

# Fall 2023: CS5720

## Neural Networks & Deep Learning - ICP-1

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Git link: [https://github.com/Mani543/Manisha\\_NNDL\\_ICP.git](https://github.com/Mani543/Manisha_NNDL_ICP.git)

Video link: [https://drive.google.com/file/d/1URitCku7pPY-qWkxRnlgTgbo6j\\_99dHM/view?usp=sharing](https://drive.google.com/file/d/1URitCku7pPY-qWkxRnlgTgbo6j_99dHM/view?usp=sharing)

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.

```
main.py x DeleteCharsAndReverseString.py x ArithmeticOperations.py x ReplacingAStringWithAnother.py x GradingSystem.py x
1 # Entering the input
2 input_string = list(input("Enter the string: "))
3
4 # Delete 2 characters from input
5 chars_to_delete = min(2, len(input_string))
6 formatted_string = input_string[chars_to_delete:]
7
8 # Print the string after deletion
9 print("String after deleting 2 characters:", formatted_string)
10
11 # Reverse the resultant string
12 reversed_string = ''.join(reversed(formatted_string))
13
14 # Print the reversed string
15 print("Reversed string:", reversed_string)
```

Output:

```
C:\Users\manis\PycharmProjects\pythonProject\venv\Scripts\python.exe C:\Users\manis\
Enter the string: Manisha
String after deleting 2 characters: ['n', 'i', 's', 'h', 'a']
Reversed string: ahsin

Process finished with exit code 0
```

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

```
main.py x DeleteCharsAndReverseString.py x ArithmeticOperations.py x ReplacingAStringWithAnother.py x GradingSystem.py x
1 # Enter the input
2 number1 = float(input("Enter the first number: "))
3 number2 = float(input("Enter the second number: "))
4
5 # Perform arithmetic operations
6 addition = number1 + number2
7 subtraction = number1 - number2
8 multiplication = number1 * number2
9
10 # Check if num2 is not zero to avoid division by zero
11 if number2 != 0:
12     division = number1 / number2
13 else:
14     division = "Cannot divide by zero"
15
16 # Print the results
17 print("Addition:", addition)
18 print("Subtraction:", subtraction)
19 print("Multiplication:", multiplication)
20 print("Division:", division)
21
```

### Output:

```
C:\Users\manis\PycharmProjects\pythonProject\venv\Scripts\python.exe C:\Users\manis\PycharmP
Enter the first number: 25
Enter the second number: 3
Addition: 28.0
Subtraction: 22.0
Multiplication: 75.0
Division: 8.333333333333334

Process finished with exit code 0
```

2. Write a program that accepts a sentence and replace each occurrence of 'python' with 'pythons'.

```
main.py x DeleteCharsAndReverseString.py x ArithmeticOperations.py x ReplacingAStringWithAnother.py x GradingSystem.py x
1 # Enter a sentence as input
2 input_string = input("Enter a sentence: ")
3
4 # Replacing python in sentence with pythons
5 formatted_sentence = input_string.replace('python', 'pythons')
6
7 # Print the formatted sentence
8 print("The sentence after formatting:", formatted_sentence)
```

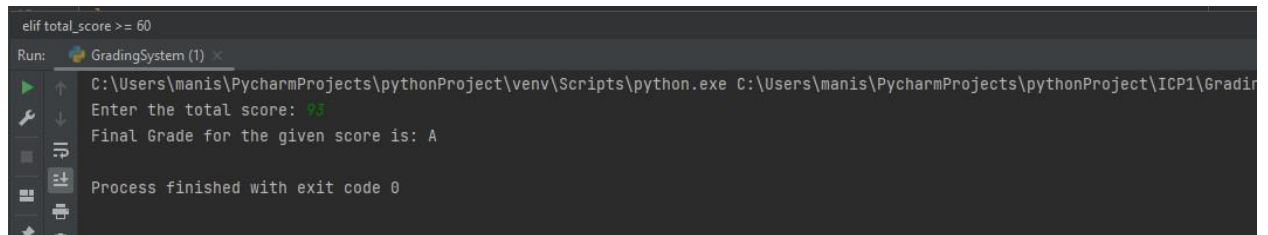
Output:

```
Run: ReplacingAStringWithAnother (1) x
C:\Users\manis\PycharmProjects\pythonProject\venv\Scripts\python.exe C:\Users\manis\PycharmProjects\pythonProject\
Enter a sentence: Python is a programming language
The sentence after formatting: Python is a programming language
Process finished with exit code 0
```

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

```
main.py x DeleteCharsAndReverseString.py x ArithmeticOperations.py x ReplacingAStringWithAnother.py x GradingSystem.py x
1 # Take input score from the user
2 total_score = float(input("Enter the total score: "))
3
4 # Determine the letter grade based on the grading scheme
5 if total_score >= 90:
6     grade = 'A'
7 elif total_score >= 80:
8     grade = 'B'
9 elif total_score >= 70:
10    grade = 'C'
11 elif total_score >= 60:
12    grade = 'D'
13 else:
14    grade = 'F'
15
16 # Print the letter grade
17 print("Final Grade for the given score is:", grade)
```

## Output:

A screenshot of the PyCharm Run console. The console title bar shows 'Run:' and 'GradingSystem (1)'. The output text is as follows:

```
elif total_score >= 60  
C:\Users\manis\PycharmProjects\pythonProject\venv\Scripts\python.exe C:\Users\manis\PycharmProjects\pythonProject\ICP1\GradingSystem.py  
Enter the total score: 93  
Final Grade for the given score is: A  
Process finished with exit code 0
```