

Python Activity

Test on python shell

1. Test whether python is installed or not?

```
root@krosumlabs~]# python -V
```

Python 3.7.0

```
C:\Krosumlabs]# python -V
```

Python 3.7.0

2. Display the message "Welcome to python", to the monitor.

```
>>> print ("Welcome to Python")
```

Welcome to Python

3. Using single/double quotes, display your name and working place to the screen.

```
>>> print("My name is:Karthikeyan\t From Bangalore")
```

My name is:Karthikeyan From Bangalore

```
>>> print('My name is:Karthikeyan\t From Bangalore')
```

My name is:Karthikeyan From Bangalore

Note : There is no difference between ' ' " "

4. How to use single line comment and multiline comment to screen?

```
>>> # This is single line comment
```

```
>>> # print ("python Won't execute this line")
```

```
>>> '''
```

This is multiline comments

this is sample text code

this codes are documented

```
'''
```

```
>>> " " "
```

This is another way to use multiline

comments. Sample data lines are multiline commented

```
''''
```

5. How to read 'str' document in python shell?

```
>>> help(str)
```

Task : string,int,float ,operators ,conditional and looping statements

6. Write a python program that declares a variable var, holding your name as its value. Also display

"Hello ..followed by your name".

```
>>> var="Karthikeyan"
```

```
>>> print("Hello...",var)
```

```
>>> print("Hello...%s"%(var)) ## Will discuss about this in class
```

```
>>> print("Hello...{}".format(var))
```

7. Write a python program :

- a. Declare a variable fname & initialize your first name as its value.
- b. Declare another variable lname & initialize your last name as its value.
- c. Using string concatenation operator, join fname with lname and display its length to the monitor.

a. Declare a variable fname & initialize your first name as its value.

```
fname="karthikeyan"
```

b. Declare another variable lname & initialize your last name as its value.

```
lname="Palani"
```

c. Using string concatenation operator, join fname with lname and display its length to the monitor.

```
name=fname+lname
```

```
print("Total name length :%d",(len(name)))
```

8. Explore the python program:

```
no=56
```

```
item_cost=509.56
```

```
description=""
```

Using type() function, determine the data type of the above declaration.

```
>>> no=56
```

```
>>> item_cost=509.56
```

```
>>> description=""
```

```
>>> print("no=56 is ",type(no))
```

```
no=56 is <class 'int'>
```

```
>>> print("item_cost=509.56",type(item_cost))
```

```
item_cost=509.56 <class 'float'>
```

```
>>> print("description:",type(description))
```

```
description: <class 'str'>
```

9. Write a python program:

a. declare a string variable as os

b. initialize your working os name as its value(ex: if your working operating system is aix, os="aix")

c. using membership operator, test whether a character 'x' is found in the input string.

a. declare a string variable as os

```
os=""
```

b. initialize your working os name as its value(ex: if your working operating system is aix, os="aix")

```
os="Linux"
```

c. using membership operator, test whether a character 'x' is found in the input string.

```
>>> "x" in os
```

```
True
```

10. Write a python program:

a. Read a student name and 3 subject marks from STDIN (keyboard)

b. Calculate sum and average of 3 subjects.

c. Display all the details(name,subject,total,average) to monitor.

Note : using single print()

a. Read a student name and 3 subject marks from STDIN (keyboard)

```
name=input("Enter a student name:")
```

```
s1=int(input("Enter a subject1:"))
```

```
s2=int(input("Enter a subject2:"))
```

```
s3=int(input("Enter a subject3:"))
```

```
total=s1+s2+s3 # sum of 3 subjects
```

```
avg=total/3 # average of 3 subjects
```

c. Display all the details(name,subject,total,average) to monitor.

```
print("""
```

```
Student name:%s
```

```
Subject1 :%d
```

```
Subject2:%d
```

```
Subject3:%d
```

```
TOTAL:%d
```

```
AVERAGE:%f""",(name,s1,s2,s3,total,avg))
```

11. Write a python program:

a. Read a business enquiry number from STDIN

b. Test whether your enquiry number ranges between 500 - 600. If matched, read a quotation number

c. If your quotation number ranges between 550 -650, read a customer name and check whether it matches with any of the following- "IBM" , "ORACLE" ,"HP","KLABS". If so, read PO number from STDIN.

d. If customer name matches, Read a PO number & Test whether it ranges between 500-1000.

e. If input PO matches, display all your business input details (enquiry number,quotation number,customer name,PO Number)

g. If any of the condition fails script won't take next input.

