

Programming Lab - 1

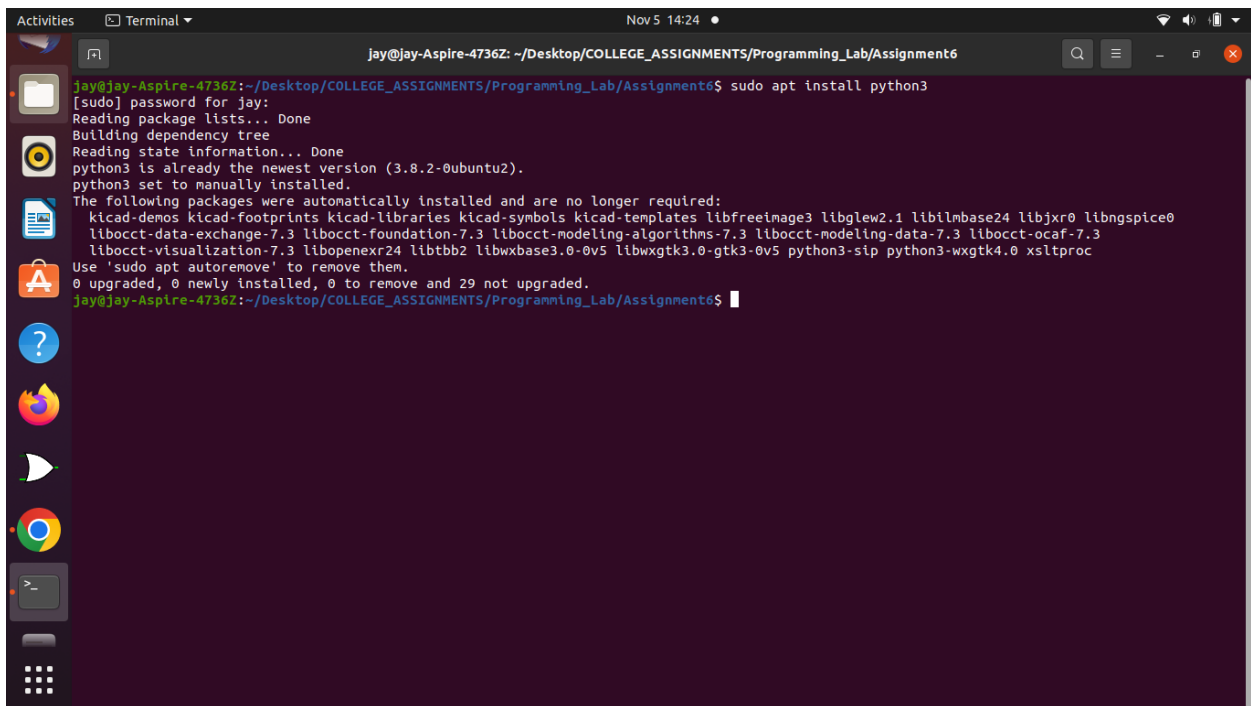
Assignment - 6

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1. Install latest python version on your system (visit <https://www.python.org/> site)

OUTPUT -



```
jay@jay-Aspire-4736Z: ~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6
jays@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6$ sudo apt install python3
[sudo] password for jay:
Reading package lists... Done
Building dependency tree
Reading state information... Done
python3 is already the newest version (3.8.2-0ubuntu2).
python3 set to manually installed.
The following packages were automatically installed and are no longer required:
  kicad-demos kicad-footprints kicad-libraries kicad-symbols kicad-templates libfreeimage3 libglew2.1 libilmbase24 libjxr0 libngspice0
  libocct-data-exchange-7.3 libocct-foundation-7.3 libocct-modeling-algorithms-7.3 libocct-modeling-data-7.3 libocct-ocaf-7.3
  libocct-visualization-7.3 libopenexr24 libtbb2 libwxbase3.0-0v5 libwxgtk3.0-gtk3-0v5 python3-sip python3-wxgtk4.0 xsltproc
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 29 not upgraded.
jays@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6$
```

