Graphical user interface, text, application, email

Description automatically generatedWeek 4

Python Logical Flow Control

Logical Flow Control – programs control flow – order that the code is executed, regulated by conditional statements loops and functions, default mode, lines of code are executed from top to bottom,

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Description automatically generatedSequential – execution happens in sequence, default mode, lines are executed from top to bottom, rarely linear or simple

**See video for more notes. These are not complete**

Selection **decision** or **branching** **statements** tests various conditions and executes instructions based on which one is true

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Description automatically generatedLoop statements – while, for, range(); combined with other loops to enhance repetitive actions, uses break and else

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Graphical user interface, text, application

Description automatically generatedA screenshot of a computer

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Text

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Method = . separates it makes it a method

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Description automatically generatedAttributes describe

Library object method ------research these

Text

Description automatically generatedArgument – value passing through a function

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Day 2

Modules and Libraries – code with useful features that were created by other programmers in python, reduce the amount of code that has to be written from scratch

Modules- module is a chunk of related code saved in the same file, random module generates a random number, date/time manipulates date and time data

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Description automatically generated with medium confidence

Packages – used for creating larger applications, contain several modules, directory includes \_init\_.py in name

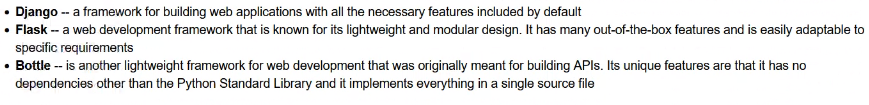


Libraries – similar to packages contains mult modules and/or packages

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Frameworks – collection of modules and packages that fast track dev



How to use them – call import function, for specific from import; mainly use specific call functions for better programming practices promotes efficiency within the code allowing for faster programs

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Exception Handling

Try/except -surround a dangerous section of code that may not work with try and except, if the code works except is skipped, if the code fails the program carries out the except function not causing a traceback(try this, if it doesn’t work do this)

In except you can name a specific error to return something specifically for that error

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Description automatically generatedTry – lets you test code without crashing the code

Else – executes if no errors

Finally - block lets you execute code regardless of if theres an error

A picture containing text

Description automatically generated

Text

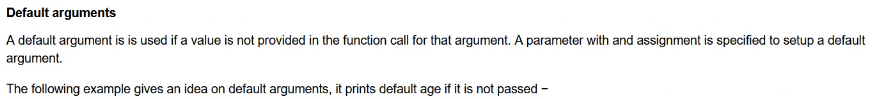
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Defined Functions show up green in python

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Return turns a local variable (var inside a code block) to a global variable (accessible to the rest of the code)

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Description automatically generatedDay 3

Arrays and intro to NumPy

Diagram

Description automatically generatedArray – collection or ordered series of elements of the same data type, stores values in square brackets under a var name, similar to lists except lists store various data types and arrays only store a specific data type, can access value by referring to an index number, manipulate arrays by array module – very complex; central data type of numpy; shape specifies array shape by dimension; NumPy – manipulates multidimensional arrays; python doesn’t support arrays naturally

NumPy Array vs list – occupy less memory, faster, more convenient

Chart, diagram

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Graphical user interface, text, application

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Description automatically generatedYou can create arrays with a range of elements

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Description automatically generatedNumPy supports more data types associated with numbers than Python and is more precise with numbers

Text

Description automatically generatedDiagram

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