CS 1050 HW #2

1. The variable a starts with the value 10. a = 10

The variable b starts with the value 2. b = 2

The variable c starts with the value 4. c = 4

Store the value of a times b in a. a = 10\*2 = 20

Store the value of b times c in c. c = 2\*4 = 8

Add a and c, and store the result in b. b = 20+8 = 28

Display the value in b on the screen. b = 28

2. **Sales Tax Algorithm**

Input/scan retail price of the item (Price of Item).

Fetch sales Tax Rate %.

Sales Tax = Tax Rate % \* Price of Item

Total Sale = Price of Item + Sales Tax

Display Sales Tax

Display Total Sale

**Account Balance Algorithm**

Fetch Starting Balance

Fetch Deposits

Fetch Withdrawals

Fetch Interest Rate

Current Balance without Interest = Starting Balance + Deposits – Withdrawals

Interest Amount = Current Balance without Interest \* Interest Rate

Current Balance = Current Balance without Interest + Interest Amount

Display Current Balance

**Where is the Bathroom Algorithm**

(Note: can’t remember how to get to the bathroom since I am not in the AES Building so this is a generalized algorithm)

Go to CS 1050 Classroom Exit

Open door and walk 4 steps

Turn right and walk 15 steps

Turn right and walk 30 steps

Check if stair case is next to you. If not, walk one more step till it is

If the star case is next to you, turn towards the walkway directly right of it

Walk 10 steps, turn right

If male, go right

If female, go left

3. **Syntax**: is the structure/grammatical correctness of a statement, or in our case, the line of code. Following a set of rules, the correct structure of said statement can be constructed.

**Semantics**: is the “meaning” of a statement or line of code. This is where the line can be valid or invalid. Semantics is important for deciphering the meaning of a line because a line can be syntactically correct but still have an invalid meaning or have an undecipherable purpose.