2.Using python command prompt try to execute below statements one by one

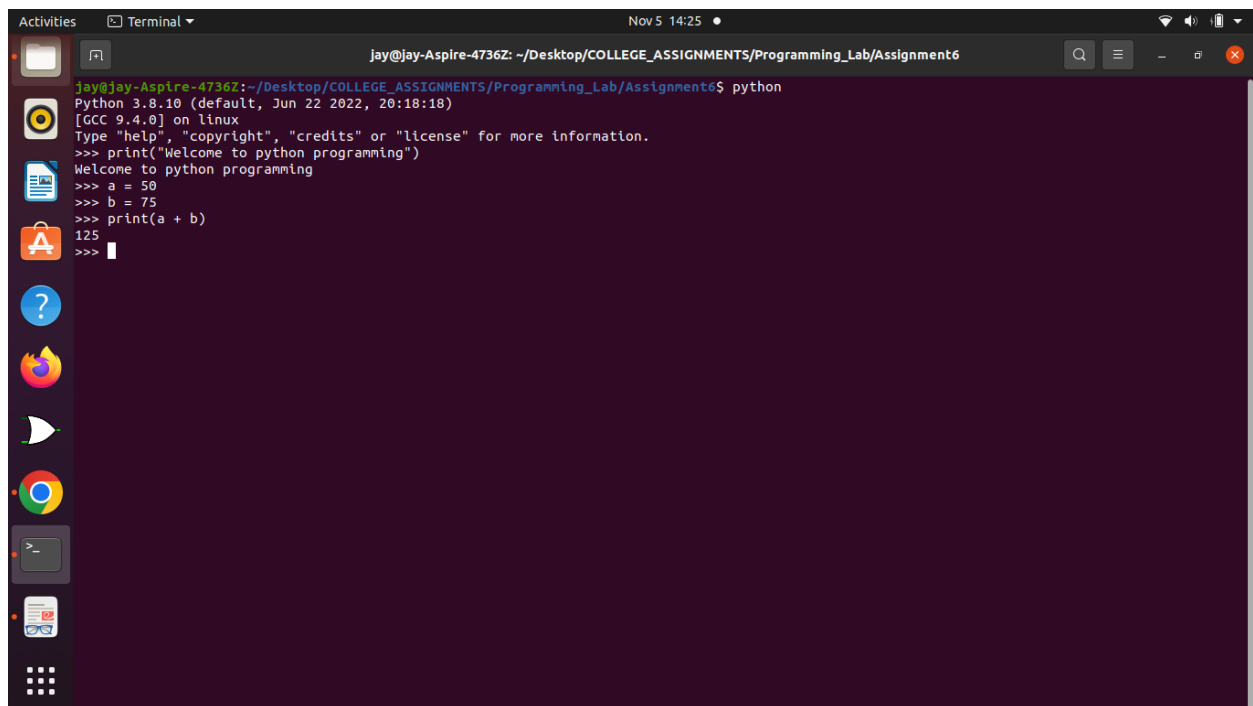
print("Welcome to python programming")

a = 50

b = 75

print(a+b)

OUTPUT -



The screenshot shows a terminal window titled "jay@jay-Aspire-4736Z: ~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6". The terminal displays the output of running the Python interpreter. The prompt is "jay@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6\$ python". The output shows "Python 3.8.10 (default, Jun 22 2022, 20:18:18) [GCC 9.4.0] on linux". The user enters ">>> print('Welcome to python programming')", and the output is "Welcome to python programming". The user then enters ">>> a = 50", ">>> b = 75", and ">>> print(a + b)". The output for the last line is "125". The terminal window has a dark background and a light-colored text. The left sidebar shows various application icons, including a file manager, a terminal, a web browser, and a terminal emulator.

