ED5340:Data Science: Theory and practice

LAB 1: BASIC PYTHON AND STRINGS

Mark as done

Opened: Wednesday, 24 January 2024, 12:00 PM
Due: Wednesday, 24 January 2024, 4:30 PM

LAB -1

- **The lab session is scheduled between 2pm to 5pm.**
- **You are required to submit the code in the Moodle platform using the naming format "rollno_hw1", preferably in .ipynb format.**
- **Additionally, you should submit a video explaining the code you worked on today, by tomorrow (not more than 10 min of length, separate link will be provided for the video).**

QUESTIONS:

1. **WAP(Write a program) to find (print) the value of the following:**

    1. $7*\ln(3)*[\ln(5)+\ln(e^3)]$
    2. **Difference in area between two concentric circles of diameter 5m and 3m.**

2. **WAP to return the count of odd numbers and even numbers between 7 and 80 (both inclusive) using arithmetic operators (without using loops) and print it using 'format strings' in a single line. (Refer to the attached file L3_output.py for examples of using formatted strings)**

3. **What are the different kinds of data types in python? Name them and explain their significance. WAP to demonstrate them in Python and print the size and type of each of them in ascending order.**

4. **WAP to find the surface area of a cuboid with sides a,b,c. The values of a, b, c should be random numbers generated between 10 and 100. Take the seed value as user input. (use 'random' module).**

5. **WAP to solve the quadratic equation of the form $ax^2+bx+c=0$, where a, b and c are real numbers and a ≠ 0 (Take a, b and c as user input).**

6. **WAP to demonstrate various arithmetic operations by taking the two input numbers in a single line as space-separated-values (Use split function).**

7. **Given the words 'Learning', 'python', 'is', 'fun'. Accomplish the following tasks:**

a.   **Create a sentence by combining these words : "Learning python is fun." use('.join')**

b.   **Print the sentence "Learning datascience is fun." (use '.replace')**

    c.   **Generate an uppercase version of the sentence: "LEARNING PYTHON IS FUN."**

    d.   **Rearrange the words to form a new sentence: "fun is python learning."**

    e.   **Reverse each word in the sentence and print the result: "nuf si nohtyp gninrael."**

8. How object oriented programming in Python is different from other object oriented languages?

9. What are 'built-in-functions' in Python? Explain any five.

10. WAP to:

    1. Count the number of vowels in a given string.
    2. Check if a given string is palindrome.

📄   L3_output.py   24 January 2024, 12:05 PM

[Add submission]

Submission status

Submission status	No submissions have been made yet
Grading status	Not graded
Time remaining	3 hours 31 mins remaining

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