**Spring 2024: CS5720 Neural Networks & Deep Learning - ICP-1**

**Assignment 1**

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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 resultantstring and print it. Sample input: •python •Sample output: •ntyp – Take two numbers from user and perform at least 4 arithmetic operations on them.

input\_string = list(input("Enter the string 'Python': "))

if len(input\_string) >= 2:

del input\_string[:2]

resultant\_string = input\_string[::-1]

print("Sample output:")

print("".join(resultant\_string))

num1 = float(input("Enter the first number: "))

num2 = float(input("Enter the second number: "))

addition = num1 + num2

subtraction = num1 - num2

multiplication = num1 \* num2

division = num1 / num2

print("Arithmetic operations:")

print(f"{num1} + {num2} = {addition}")

print(f"{num1} - {num2} = {subtraction}")

print(f"{num1} \* {num2} = {multiplication}")

print(f"{num1} / {num2} = {division}")

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Description automatically generated

**Description:**

The first two items in the list are eliminated (deleted) if the input string's length is more than or equal to 2.

Slicing ([::-1]) is used to invert the modified list, generating a new list.

The entered integers are subjected to perform addition, subtraction, multiplication, and division

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

input\_sentence = input("Enter a sentence: ")

# Replace each occurrence of 'python' with 'pythons'

modified\_sentence = input\_sentence.replace('python', 'pythons')

# Print the modified sentence

print("Sample output:")

print(modified\_sentence)

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Description automatically generated

**Description:**

The user can enter a sentence, it changes the text by inserting "pythons" in place of each instance of the word "python," and it outputs the updated sentence. For this operation, the replace function is essential since it offers a straightforward way to replace characters in a string.

1. 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

class\_score = float(input("Enter the class score: "))

# Determine the letter grade based on the grading scheme

if class\_score >= 90:

grade = 'A'

elif 80 <= class\_score < 90:

grade = 'B'

elif 70 <= class\_score < 80:

grade = 'C'

elif 60 <= class\_score < 70:

grade = 'D'

else:

grade = 'F'

# Print the letter grade

print("Letter Grade:", grade)

A close-up of a score

Description automatically generated

**Description:**

After entering a class score, the user can choose which letter grade ('A, B, C, D, or F') to assign the score according to the supplied grading scheme. Printing the outcome is the next step. A conditional logic example for grading depending on a numerical input may be found in this section of code.

Video Link: <https://drive.google.com/file/d/1WWpxjzVOwqZrfv0pMR4ZvmLCPTMNT36n/view?usp=sharing>

GitHub Link: https://github.com/BhuvanaNandhimalla/NeuralNetworks\_Assignment1

Source code: <http://localhost:8888/notebooks/Untitled.ipynb?kernel_name=python3>