then write the code to compute s on the basis of these values. At the end of your code, print the value of your variable s to the console.
9. This problem is exactly the same as the one before, except that you need to pass the values of s_0 , v_0 , a , and t from command line. Name your program `PositionVersion2`

Submission Instructions

- Your submission must consist of a zip archive that contains all .java files. No additional files should exist in the .zip archive.
- The name of the zip file must adhere to the following naming convention `asst1_<netid>`, where `<netid>` stands for your AUBnet user name. These zipped files will be processed automatically so please make sure you use this naming convention. The single zipped file must be uploaded to Moodle.