1. Hello World

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1.01 | Set Up | IDE, python | Syllabus and Grading and Project Demo | Sign Up Sheet |
| 1.02 | Python Set Up (Interactive Mode) | Syntax, Interpreter, prompt, terminal, printing, string, integer, value, | Practice using interpreter | Scavenger Hunt |
| 1.03 | Python Set Up (Script Mode) | Script, compile, run, output | Practice using save, running files via terminal | Basic File save |
| 1.04 | Variables | Variable, equality (passing values around) | Practices storing, updating, pacing around variables | Playing with variables |
| 1.05 | User Input | Input | Storing user input | Knock-Knock Jokes |
| 1.06 | Quiz/Debugging | Syntax error, runtime errors, semantic error | Practice identifying errors and diagnosing them | Quiz |
| 1.07 | Madlibs |  |  |  |

1. Data Types & Expressions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2.01 | Binary Day | Binary, Data Types | Uplugged Activites around binary |  |
| 2.02 | Strings vs. Integers vs Floats (1 day) | Type, string, floating point, casting | Different representation of data in python. In class worksheet, practice converting and print results. Should be a bit of review. | Halving program |
| 2.03 | Lists (2 days) | index, | Lists as a way to store data, and accessing data from it | Buzz Feed Basic Quiz |
| 2.04 | Lists Part 2 (2 days) | Adding/removing/slicing | Practice making sub-lists and adding/removing items from lists | Create a Sentence/ Quiz |
| 2.05 | Booleans & Expressions (2 days) | Evaluating and composing | Knowing what a Boolean expressions is and being able to compose and evaluate it | Describe self using Boolean composed together (20 questions) |
| 2.06 | Conditional statements | if, else, elif |  | College/Restaurant/TV Show Recommender |
| 2.07 | Game Loop | While | Discuss as a game loop | Basic Game. Closes on typing quit, returns all the user inputs a user has given |
| 2.08 | Adventure Quest (Zork)/ Choose your own Fate |  |  |  |

1. Functions (p. 1)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3.01 | Built in Functions/imported functions | Function, type, str, print, abstraction, arguments, calling, importing, returning | Use these keywords, talk about abstraction, arguments, calling, importing, returning | 8 ball |
| 3.02 | User defined functions | def, | Creating and naming functions practice | Given a card shuffle algorithm, write a draw algorithm that prints out card you drew. Draw 2 |
| 3.03 | Return vs print | Returning, null, void | Difference between printing and returning | Play the game war |
| 3.04 | Debugging day/scope | Practice fixing errors, going over common issues | Variable scope and updating lists vs updating variables | In class activity/worksheet |
| 3.05 | Oregon Trail |  |  |  |

1. Loops

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 4.01 | For each loop | For each, in, item, | Practice going through items in lists and strings | Count the vowels |
| 4.02 | For loop | Range, | Practice printing out items of a list in a different way | make an alphabet code |
| 4.03 | Nested For loop | Nested, | Stack trace, use functions with for loop in it, elements of different types | Printing out Patterns |
| 4.04 | Debugging Day | Scope |  |  |
| 4.05 | Drawing/ Brick building or Tic-tac-toe or cards |  |  |  |

1. Functions (p.2)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 5.01 | EarSketch: Intro | DAW, sound tab | Playing beats, show off a song, find songs that might be easy to make |  |
| 5.02 | EarSketch:Music | Beats, tempo, measure, rhythm, meter | Basic song |  |
| 5.03 | EarSketch: Functions | fitMedia, setEffect, makeBeat | Song in rounds? |  |
| 5.04 | EarSketch: User Defined |  | Creating repeatable sections of songs |  |
| 5.05 | Complex Song/ Make a song |  |  |  |

1. Dictionaries

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 6.01 | Creating Dictionaries | Key-value, dictionary, | Creating a dictionary | Internet speak dictionary |
| 6.02 | Adding/removing/getting | Inserting, deleting | Getting items, replacing, adding, deleting | Word Count |
| 6.03 | Storing lists | Inserting, appending |  | Weekly ToDo Lists |
| 6.04 | Google Search discussion | Fun!!! |  |  |
| 6.04 | Looping through dictionaries | Keys, values | Creating repeatable sections of songs | Most Frequent word |
| 6.05 | Project/ Guess Who/ Word Count |  |  |  |

1. Classes/OOP

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 7.01 | User Defined Types | Class, object, instance | Given examples, create classes | Use the RGB type and create colors (look up what the colors are) |
| 7.02 | Creating Types | Self, class, instaniating | Make your own class | Make your own Pet class |
| 7.03 | Attributes and Methods | Attribute, method, functions and variables | Adding attributes and methods onto types and making calls to them | On the pet class implement some attributes and methods on the pet |
| 7.04 | Inheritance | Inheritance, child, parent |  | Given a generic pet class overwite some methods and make a dog class |
| 7.05 | Pokemon |  |  |  |