

REAL WORLD APPLICATIONS

DAY FOUR

PROJECT INCLUDE ALBION BOOTCAMP

REVIEW

Variable data types: Strings, integers, floats

Lists: A list is a group of items. Each item in the list has an **index**.

Functions: A function is a block of code that takes in inputs (parameters) and outputs something (return or print).

If, elif, else: Runs a block of code if a condition is **True** or else if **False**.

For Loops/While Loops: Loops that loop the same code until a condition or the end is reached.

UPPERCASE FUNCTION

Build a function that returns the number of uppercase letters in a string that is passed through a parameter.

For example: `upper("uPpeR")` returns 2

Hint: Use `isupper()` function

REVERSE LETTERS OF A STRING

Build a function that reverses the letters of a string.

For example: `reverse("cool")` returns `looc`

Hint: Create a new variable that holds a string.

Finish winner()

Finish the winner() function. It should:

1. Take in the board
2. Print out the winning player

Hint: Look at the **checkWin()** function.

Finish playOne()

Finish the playOne() function.

playOne() must:

1. Loop until board is full (hint: boardIsFull) and there is no winner (hint: checkWin). Print the winner after the loop.
2. Switch players each loop
3. Ask player to type in their move but if move is not valid, then ask player to type in their move again
4. Print the board once each move is completed

So do you not want a final project handout then? Up to you, I'd just like to put this up while they work. + we're not having a powerpoint on the last day

BREAK TIME

LIBRARIES

Python is a very useful language because it is extremely well developed.

Libraries are functions that other programmers have written to make your programming life easier. You have to import these libraries:

```
from library import function
```


RANDOM

The random library is a useful library that programmers use frequently

It can chose a random item from a list, or a random integer from a range, or even a random float

Importing randint in python:

```
from random import randint
```

Then, calling randint:

```
randint(lowest, highest, step)
```

Step is optional

RANDOM ACTIVITY

Create a function that picks a random item from a list.

Create a function that chooses five random integers and adds them together

ARTIFICIAL INTELLIGENCE



DAY FOUR COMPLETE
SEE YOU TOMORROW!