**Python Scripting 2 – Answers**

Write shell programs that will carry out the following tasks:

1. Ask the user to enter the name of a text file, the contents of that file will be displayed on screen.  
     
   Hint: cat

*import subprocess*

*subprocess.call([‘clear’])*

*filename = raw\_input(“Enter a filename: ”)*

*result = subprocess.check­\_output([‘cat %s’ % file\_name], shell=True)*

*print (result)*

1. Produce a long listing of the files in the current directory, followed by a count of the entries in the directory.

Hint: ls, wc

*import subprocess*

*subprocess.call([‘clear’])*

*list = subprocess.call([‘ls -l’], shell=True)*

*result = subprocess.check­\_output([‘ls –l | wc –l’], shell=True)*

*print (list)*

*print (“Number of files in directory is %s” % result)*

1. List all the entries in the current working directory, followed by counts of the number of files and sub-directories present.

Hint: grep

(remember that the long listing produces file details where the first character of the first field indicates whether the item is a file or a directory e.g. –rwxrwxrwx (file) drwxrwxrwx (directory). grep ^- (to find files) , grep ^d (to find directories))

*import subprocess*

*subprocess.call([‘clear’])*

*list = subprocess.call([‘ls -l’], shell=True)*

*files = subprocess.check­\_output([‘ls –l | grep ^- | wc –l’], shell=True)*

*directories = subprocess.check­\_output([‘ls –l | grep ^d | wc –l’], shell=True)*

*print (list)*

*print (“Number of files in directory is %s” % files)*

*print (“Number of directories in directory is %s” % directories)*

1. Display the date and time, followed by the user's login ID and the current working directory.

Hint: date, whoami

*import subprocess*

*subprocess.call([‘clear’])*

*date = subprocess.check\_output([‘date \’+%d/%m/%y\’’], shell=True)*

*time = subprocess.check­\_output([‘date \’+%H:%M\’’], shell=True)*

*user = subprocess.check­\_output([‘whoami’], shell=True)*

*directory = subprocess.check­\_output([‘pwd], shell=True)*

*print (“Date is %s” % date)*

*print (“Time is %s” % time)*

*print (“User ID is %s” % user)*

*print (“Current directory is %s” % directory)*

1. Prompt the user for the insurance group of a car, and then list all the cars in the carprice file with that insurance group.

Hint: read, grep

*import subprocess*

*subprocess.call([‘clear’])*

*group = raw\_input(“Please enter insurance group: “)*

*cars = subprocess.check­\_output([‘grep %s carprice.txt’ % group], shell=True)*

*print “Cars with insurance group %s is %s” % (group, cars)*

1. Read in a users ID, and then, display the

appropriate line from the output generated by the who command for that user.

Hint: read, grep, who

*import subprocess*

*subprocess.call([‘clear’])*

*id = raw\_input(“Please enter user id: “)*

*status = subprocess.check­\_output([‘who | grep ^\”%s \”’ % id], shell=True)*

*print “User details are %s is ” %status*

*Note that there should be a single space between ID and the " in the last line of the program above. This will ensure that if the user ID entered was am, users such as aml, amd etc would be ignored*