

CSci 111 - Computer Science I
Fall 2022
Closed Lab 1

Programming Activity

1. Key in the starter code for **SalesTax.java** (see code on next page). Click **File** on Notepad++, then click **New**, save the file as **SalesTax.java**.
2. This file contains a simple Java program that contains errors. Compile the program. You should get a listing of syntax errors. Correct all the syntax errors, you may want to recompile after you fix some of the errors.
3. When all syntax errors are corrected, the program should compile. Now, develop some test data. Use the chart below to record your test data and results when calculated by hand.
4. Execute the program using your test data and record the results. If the output of the program is different from what you calculated, this usually indicates a logic error. Examine the program and correct logic error. Compile the program and execute using the test data again. Repeat until all output matches what is expected.

| Item | Price | Tax | Total (hand-calculated) | Total (computer output) |
|------|-------|-----|-------------------------|-------------------------|
| | | | | |
| | | | | |

Code Listing (SalesTax.java)

// This program calculates the total price which includes sales tax.

```
import java.util.Scanner;
```

```
public class SalesTax {
    public static void main(String[ ] args) {
        //identifier declarations
        final double TAX_RATE = 0.07;    // PROGRAM CONSTANT

        String item;                      // INPUT
        double price;                     // INPUT
        double tax;                       // OUTPUT
        double total;                     // OUTPUT

        //create a Scanner object to read from the keyboard
        Scanner scan = new Scanner(System.in);

        //display prompts and get input
        System.out.print("Item description: ");
        item = scan.nextLine();

        System.out.print("Item price: $");
        price = scan.nextDouble();

        //calculations
        tax = price + TAX_RATE;
        totl = price * tax;

        //display results
        System.out.println (item + " $" + price);
        System.out.println ("Tax $" + tax);
        System.out.println ("Total $" + total);
    }
}
```

Submitting your work: When complete, **raise your hand** to let the instructor/TA know that you are ready for your work to be checked. You will then be asked to demonstrate that your code works correctly.

Notice: You need to **submit the program** on Blackboard. Click on **Closed Lab 1** link in Bb, click **Browse My Computer**, attach the program, and then click **Submit**.