

Neural Networks & Deep Learning ICP-1

Student Name: Sravani Lankala

Student ID: 700746285

GitHub Link: https://github.com/sravanilankala/NNDL_ICP1_Fall23

Video Link:

https://drive.google.com/file/d/1SLxFKslibG8n5F77-srn7syfldAx3-1q/view?usp=drive_link

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



```
700746285_NNDL_ICP1.ipynb
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[33] # 1a. Input the string "Python" as a list of characters from console, delete at least 2 characters, reverse the resultant string and print it
# Ask user to input string
input_str = list(input("Enter a string:"))

Enter a string:Python

[34] # Delete 2 characters from the string
chars_to_del = min(2, len(input_str))
output_str = input_str[chars_to_del:]

# print result
print("Output string after deleting 2 chars: ", output_str)

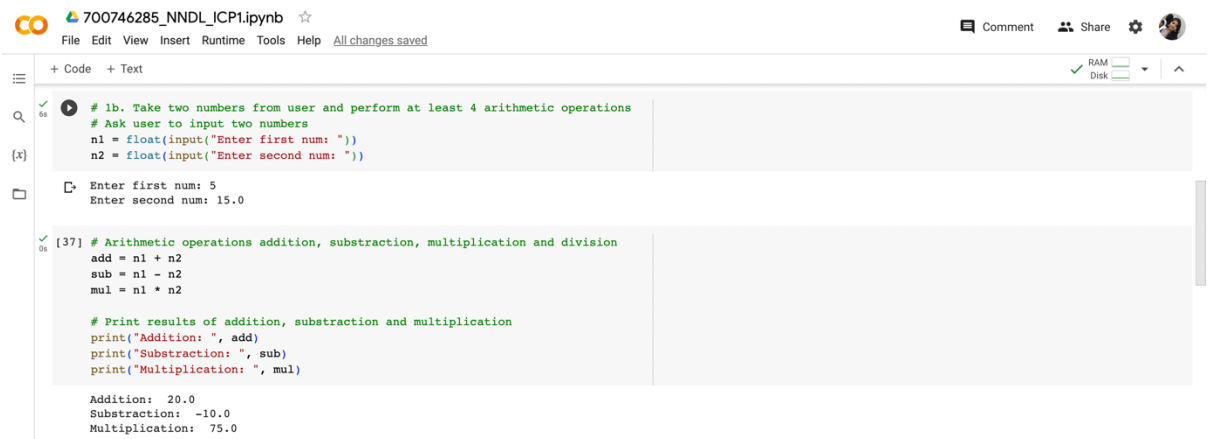
Output string after deleting 2 chars: ['t', 'h', 'o', 'n']

[35] # Reverse String
reversed_str = ''.join(reversed(output_str))

# Print reversed string
print("Reversed string: ", reversed_str)

Reversed string: noht
```

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



The screenshot shows a Jupyter Notebook titled '700746285_NNDL_ICP1.ipynb'. The code in the first cell asks the user for two numbers, 'n1' and 'n2'. The user enters '5' for the first number and '15.0' for the second. The second cell performs arithmetic operations: addition (20.0), subtraction (-10.0), and multiplication (75.0). The output shows these results.

