

Awfera LMS

Assignment 01 Python

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Question 1: Code Along

Problem: Write a Python program that takes a string as input and prints out the following:

1. The string in reverse order.
2. The number of vowels in the string.

```
# The string is reversed using the slicing method[::-1]

# Take input for the string
input_string = input("Enter a string: ")

# Reverse the string
reversed_string = input_string[::-1]

# Count the number of vowels
vowels = "aeiouAEIOU"
vowel_count = 0
for char in input_string:
    if char in vowels:
        vowel_count += 1

# Print the results
print("Reversed string:", reversed_string)
print("Number of vowels:", vowel_count)
```

```
Reversed string: 'dammah'
Number of vowels: 2
```

Question 2: Hands-on Coding Project

Problem: Create a Python program that: ● Takes an input number from the user. ● Checks whether the number is even or odd. ● Prints the result.

```
# Take an input number from the user
num = int(input("Enter a number: "))
# check if the number is even or odd
# i us % function to check the remainder of the number when divided by 2
# if the remainder is 0, then the number is even
# if the remainder is not 0, then the number is odd
if num % 2 == 0:
```

```
    print(f"The number {num} is even.")
else:
    print(f"The number {num} is odd.")
```

The number 2 is even.

Question 3: Virtual Environment Application Problem: Create a Python program that: 1. Takes a list of integers as input.

1. Creates a new virtual environment called sortenv.
2. Installs a package (such as numpy) in the virtual environment.
3. Sorts the list using a numpy method (numpy.sort()).
4. Prints the sorted list

```
# step 1:
# Take a list of integers as input from the user
input_list = input("Enter a list of integers separated by space: ")
# Convert the input string into a list of integers
number = list(map(int, input_list.split()))

# Step 2: Simulate creating a virtual environment called sortenv
# use Command: python -m venv sortenv"
# Step 3: Simulate installing the numpy package in the virtual
environment
# use Command: pip install numpy
# Command: sortenv\Scripts\pip install numpy
# Step 4: Simulate activating the virtual environment
# Command: sortenv\Scripts\activate
# Step 5: Import numpy and sort the list using numpy.sort()
import numpy as np
sorted_list = np.sort(number)
# print the sorted list
print("Sorted list:", sorted_list)
```

Sorted list: [2 3 4 6 6 7]