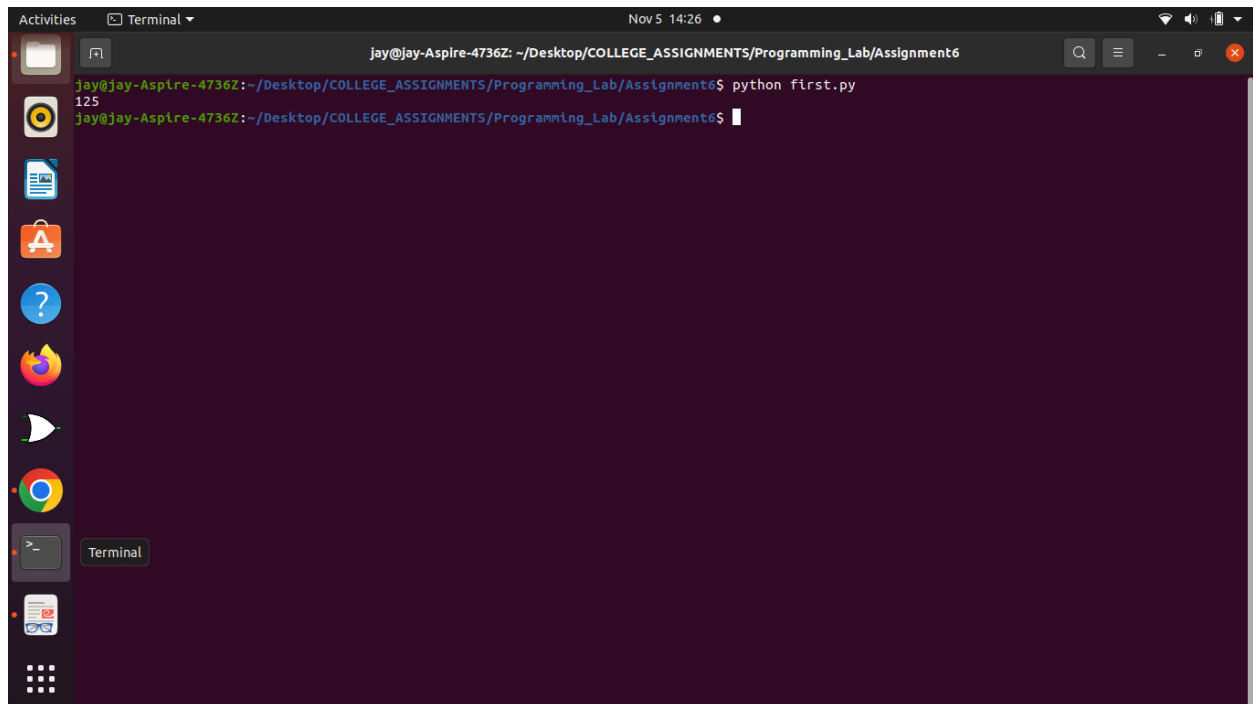
```
jay@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6$ python
Python 3.8.10 (default, Jun 22 2022, 20:18:18)
[GCC 9.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> print("Welcome to python programming")
Welcome to python programming
>>> a = 50
>>> b = 75
>>> print(a + b)
125
>>>
```

3. Write above program in text editor and save file named first.py execute the code.

CODE -

```
a = 50  
b = 75  
print(a + b)
```

OUTPUT -



The screenshot shows a terminal window titled "Terminal" with the following content:

```
jay@jay-Aspire-4736Z: ~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6  
jay@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6$ python first.py  
125  
jay@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6$
```

The terminal output displays the number 125, which is the result of the addition 50 + 75. The terminal window is part of a desktop environment with a sidebar containing various application icons.

4. Write a python program to assign value to a variable of following data type

also print its values along with its data type.

a) Numbers

b) List

c) Tuple

d) Byte

e) Bytearray

f) Set

g) Frozenset

h) Dictionary

CODE -

```
# a - Number
# b - List
# c - Tuple
# d - Byte
# e - Bytearray
# f - Set
# g - Frozenset
# h - Dictionary
a = 343
b = [3, 3, 1, 5, 45, "Hello World", 43.43, [3, 3, 4]]
c = (3, 4, 2, 4)
d = b'4334'
e = bytearray(b'aaccdd34')
f = {3, 4, 2, 3, 3, 4, 5}
g = frozenset([4, 3, 42, 43, 2])
h = {"name": "Jay Shirgupe", "class": "CSE", "College": "Walchand College of Engineering, Sangli"}
for elem in [a, b, c, d, e, f, g, h]:
    print(type(elem), elem, sep = '\n')
    print()
```

