**100 Days Course Progress Report**

For the first few days, I did not find anything difficult or hard as I already knew everything contained in those days.

**Day 1**: On day one, I was introduced to how the course would work and what resources I should have, like Visual Studio Code. I also learned about how the Python console works and received a brief introduction to input functions and strings.

**Day 2**: On day two, I was introduced to understanding data types and how to manipulate strings, including f-strings like the previous day.

**Day 3**: On day three, I was introduced to if statements and logical operators like NOT, OR, and AND. I also learned how to use the if-else function and how to use multiple if statements in succession.

**Day 4**: On day four, I was introduced to lists in Python and how the random module works. I also learned how to append items to a list.

**Day 5**: On day five, I was introduced to looping a block of code using for loops and while loops and created a password generator.

**Day 6**: On day six, I was introduced to Python functions and the importance of indentation in Python. I also learned how to define and call Python functions.

**Day 7**: On this day, I created code for the game *Hangman* and learned to break down complex problems into flowcharts.

**Day 8**: On day eight, I was introduced to working with functions with parameters and created a *Caesar Cipher* to encrypt and decrypt words input into the system and i also used the for loop function and if function i learnt from day 5 and 3 .

Major Issue: The problem i encountered while making it was that once you try shifting it past z it would result in an error it took me an hour to figure out how to fix it

**Day 9**: On this day, I was taught how to use dictionaries in Python and how to use nested lists and dictionaries. I created a *Secret Auction Program* where users input hidden bids, and the highest bid is compared.

**Day 10**: On this day, I was taught how to make functions with outputs that return a value. I also created a calculator project which can allow a user to add subtract multiply or divide. I found creating functions with outputs a bit difficult at first but eventually got the hang of it.

**Day 11**: On this day, I completed my first capstone project (a project done independently), the *Blackjack* project.

**Day 12**: On this day, I learned about local and global scope variables and how to modify them and created a number-guessing game.

**Day 13**: On this day, I was taught how to debug my code by first describing the problem, reproducing the bug, and then evaluating each line.

**Day 14**: On this day, I completed another capstone project called *Higher or Lower*.

**Day 15**: On this day, I completed another capstone project called the *Coffee Machine* code which has a limited amount of resources and removes a certain amount depending on what you ordered a latte an espresso or a cappuccino.

**Day 16**: On this day, I learned how to use Object-Oriented Programming (OOP) and how to separate my code into different files for better organization. I also learned how to add Python packages and fixed the *Coffee Machine* project.

**Day 17**: On this day, I learned how to create classes in Python and built a *Quiz Project* using OOP where i made for files the data file which holds the questions the main , the question model and the quiz\_brain which has functions like checkanswer or still has questions . By this time, I understood it better. I also learned about class constructors and the \_\_init\_\_() function.

**Day 18**: On this day, I learned how to use the turtle module to create a Graphical User Interface (GUI) and made it draw a square, dashed lines, different shapes, and randomly walk around using the random module.

**Day 19**: On this day, I created a *Turtle Race* and an *Etch-A-Sketch* with the turtle module. I also learned about Python higher-order functions and event listeners, which allowed the *Etch-A-Sketch* app to respond to button inputs.

Major Issue: Controlling the turtle and changing its shape was a major issue i had here it took a while to figure it out

**Day 20**: On this day, I built a *Snake Game* by first creating the snake body and then animating its segments, i also created a snake class and used event listeners to allow the snake to be controlled by the user.

Major Issue: The major issue here was creating the snakes multiple segments and making them move simultaneously

**Day 21**: On this day, I learnt about class inheritance and completed the *Snake Game by giving it collision with food making it add segments and also making a game over whenever it touches its self or the walls* .

Major Issue: The major issue was making it add segments every time the snake ate food

**Day 22**: On this day, I created *Pong i set up the main screen and created classes for the ball and the paddles, making it so that the paddle is controlled by the user and the ball bounces and made it that if the ball touches the left side or right it will give scores to the other person also adding the ability for someone to change the ball speed* .

Major Issue: The major issue was making the ball bounce around in a sensible manner and also changing the speed as at first the ball was moving too fast but eventually i found a way to slow it down

**Day 23**: On this day, I created a *Turtle Crossing Game which is similar to the chicken cross game where a chicken has to cross the road the difficult part was making the various level speeds for the cars*.

**Day 24**: On this day, I improved the *Snake Game* to include a high score and learned how to pull values from other files to store the high score. I also improved it by learning how to open, read, and write to files using the with statement also allowing it to save the highscore in the file and bring display it as the game is going.

**Day 25**: On this day, I learned about the pandas module, which helps in reading CSV data and working with rows and columns. I created a *U.S. States Guessing Game* using turtle graphics which can help in remembering the states in the us as it also saves the states you couldn’t get.

