

Python Masterclass-3 Assignment

1. Dictionary Quest-

Task:

You are on a quest to collect various items in different locations. Your task is to create a dictionary to keep track of the items you find in each location. Write a Python program that allows you to add items to the dictionary, remove items, and check if a specific item exists in a location.

➤ Requirements:

1. Create an empty dictionary to represent the player's inventory.
2. Prompt the user to enter a location and an item found in that location.
3. Add the item to the inventory dictionary with the location as the key and the item as the value.
4. Allow the user to remove an item from a specific location.
5. Implement a function to check if a specific item exists in any of the locations in the inventory.
6. Display the current inventory after each operation.

2. Set Collector-

Task:

You are a collector of unique items. Your task is to create sets of items based on their categories and perform operations on those sets. Write a Python program that allows you to create sets, combine sets, find common elements, and check if one set is a proper subset of another set.

➤ Requirements:

1. Prompt the user to enter items and their categories.
2. Create sets of items based on their categories.
3. Allow the user to combine two sets into a single set.
4. Implement a function to find and display the common elements between two sets.
5. Implement a function to check if one set is a proper subset of another set.
6. Display the sets and the results of the operations after each step.

3. Number Challenge-

Task:

You have encountered a number challenge! Your task is to solve different number-related puzzles using control flow statements. Write a Python program that prompts the user to enter a number and perform operations to determine properties of the number.

➤ Requirements:

1. Prompt the user to enter a number.
2. Check if the number is positive, negative, or zero, and display the result.
3. Check if the number is even or odd, and display the result.
4. Prompt the user to enter a divisor and check if the number is a multiple of the divisor, displaying the result.
5. Provide feedback to the user based on their answers and encourage them to solve more number challenges.