

Assignment

In this assignment you have to solve the problems based on concepts of Function and Regular Expression.

- 1) Write a python code to Display Fibonacci sequence till the number entered by user using recursive function.
- 2) Write a python code to implement Binary Search using recursion and without recursive function.
- 3) Consider below scenario from Student System
 - a. Accept student_id and validate whether it contains only digits
 - b. If student_id is valid, accept student_name from the user and validate whether it contains only alphabets
 - c. If student_name is valid, accept fees_amount paid by the student
 - Decimal point is optional in fees_amount
 - Only 2 digits are allowed after decimal point
 - d. If invalid data is entered in any of the above steps, display appropriate error messages. Else, create an email_id for student as student_name@daiict.ac.in.
 - e. Perform above validations using Regular Expressions and print details of Student: student_id, student_name, fees_amount, email_id
- 4) Write a Python program to check if the number provided by the user is an Armstrong number or not. Use the "function" concept.
- 5) Suppose the input is a string –
"You have received first email from abc@gmail.com at 11:00 am on 1st October, You have received second email from def@gmail.com at 1:30 pm on 2nd October, You have received third email from pqr@gmail.com at 10:30 am on 3rd October, You have received fourth email from qwert@gmail.com at 11:00 am on 4th October, You have received fifth email from spam@gmail.com at 1:00 pm on 5th October".

Now do the following tasks using the python regular expression library:

- a. Fetch all the email ids from the given text using the 'findall' function in regular expressions.
- b. Change the domain name as daiict.ac.in from all the email ids from given input using 'sub' function
- c. Search the email id 'spam@gmail.com' from given input text
- d. Fetch all time and date of all email ids.