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| Full Name | Ethan D’Souza |
| Student ID | 1735988 |

Reflection

**Objective:**

The main goal of this assignment was to get practice with input and output. It was also about decision-making and being creative with code. The task was to build an interactive game that required several user inputs and included integer, float, and string-based decisions. I was supposed to also learn how to use boolean operators to make the story change based on what the user chose.

**Procedure**

To build the game, I followed these steps:

1. Planning the Story: I started by thinking of a simple plot where the user’s decisions would change the story. I picked key points where the player’s input would make a difference, like choosing between the forest or the cave.  
2. Setting Up Decisions: I added different types of choices, like an integer decision for doors, a float for the jump, and a string choice for the paths. Each one had to work with the input correctly.  
3. Using Boolean Logic: I used boolean checks in the game for situations like checking if the player had equipment to deal with an obstacle or if their jump was successful. This helped control what happened next.  
4. Testing the Game: I tested the game with a variety of inputs. I used correct ones and also wrong ones to see if the game handled them right. I tried to see what would happen if someone entered something unexpected.

Some key ideas explored included:

* Using loops for input validation so the game asked again if the input was not valid.
* Making different paths using if/elif/else statements based on what the player chose.
* Using boolean operators to check conditions and make the game more interactive.

**Results:**

The game mostly worked as I planned. The decisions and outcomes matched what I expected. The game followed each path correctly and showed the right response depending on the player’s input.  
- I tried a bunch of test cases, including extreme ones. For example, when I entered numbers outside the range for the door or jump, the game showed the right message and asked again for a valid input.

**Reflection:**

Challenges:

* One problem was making sure the loops did not make the player enter the same thing twice, even when it was right. I fixed this by changing the loop conditions.
* Another challenge was getting the boolean checks to work in different parts of the story, like checking if the player had equipment. I had to think carefully about how the game would react based on the player’s status.

**Programming Rules:**  
1. Plan: I wrote out the story and decision points before coding. This helped me stay organized.  
2. Design: I worked on a proper algorithm, so that the code would be easier to complete, and then finally worked on it as well.

3. Test: I used a lot of test cases to make sure everything worked and handled different inputs correctly.

Overcoming Challenges:  
- For the input validation issue, I made sure the loops were simple and only repeated when needed.  
- For the boolean checks, I had to test different scenarios until I got the right outcomes.

Takeaways:  
- Planning the story before coding made it easier to write the code later.  
- Validating input is important so the game works smoothly for the user.  
- Using booleans helped make the game more interactive and flexible.

Learning Experience:  
I think I learned what I was supposed to for this lab. I got a lot of practice with handling input and using decision-making in code. Doing this alone made me think through each part carefully. It was challenging at times, but it was also a good way to learn from my mistakes.  
Overall, the lab showed me why planning, designing, and testing carefully is important for making an adventure game work well.