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INDIAN INSTITUTE OF INFORMATION TECHNOLOGY GUWAHATI

Artificial Intelligence Lab (CS 236), B.Tech
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Practice Assignment - 2

1. Create a file called “example.txt” with some text in it. Save the file in the same folder as that of the Python file. Read this text file using Python.
2. Write a program to read a specific number of characters from a text file (create a own text file) and print the characters.
3. Write a program to append another line of text in the text file (created in the 2nd question) and display the text file.
4. Write a function in python to count the number of lines from a text file "text.txt" which is not starting with an alphabet "T".

    i. Example: The file "text.txt" contains the following lines:

    A girl is playing there badminton.
    The scenary is beautiful.
    The birds are flying in the sky.
    The sky is cloudy.
    Alphabets consists of vowels and consonants.

    Display the output .

5. Write a python program to read a content of one file and write into an another file by creating a text file.
6. You are given a N X M integer array matrix with space-separated elements (N= rows and M= columns).Calculate the transpose and flatten results. First, print the transposed array and then print the flatten.
7. Given an array of integers- [10,16,71,9],[71,91,31,51].Write a program to print-
    i. Dimension of the array
    ii. Shape of the array
    iii.Size of the array
8. Create two random arrays of any dimension and perform the following operations:
    i. Concatenate two arrays.
    ii. Sort both the arrays.
    iii. Add the two arrays
    iv. Subtract the two arrays
    v. Multiply two arrays

vi. Divide the two arrays.

9. Create a random matrix of 8 x 7 (where columns are the features and rows are the patterns) and find the maximum and minimum values from each feature.
10. Write a NumPy program-
    Create a 4 x 5 matrix with values ranging from 1 to 20 and find the following:
    i. Create an array of 10 zeros,10 ones, 10 fives.
    ii. Create an array of all the even integers from 10 to 50.
    iii. Generate a random number between 0 and 1.
    iv. Save the matrix (generated in question iv) to a text file and load it.
