

Journal

Assignment 1 Reflections and Lessons:

Keeping track of my work over a period of time, noting any problems and how I overcame them.

Python coding has similar applications to how we deal with problems in real life.

Examples:

Problem Decomposition: Breaking down a complex problem into smaller problems and working on a solution for each of them rather than the main problem

Decision Structures: How a certain decision can change the entire path/sequence that will be followed. This helped me understand about my personal journey in life and the value of a decision

Looping: The process of doing something over and over until we get the desired result. As not everything can happen after only one try.

Problem Decomposition:

Each plant generates a certain amount of food.

Longer the name of the plant means higher profit, but it costs more to buy as well.

Rain amount is random (random module)

Rainfall determines how much food will be generated from the plant.

Not enough rain a random plant die (random module)

Enough Food=Can buy new plants.

New plants can't be the ones we already own.

Work Entries

Date: 16/9/2022

Time: 1:00 PM- 3:00 PM

Duration: 2 hours

Worked On:

Started with the journal and going through the problem while noting down important points and working on the problem decomposition. Worked on the main function, created the initial main function, Wait function (rainfall, food wasted or not), the Display function which are part of the menu and file reading and writing.

Difficulties:

Constants and variables to be created to be used to accurately describe the function that they carry out.

Solved by using adjectives, nouns and verbs taught in naming conventions and made it easier where to assign which one

Deciding on the flow/sequence of the Wait function

Solved by creating food wasted initially and if a plant would die or not based on the random rainfall value

Certain way to display output for the Display function

Solved by using end and strip function

Each problem was first printed/displayed to understand what went wrong and then debugger was also used to understand where exactly the error was occurring in the respective functions (line by line).

Followed the tips present in the assignment question page (each step-by-step process).

Date: 17/9/2022

Time: 12:00 PM - 1:30 PM

Duration: 1 hour 30 minutes

Worked On: Wait function(food generated), Addnew function, Quit function and file reading and writing.

Difficulties:

Problems with writing to a file as overwriting was occurring and two newlines being added. Not writing the plant names in a correct way to the file. (Occurred for the Quit function and Addnew function).

Solved by adding \n to help separate the plant names and using file reading to store the plant names in a list which made it easier to access

Problems with variables to be used. Fixed using global statement for the variables that needed to be kept in record every time the program is executed

Problem with removing a plant from the plants we own based on the rainfall amount and deciding on what random function to remove a random plant.

Solved by using functions taught in class (choice function) and by following the tips present in the assignment question page (each step-by-step process).

SUMMARY

This is a program to simulate a gardening experience.

The entire process starts as soon as you finish reading the question.

1) Breaking down the question into smaller steps/functions to assess each small problem to solve the entire problem to get the desired output

(Problem description).

2) Deciding on what parts will perform what task.

3) Creating a pseudocode.

4) Implementing the pseudocode and writing python code.

The main thing I have learnt through the process is performing a task in a step-by-step manner assessing each problem helps improve the understanding process and yields a better result.

The feedback provided in assignment 1 was extremely useful in correcting my coding methods and standard practices that I follow. I have worked on improving my constant and variable naming using more in-depth rules of naming conventions. Worked on improving my algorithm/pseudocode writing skills and decision structure formats.

In terms of following a systematic development process, I think I am following it much better than before seeing my mistakes and working on them and following the working method provided in the assignment question page.

Next time I will follow the process of breaking down the problem then assessing one problem at a time, test it and once it works then move on. The whole process is a huge and important learning curve in coding.

Report- Individual Assignment Cover Sheet

Student Details

Student Name	Student ID	Student Email ID	JCU Username
Aditya Vijay	14334303	aditya.vijay@my.jcu.edu.au	jc947859

Student Signature
SCHOOL

Aditya V

Unit

Assignment Details

Title: Problem Solving and Programming I Assignment 2

Due Date: 25-09-2022

Date Submitted: 25-09-2022



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Declaration:

Aditya V

Aditya Vijay