

```
1 import os, sys, subprocess
2 import platform
3 import os.path, stat
4
5 from os import listdir
6
7
8 """
9 Ejercicio 2a. Modificar el anterior script para que se le pida al usuario por
10 consola el directorio donde tendrá que buscar y deberá mostrar todos
11 los ficheros del directorio, así como de los posibles subdirectorios.
12 Sintaxis: listado.py
13 El script deberá capturar todas las posibles excepciones como pueden ser:
14
15 a. Si el directorio que el usuario introduce no existe o no es un directorio,
16 deberá dar un error.
17 b. Si el usuario que lo invoca no tiene permisos de lectura del directorio,
18 el script deberá gestionar dicha excepción.
19 """
20
21
22 """
23 Usage: Defining a method that lists the files in a directory
24 Name of method: listDirectory
25 Date of creation: 20/02/2021
26 Members: Roberto Jiménez y Alberto Pérez
27 Last modification: 20/02/2021
28 Parameters:
29     Entry:
30         - path: Directory from which the list of files or directories
31             that exist is obtained
32     Out:
33         - List with files and directories
34 """
35 def listDirectory(path):
36     if os.access(path, os.R_OK):
37         return os.listdir(path)
38     return ["Error, directory has not reading permissions"]
39
40
41
42 """
43 Usage: Definition of a recursive method that goes through all the directories and
44 subdirectories based on the directory passed by parameter
45 Name of method: recursivelyList
46 Date of creation: 20/02/2021
47 Members: Roberto Jiménez y Alberto Pérez
48 Last modification: 20/02/2021
49 Parameters:
50     Entry:
51         - directory: Directory which is going to be listed
52     Out: None
53 """
54
55 def recursivelyList(directory):
56     auxDirectories = []
57     files = listDirectory(directory)
58     print("\x1b[1;34m" + directory + ":")
59     for file in files:
60         path = directory + "/" + file
```

```
61         if(os.path.isdir(path)):
62             print("\x1b[1;36m" + file + " ", end="")
63             auxDirectories.append(path)
64         else:
65             print("\x1b[1;37m" + file + " ", end="")
66
67     print("\x1b[1;37m \n")
68     #
69     for directory in auxDirectories:
70         recursivelyList(directory)
71
72
73 """
74 Definition of the main method of the program
75 Name of method: main
76 Date of creation: 20/02/2021
77 Members: Roberto Jiménez y Alberto Pérez
78 Last modification: 20/02/2021
79 Parameters: None, parameters are read by console
80 """
81 def main():
82
83     if platform.system() != 'Linux':
84         #Check if is a UNIX machine
85         print("Error, the OS is not a UNIX machine. Getting out...")
86         exit(1)
87     if len(sys.argv) == 1:
88         #We chek that no parameters are passed
89         path = input('Write the path of the directory ')
90
91         if os.path.isdir(path):
92             print("")
93             recursivelyList(path)
94             #if os.chmod(path, )
95             #subprocess.run(['ls', '-l', '-R', path])
96
97         else:
98             #Case when parameters are passed to the script
99             print("Error, the parameters are not necessary")
100
101
102
103 if __name__ == "__main__":
104     """
105     In that case, we check that the program starts in the right function, in our
106     case, main()
107     """
108     main()
109
```