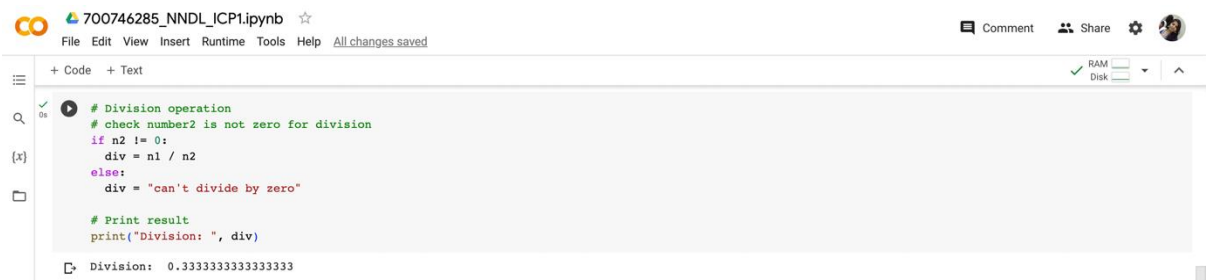
```
# 1b. Take two numbers from user and perform at least 4 arithmetic operations
# Ask user to input two numbers
n1 = float(input("Enter first num: "))
n2 = float(input("Enter second num: "))

Enter first num: 5
Enter second num: 15.0

[37] # Arithmetic operations addition, subtraction, multiplication and division
add = n1 + n2
sub = n1 - n2
mul = n1 * n2

# Print results of addition, subtraction and multiplication
print("Addition: ", add)
print("Subtraction: ", sub)
print("Multiplication: ", mul)

Addition: 20.0
Subtraction: -10.0
Multiplication: 75.0
```



The screenshot shows a Jupyter Notebook titled '700746285_NNDL_ICP1.ipynb'. The code in the first cell checks if the second number is zero before performing division. The user enters '5' for the first number and '15.0' for the second. The output shows the division result: 0.3333333333333333.

```
# Division operation
# check number2 is not zero for division
if n2 != 0:
    div = n1 / n2
else:
    div = "can't divide by zero"

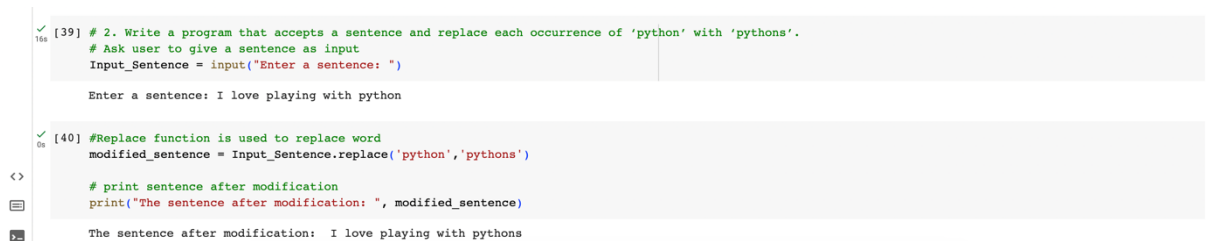
# Print result
print("Division: ", div)

Division: 0.3333333333333333
```

2. 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



The screenshot shows a Jupyter Notebook titled '700746285_NNDL_ICP1.ipynb'. The code in the first cell asks the user for a sentence. The user enters 'I love playing with python'. The second cell uses the 'replace' function to replace 'python' with 'pythons'. The output shows the modified sentence: 'I love playing with pythons'.

```
# 2. Write a program that accepts a sentence and replace each occurrence of 'python' with 'pythons'.
# Ask user to give a sentence as input
Input_Sentence = input("Enter a sentence: ")

Enter a sentence: I love playing with python

[40] #Replace function is used to replace word
modified_sentence = Input_Sentence.replace('python', 'pythons')

# print sentence after modification
print("The sentence after modification: ", modified_sentence)

The sentence after modification: 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.



The screenshot shows a Jupyter Notebook with two cells. The first cell contains a comment and a line of code to prompt the user for a score. The second cell contains an if-elif-else statement to determine the letter grade based on the score. The output of the second cell shows the final grade for a score of 90.5.

```
# 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.

# Ask user to input score
score = float(input("Enter total score: "))

Enter total score: 90.5

# Check score based on grading scheme
if score >= 90:
    grade = 'A'
elif score >= 80:
    grade = 'B'
elif score >= 70:
    grade = 'C'
elif score >= 60:
    grade = 'D'
else:
    grade = 'F'
# print grade
print("Final grade for given score is: ", grade)

Final grade for given score is: A
```