

York University
Lassonde School of Engineering
Dept. of EECS
EECS 2032Z

Lab 2

Part 1

Write a bash script that does the following

The script takes 2 arguments, the first is a directory and the second is a file name (the directory could be relative to the current directory or relative to /).

if the number of arguments is not 2, the program displays

usage: script_name dir file

then it quits.

If the number of arguments is 2, it checks if the first argument is a directory or not, if not it displays

argument_1 is not a directory

where argument_1 is the name you supplied as the first argument

if the second argument is not a regular file, it displays

argument_2 is not a regular file

Where argument_2 is the second argument you supplied

Otherwise it checks if the directory specified by argument_1 contains a file with a name as specified in argument_2 and prints one of these two sentences

file argument_2 is in directory argument_1

or

file argument_2 is not in directory argument_1

The file name is sh1.sh and should be submitted to the directory LAB2

Part 2

Write a shell script to check if there is any solution for a Diophantine equation within the bounds specified or not.

The Diophantine equation is on the form

$$x^3 + y^3 = z^3 + w^3$$

where

$$x \leq x_1, y \leq y_1, z \leq z_1, w \leq w_1$$

The script name is Dio.sh and should run as

Dio.sh x_1 y_1 z_1 w_1

The script searches for all combinations of x, y, z, w that are less than or equal to x_1, y_1, z_1, w_1 . If any solution is found, it displays

$x = \text{correct_x_value}, y = \text{correct_y_value}, z = \text{correct_z_value}, w = \text{correct_w_value}$

where x, y, z, w are any solution to the above equation (integer values only)

If there is no solution, it prints

No solution

submit Dio.sh to the directory LAB2