**Homework July 24, 2021**

Introduction to Programming with Python

1. What is List Comprehension in Python?

It’s a way to set up a number of for in loops to function on a single line of code and one can even generate lists from that single line of code.  
variable\_list = [list]  
End\_variable = [action/verb(variable \*\*3) for variable in variable\_list]

2. What is a Python Conditional and what is it used for?

It is an if else or elif/else loop for setting conditions to your code.

3. What happens when you return a value for a python method/function?

You can use the value to perform further computations or whatever else you want to do with it.

4. What is a default argument and explain a use case.

A default argument is a default result given if no other arguments are given. So one can use as a default “No team given” and if one tries to call a team that one hasn’t made a value for, or if one doesn’t call a value at all, the default will appear instead.

5. What is a named argument?

Named arguments, also known as keyword arguments, lets you assign keywords to values and treats in like a dictionary, then you can use the keywords in your arguments to call on those values. It’s useful if you have a lot of values and it is not in an order your wish, assigning keywords to those values will allow you to bring them where you wish.

6. What does the \*args do in a python function and how might you use it?

It packs in a list of arguments. You can use it when you def a function and put it in the argument so that Python treats the arguments as a list. It’s very helpful if you don’t know how many arguments you may have.

7. What are Keyword Arguments in Python?

See named argument.

Advanced Python Programming

1. What is a Class in python?

Python is an object oriented language and creating a class creates an object so new instances of that object can be made.

2. What is a dunder method in Python?

It’s a special method with double underscores at the beginning and end of the method. It is how Python is supposed to handle the data in that class.

3. What is self in python and how might we use it?

Self is the same as ‘this’ in JavaScript. It tells Python to look back at the Class itself for its attributes and methods.

4. How does inheritance work in python?

It allows a class to have all the same attributes as its parent class.

5. What is pipenv?

It’s a tool that creates a shell for a project. It protects it from changes that may happen to something the program is dependent on. So maybe an import updates and changes the way the program had worked before, crashing it and other programs it was used for, when it is in a pipenv shell that won’t happen.

6. What is Polymorphism?

It allows one to change methods in a child class.

7. What is the purpose of **init** in python?

It instantiates a class.

8. What is a decorator and what is its purpose in python?

@It modifies the behavior of a function or class by taking a function as an argument in another function and called inside the wrapper function.

9. What is a Generator in python?

It’s an iterator that can be used to loop through a large amount of data.

10. How do you declare a new instance of a class?

You call the class and then use \_\_init\_\_.

Python API Development with Flask

1. What is Flask?

It’s a micro-web framework tool used to build up web-applications.

2. What is an API?

It stands for Application Programming Interface. It is software that allows two applications to communicate with each other.

3. What is the purpose of an API endpoint?

It’s a URL that lets the API access the server.

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5. What is SQLite?

It’s a lightweight database used to access multiple databases at once.

6. Explain how you can use the HTTP verb POST.

GET and POST are the two most common methods. You can use it to post new data to a specified source.

7. Explain how you can use the HTTP verb GET?

GET gets new data from a specified source.

8. Explain how you can use the HTTP verb PUT.

PUT puts new data at the designated space in a specified source.

9. Explain how you can use the HTTP verb DELETE.

DELETE deletes data from a specified souce.

10. Explain what SQLAlchemy is?

It’s an object relational mapper. It allows the not objected oriented SQL to interact as objects for Python.

Flask Homework