OUTPUT -

Activities Terminal Nov 5 14:27

jay@jay-Aspire-4736Z: ~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6

```
jay@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6$ python Problem4.py
<class 'int'>
343

<class 'list'>
[3, 3, 1, 5, 45, 'Hello World', 43.43, [3, 3, 4]]

<class 'tuple'>
(3, 4, 2, 4)

<class 'bytes'>
b'4334'

<class 'bytearray'>
bytearray(b'aaccdd34')

<class 'set'>
{2, 3, 4, 5}

<class 'frozenset'>
frozenset({2, 3, 4, 42, 43})

<class 'dict'>
{'name': 'Jay Shirgupe', 'class': 'CSE', 'College': 'Walchand College of Engineering, Sangli'}
```

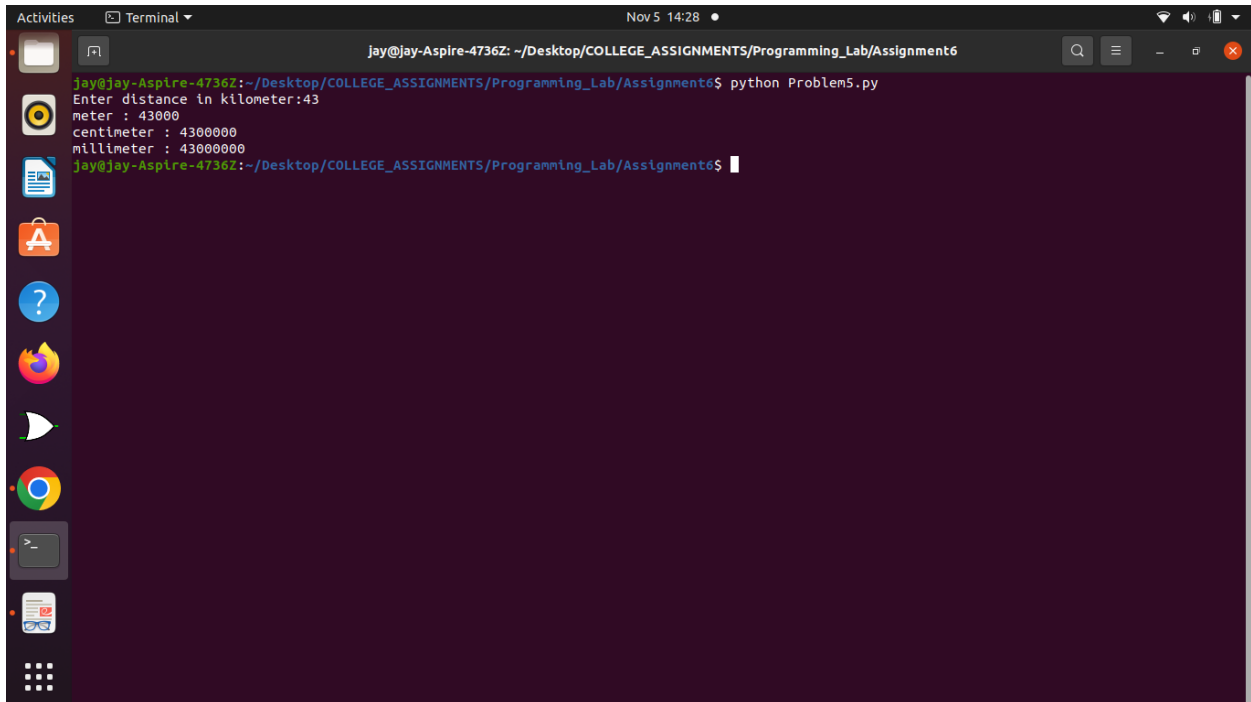
jay@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6\$

5. Write a program to convert Km into meters, centimeters and millimeter using python.

CODE -

```
km = int(input("Enter distance in kilometer:"))  
meter = km * 1000  
centimeter = meter * 100  
millimeter = centimeter * 10  
print("meter :", meter)  
print("centimeter :", centimeter)  
print("millimeter :", millimeter)
```

