Python Activity – 5

os , os.path and sys modules

Q1. using os module display the list of all **environment variables** and **the total number of variables**.

Q2. using os module display the **login name** and **login directory path**.

Q3. How to test whether the environment variable **DB** is existing or not?

Q4. using **os.uname(),** display kernel name,version.

Q5. Write a python script:

       a. Display your current working directory.

       b. Change it to **/etc** directory

       c. Copy the list of all filenames into local variable

       d. Write all the files into an external file.

       e. Display the total no.of files under **/etc** directory.

Q6. Write a python script:

       a.   Test an input file is existing or not.

      [Use Command line arguments to take input.]

       b.   Before testing the file existence, perform the following validation.
          i)   Input file and script file must be different.
          ii)   command line argument is not an empty argument.
          iii)   command line argument should not take more than one input file.

Q7. Write a python script:

       a. create a new directory under your login path.

       using **os.path** module, validate whether the input directory is existing or not.

       if directory exists, using **ls -ld** command, display the directory attributes.

       if directory doesn't exist, using **os.mkdir()** method, create a new directory.

       b. copy list of **.sh** files into new directory.

       c. change to new directory

       d. give execute permission to all the users(user,group,others)

       e. using **os.popen()** execute all the script files(.sh) and redirect the result

         to **/var/log/Test1.log** file.

Q8. Write a python script:

    a. using commandline argument read an input file.
    b. test whether the input file is existing or not.
    c. if file exists, check whether the input file is a reg.file or not.
        i)   if input file is a regular file, using **os.stat()** display the file details and file index number.
        ii)   if the input file is not a regular file,test whether the input file is a directory file or not. If it's directory file, display the directory details using **os.stat()** and also display the file block size.
    d. If neither of the conditions matches, display suitable validation message.

Q9. Write a python script to copy pictures that are made with a webcam to a web directory.

   For every five minutes, a picture is taken and for every hour, a new directory is created,

   Holding the images for that particular hour. Every day, a new directory is created containing

   24 subdirectories (for 24 Hour). The script should run in the background.

Q10. Predict the output of the below codes

a. import os.path

   os.path.ismount("/")

b. import os.path

   os.path.basename("/etc/passwd")

Test in python shell

c. How to test "bs4" module is exist or not? (Note: use sys.modules)

   if module does not exist, how can we install "bs4" module in python?

d. How to add external /home/userA/Project/AB.pyc file into sys.path?

   Now test whether AB module file is loaded or not?

e. Explore Python Package Index (PyPI) https://pypi.org

   search Linux operating system projects.