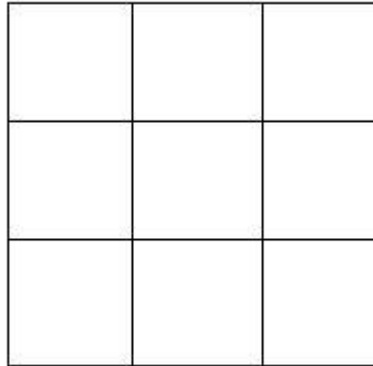


COP 3223 Program #4: Turtle Time and List Power

Part A: Turtle Tac Toe (ttt.py)

Hopefully you enjoyed the turtle videos. For this portion of the assignment, you'll write a short program that prints out an empty Tic-Tac-Toe grid, using python's turtle. You can scale the grid to be the size that you want, but make sure that its shape looks like this:



For a bit of extra credit, allow two users to play tic tac toe against each other by prompting them which row and column they want to put their piece (row 0 – 2, col 0 – 2).

Part B: Grocery List (grocery.py)

Write a program where the user enters a grocery list and then enters what they have actually bought. Afterwards, print out a list of items left to obtain as well as a list of unnecessary items that they bought. Print both of these lists in alphabetical order. The two input lists can come in any order and may contain repeats. For example, if the initial list contains “eggs” five times but we only buy “eggs” two times, then our list of items left to buy should contain three copies of “eggs”.

Sample Program Run

```
Please enter the number of items on your grocery list.
```

```
6
```

```
What is item #1 on your list?
```

```
eggs
```

```
What is item #2 on your list?
```

```
cheese
```

```
What is item #3 on your list?
```

```
milk
```

```
What is item #4 on your list?
```

```
ham
```

```
What is item #5 on your list?
```

```
eggs
```

What is item #6?

bread

Please enter the number of items you bought.

4

What is item #1 that you bought?

milk

What is item #2 that you bought?

chips

What is item #3 that you bought?

turkey

What is item #4 that you bought?

cheese

Here are the items you still need to buy:

bread

eggs

eggs

ham

Here are the unnecessary items you bought:

chips

turkey

Deliverables

Two source files: *ttt.py*, for your solution to problem A, *grocery.py* for your solution to problem B. All files are to be submitted over WebCourses.

Restrictions

Although you may use other compilers and coding environments, your program must run in IDLE.

Grading Details

Your programs will be graded upon the following criteria:

1) Your correctness

2) Your programming style and use of white space. Even if you have a plan and your program works perfectly, if your programming style is poor or your use of white space is poor, you could get 10% or 15% deducted from your grade.