OUTPUT -



The screenshot shows a terminal window titled "Terminal" with the user "jay" at host "jay-Aspire-4736Z". The current directory is "~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6". The user has executed the command "python Problem5.py". The program prompts for "Enter distance in kilometer:" and the user has entered "43". The program then outputs the following values:

```
meter : 43000  
centimeter : 4300000  
millimeter : 43000000
```

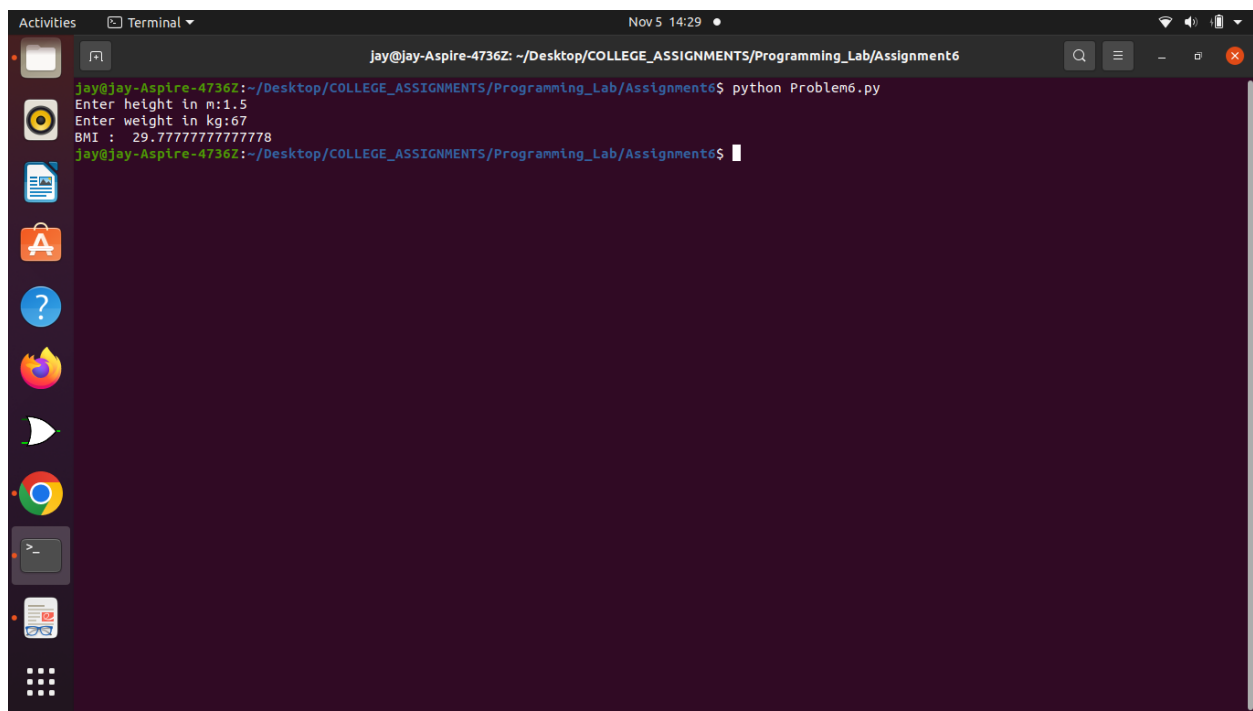
The terminal window also shows a sidebar with various application icons on the left and system status icons on the right.

6. Write a program to insert details from user (Height, weight) and display BMI value.

CODE -

```
height = float(input("Enter height in m:"))  
weight = float(input("Enter weight in kg:"))  
bmi = weight / (height * height)  
print("BMI : ", bmi)
```

OUTPUT -



The screenshot shows a terminal window titled "jay@jay-Aspire-4736Z: ~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6". The terminal displays the following text:

```
jay@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6$ python Problem6.py  
Enter height in m:1.5  
Enter weight in kg:67  
BMI : 29.77777777777778  
jay@jay-Aspire-4736Z:~/Desktop/COLLEGE_ASSIGNMENTS/Programming_Lab/Assignment6$
```

The terminal window has a dark purple background and a sidebar on the left with various application icons. The top of the window shows the system date and time as "Nov 5 14:29".