Assignment - 1

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Video link : https://drive.google.com/drive/my-drive

GitHub link : NavyaBonthu/Assignment1 (github.com)

1. Write a python program for the following:

– Input the string “Python” as a list of characters from console, delete at least 2 characters, reverse the

resultant string and print it.

Sample input:

•python

•Sample output:

•ntyp

Source Code:

```
# Task 1: Manipulating Strings
input_string = input("Enter a string: ")  # Input the string
char_list = list(input_string)  # Convert the string to a list of characters

if len(char_list) >= 2:  # Ensure there are at least 2 characters to delete
    del char_list[:2]  # Delete the last two characters
    char_list.reverse()  # Reverse the list
    result = ''.join(char_list)  # Convert the list back to a string
    print("Modified and reversed string:", result)
else:
    print("String must have at least 2 characters to perform the operation.")
```

```
Enter a string: python
Modified and reversed string: noht
```

b. Take two numbers from user and perform at least 4 arithmetic operations on them.

Source code:

```python
# Task 2: Arithmetic Operations
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))

# Perform arithmetic operations
addition = num1 + num2
subtraction = num1 - num2
multiplication = num1 * num2

# Check if num2 is not 0 to avoid division by zero
if num2 != 0:
    division = num1 / num2
else:
    division = "Undefined (division by zero)"

print("Arithmetic Operations:")
print("Addition:", addition)
print("Subtraction:", subtraction)
print("Multiplication:", multiplication)
print("Division:", division)
```

```
Enter the first number: 5
Enter the second number: 6
Arithmetic Operations:
Addition: 11.0
Subtraction: -1.0
Multiplication: 30.0
Division: 0.8333333333333334
```

1. Write a program that accepts a sentence and replace each occurrence of ‘python’ with ‘pythons’.
   - Sample input: I love playing with python
   - Sample output: I love playing with pythons

   Source code:

```python
def replace_python(sentence):
    replaced_sentence = sentence.replace("python", "pythons")
    return replaced_sentence

input_sentence = input("Enter a sentence: ")
modified_sentence = replace_python(input_sentence)
print("Modified sentence:", modified_sentence)
```

```
Enter a sentence: I love playing with python
Modified sentence: I love playing with pythons
```

3. Use the if statement conditions to write a program to print the letter grade based on an input class score. Use the

grading scheme we are using in this class.

Source code:

```python
def calculate_class_grade(score):
    if score >= 90:
        return "A"
    elif score >= 80:
        return "B"
    elif score >= 70:
        return "C"
    elif score >= 60:
        return "D"
    else:
        return "F"

# Get input class score from the user
try:
    class_score = float(input("Enter the class score: "))
    if 0 <= class_score <= 100:
        letter_grade = calculate_class_grade(class_score)
        print("The letter grade for the score {:.2f} is: {}".format(class_score, letter_grade))
    else:
        print("Invalid score. Please enter a score between 0 and 100.")
except ValueError:
    print("Invalid input. Please enter a valid number.")
```

```
Enter the class score: 89
The letter grade for the score 89.00 is: B
```