**Day 26**: On this day, I learned about list comprehension and created a *NATO Alphabet Project which can helps in spelling out things like instead of G-A-R-E-N it would be G for Gamma A for alpha and the same for the rest*.

Major Issue: I found creating dictionaries using dictionaries comprehension to be a bit difficult but eventually i got the hang of it

**Day 27**: On this day, I learned about Tkinter and how to create the windows ,labels , buttons and entries and how to manage the layout using the pack place or grid functions that come with tkinter and the arguments in functions (optional and compulsory) and i also created a unit converter.

Major Issue: At first i found the grid function to be odd and it didn’t make sense to me but after a while i finally understood how to use it

**Day 28**: On this day, I learned how to use the Canvas in Tkinter to add images and put what i learnt in the last class into practice to create pomodoro and app that is a timer for the first 25 minutes is work time after that it would be a five minute break and then back to work.

Major Issue: The issue was making it so that the timer would actually go down because at first it would only show 25:0 instead of 25:00 and after it hit the zero it wouldn’t go to 59 but after a while i figured out a way to fix it

**Day 29**: On this day, I created a *Password Manager* in Tkinter creating functions for generating passwords randomly which i made it so that it will be copied to your clipboard, implementing what i learnt from the previous day.

**Day 30**: On this day, I learned about try and except error handling and how to write, read, and update JSON data for the passwords in the *Password Manager*.

Major Issue: For some reason whenever i typed the password in it would not save on the json file after a long time it worked

**Day 31**: On this day, I completed another capstone project called the *Flash Card App which will help in learning languages as it shows a word in French and if you know it you click yes else you click no and it stores that word in a file called to learn*.

Major Issue: The major issue was making it so that it would show the French word then its corresponding English word

**Day 32**: On this day, I learned how to use the datetime module and the smtplib module to send emails from my program. I created an *Automated Birthday Wisher* project that sends a message on the recipient's birthday.

**Day 33**: On this day, I started using APIs, learned how to call APIs, how API endpoints work, and how to work with HTTP codes, exceptions, and JSON data. I created an *ISS Overhead Notifier which will inform the user when the iss(the internation space station) will fly over the country you are located*.

Major Issue: The major issue was understanding how exactly the api worked as it took a while for me to fully get how api’s worked

**Day 34**: On this day, I upgraded the *Quiz project from day 17*  to have a GUI and used an API to fetch questions.

**Day 35**: On this day, I learned about API authentication and how to send SMS using the Twilio API. I created a *Weather Forecast App on this day i also learnt about environmental variables which allow me to use the os.getenv function instead*.

Major Issue: *The major issue was that i wasn’t able to test the sending of sms as for some reason Nigerian numbers cannot be used*

**Day 36**: On this day, I created a *Stock Trading News Alert* app.

Major Issue: The problem here was understanding how a stock market chart works.

**Day 37**: On this day, I learned about HTTP POST, PUT, and DELETE and created a *Habit Tracker* using the Pixela API the app and it shows the time you inputed and also displays the day it was when you inputed the figure.

**Day 38**: On this day, I created a *Workout Tracking* project using Google Sheets, Sheety API, and Nutritionix API the project is meant to created a row in goggle sheets that involves the date how long you did the exercise was and how much calories you are expected to lose.

**Day 39**: On this day, I built the first part of a *Flight Deal Finder* project which is meant to find deals at cheap prices and sends a message to you informing you on when and where the flight takes.

**Day 40**: On this day, I completed the *Flight Deal Finder* project by making it that it can be created in google sheet and can now email to anybody you want to email too.

**Day 41**: On this day, I learned about HTML, heading tags, paragraph tags, and self-closing tags.

**Day 42:** On this day, I learned more HTML features, such as the list element, which allows me to organize items into lists. I also learned how to nest a list within another list item and how to add images to a webpage.

**Day 43:** On this day, I learned about CSS and its importance for websites. First, I explored different ways to integrate CSS into HTML—inline, external, and internal methods. I also discovered how to select elements in CSS and apply properties to them.

**Day 44:** On this day , I leaned more about css i learnt how to change the text colours, how to change its properties like its font size and font style , then i learnt about margins paddings and borders

**Day 45:** On this day , I learned about web scraping and how it works using beautiful soup which is a program that allows a user to easily web scrape i also learnt on the legality of webscraping.

**Day 46:** On this day , The project was to create a program that will allow the user to input a year and it will check for the top 100 songs created that year and it will make a playlist for those songs

**Day 47:** On this day, The project was to create a program that checks the url of a live amazon item and checks to see if the price is less than a certain value and it sends an email if so.

Major Issue: The main issue i had was trying to get the price using webscraping as it kept giving me the attribute error