Assignment – 5.1

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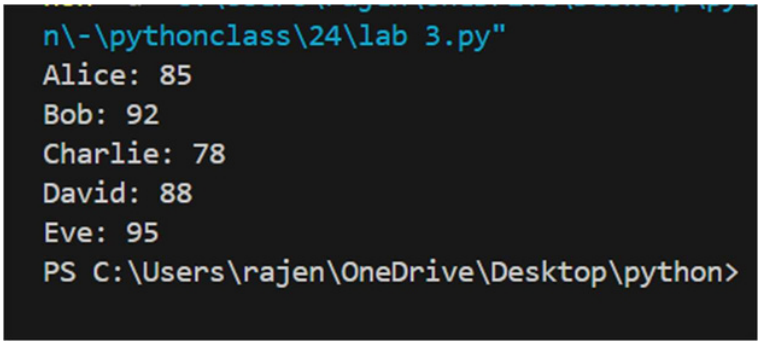
Ques 1 .Write a program that iterates over a dictionary of student names and their marks, printing each student's name and marks.

```
student_marks = {
  "Alice": 85,
  "Bob": 92,
  "Charlie": 78,
  "David": 88,
  "Eve": 95
}
for student, marks in student_marks.items():
  print(f"{student}: {marks}")
```

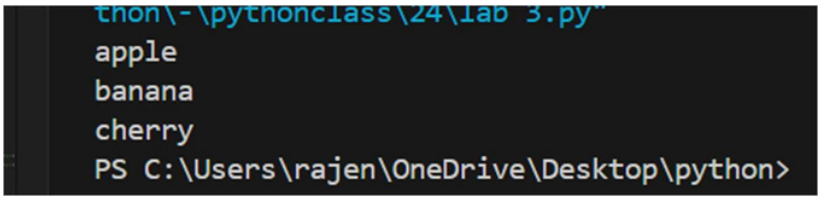


2.Given a list of fruits fruits = ["apple", "banana", "cherry"], print each fruit using a for loop.

```
fruits = ["apple", "banana", "cherry"]

for fruit in fruits:

  print(fruit)
```



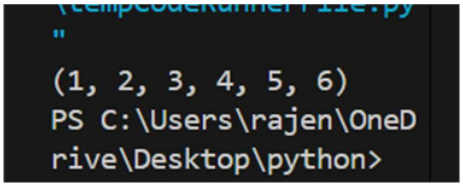
3. Given two tuples (1, 2, 3) and (4, 5, 6), concatenate them and print the result.

```
tuple1 = (1, 2, 3)

tuple2 = (4, 5, 6)

result = tuple1 + tuple2

print(result)
```



4. Write a program to replace all spaces in a string with hyphens using replace().

```
original_string = "Hello World! This is a test."
modified_string = original_string.replace(" ", "-")
print(modified_string)
```

```
ve\Desktop\python\-\pythonclass\24\lab
 3.py"
Hello-World!-This-is-a-test.
PS C:\Users\rajen\OneDrive\Desktop\pyt
hon>
```

5. Write a Python program to add a new key-value pair to a dictionary and update the value of an existing key using update().

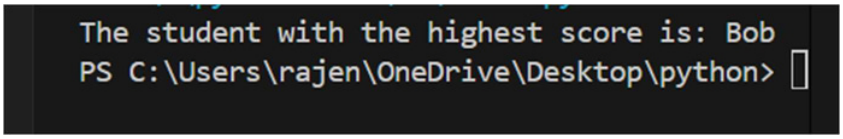
```
student_scores = {
  "Alice": 85,
  "Bob": 92,
  "Charlie": 78
}
student_scores.update({"David": 88})
student_scores.update({"Alice": 90})
print(student_scores)
```

```
4\lab 3.py"
{'Alice': 90, 'Bob': 92, 'Charlie': 78, 'David': 88}
PS C:\Users\rajen\OneDrive\Desktop\python>
```

6. Write a Python program to find the key with the highest value in the dictionary scores = {"Alice": 85, "Bob": 90, "Charlie": 88}.

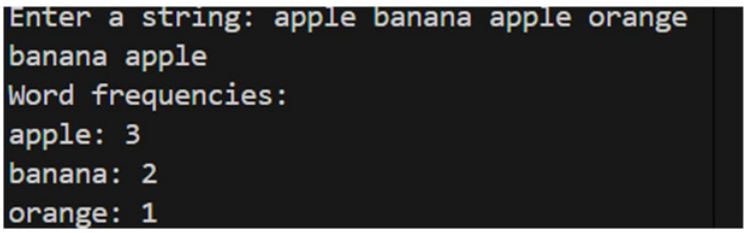
```
scores = {"Alice": 85, "Bob": 90, "Charlie": 88}
max_key = max(scores, key=scores.get)
```

print(f"The student with the highest score is: {max_key}")



7. Write a Python program that takes a string as input and counts the frequency of each word in the string using a dictionary.

```
input_string = input("Enter a string: ")
words = input_string.split()
word_count = {}
for word in words:
    if word in word_count:
        word_count[word] += 1
    else:
        word_count[word] = 1
print("Word frequencies:")
for word, count in word_count.items():
    print(f"{word}: {count}")
```



8. Write a program that inputs a list of numbers and prints a new list with only the unique elements.

```
input_list = input("Enter a list of numbers separated by spaces: ").split()
numbers = [int(num) for num in input_list]
```

```
unique_numbers = list(set(numbers))
print("List of unique numbers:", unique_numbers)
```

```
Enter a list of numbers separated by space
s: 1 2 2 3 4 5 1 3 6
List of unique numbers: [1, 2, 3, 4, 5, 6]
```

9. Write a Python program that takes a string, converts it into a list of characters, reverses the list, and then joins it back into a string to print the reversed string.

```
input_string = input("Enter a string: ")
char_list = list(input_string)
char_list.reverse()
reversed_string = ''.join(char_list)
print("Reversed string:", reversed_string)
```

```
\python\-\pythonclass\24\lab3and5.py"
Enter a string: Python
Reversed string: nohtyP
PS C:\Users\rajen\OneDrive\Desktop\python
```

10. Write a Python program to store student information (name, age, course) using a dictionary, and allow the user to input the details of multiple students. Later, print the details of each student.

```
students = {}
num_students = int(input("Enter the number of students: "))
for _ in range(num_students):
    name = input("\nEnter student's name: ")
    age = input(f"Enter {name}'s age: ")
```

```
 course = input(f"Enter {name}'s course: ")
    students[name] = {"Age": age, "Course": course}
print("\nStudent Details:")
for name, details in students.items():
    print(f"\nName: {name}")
    print(f"Age: {details['Age']}")
    print(f"Course: {details['Course']}")
```