Write suitable invalid message if condition is not matched.

```
eno=int(input("Enter a business enquiry number :"))

if(eno >=500 and eno<=600):

    qno=int(input("Enter a quotation number:"))

    if(qno>=550 and qno<=650):

        cname=input("Enter a customer name:")

        if(cname == "IBM" or cname == "ORACLE" or cname == "HP" or cname == "KLABS"):

            po=int(input("Enter a po number:"))

            if(po>=500 and po<=1000):

                print("Enquiry number:%d\tQuotation number:%d\n"%(eno,qno))

                print("Customer name:%s\tPO Number:%d"%(cname,po))

            else:

                print("Invalid po number")

        else:

            print("Invalid customer name:")

    else:

        print("Invalid quotation number:")

else:

    print("Invalid enquiry number:")
```

12. Write a python program:

Display the following menu format

```
***** System Info *****
```

```
* 1. Kernel details *
```

```
* 2. CPU Load balance *
```

```
* 3. Login and hostname details *
```

```
* 4. Mounted File system *
```

```
* 5. EXIT *
```

```
*****
```

Using multi conditional statement display suitable system command.

Note: use os module (import os) and system function.


```

import os

print """

***** system Info *****

*      1.Kernel details *
*      2.CPU Load balance      *
*      3.Login and hostname  *
*      4.Mounted Filesystem  *
*      5.EXIT                  *

***** """

choice=int(input("Enter your choice:"))

if(choice ==1):

    print("1.Working kernel details")

    os.system("uname -a")

elif(choice==2):

    print("2.CPU Load Balance")

    os.system("uptime")

elif(choice==3):

    print("3.Login and hostname details")

    os.system("whoami;id -u")

elif(choice==4):

    print("4.Mounted Filesystem details")

    os.system("df -Th")

elif(choice==5):

    print("Thank you")

    os.system("sleep 2;exit")

```

else:

```
print("Sorry %d is invalid choice:"%(choice))
```

13. Write a python program:

Display CPU load balance 5 times for every 2 seconds delay.

```
import os
```

```
for var in range(5):
```

```
    os.system("uptime;sleep 2")
```

14. Write a Python program that emulates the high-street bank mechanism for checking a

PIN. Keep taking an input from the keyboard (STDIN) until it is identical to a PIN declared.

Restrict the number of attempts to 3 and output a suitable message for success and failure.

```
pin=1234
```

```
count=0
```

```
max=3
```

```
while(count<max):
```

```
    PIN=int(input("Enter a pin number:"))
```

```
    count=count+1
```

```
    if(pin==PIN):
```

```
        break
```

```
if(pin != PIN):
```

```
    print("Sorry your pin is blocked")
```

```
else:
```

```
    print("Success input PIN is matched at %d time"%(count))
```

15. Write a python program

I. Given string is : s1="bin:usr:daemon:/bin/bash:x:/usr/bin/tcsh:false"

a. Count the number of ":" placed in given string.

II. Given string is : s2="This is sample test line\n"

a. Remove \n character to from s2 string

I. Given string is : s1="bin:usr:daemon:/bin/bash:x:/usr/bin/tcsh:false"

a. Count the number of ":" placed in given string.

```
>>> s1="bin:usr:daemon:/bin/bash:x:/usr/bin/tcsh:false"
```

```
>>> c=s1.count(":")
```

```
>>> print("Total no.of : %d"%(c))
```

Total no.of : 6

II. Given string is : s2="This is sample test line\n"

Remove \n character to from s2 string

```
>>> s2="This is sample test line\n"
```

```
>>> s2.strip()
```

```
'This is sample test line'
```

```
>>> result=s2.strip()
```

```
>>> print(result)
```

This is sample test line