

Birla Institute of Technology & Science, Pilani, K. K. BIRLA Goa Campus  
Operating Systems (CS F372)  
First Semester 2023-2024  
Lab-01 – Shell Scripting

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1. Write a shell script program which accepts a string from the user.
  - a. Display first 3 lines of all the files whose name is ending with the entered string
  - b. Display the contents of all the directories recursively whose name is starting with the entered string.
  - c. Count the occurrences of the entered string in all the text files under the current working directory
  - d. Display "No File / Directory found", if the entered string is not matching with any of the file / directory under the current working directory.
2. Write a shell script program to find area and volume of a cylinder. Take r value interactively from the user and get h value using \$1. Display appropriate messages for invalid data [negative numbers and zero value for each input taken] [Hint:  $\text{Area} = 2\pi r^2 + 2\pi rh$  and  $\text{volume} = \pi r^2 h$ ].
3. Write a shell script program to whether the entered number is a FUNDOO number or not. Take the base B and the number N as input.

The Output of the program should be

1. Base expansion of N
2. N is a FUNDOO Number / N is NOT a FUNDOO Number.

[The program should make sure that N is between 1 and 1000 and base B is between 2 and 9]

Definition of Fundoo Number:

The Number is a Fundoo number if Square of sum of the digits of its base B expansion is divisible by B.

Examples:

Example 1:        124

Base B: 3

Base 3 expansion: 11121

124 is a Fundoo number

Example 2:        123

Base B: 3

Base 3 expansion= 11120

123 is not a Fundoo number.