1. Datatypes:

1. List

*#!/usr/bin/python*

*namelist = [ 'abcd', 786 , 2.23, 'john', 70.2 ]*

*tinynamelist = [123, 'john']*

*print (namelist) # Prints complete namelist*

*print (namelist[0]) # Prints first element of the namelist*

*print (namelist[1:3]) # Prints elements starting from 2nd till 3rd*

*print (namelist[2:]) # Prints elements starting from 3rd element*

*print (tinynamelist \* 2) # Prints namelist two times*

*print (namelist + tinynamelist) # Prints concatenated namelists*

b) Tuple

*#!/usr/bin/python*

*tupleex = ("python", "tuple", 1952, 2323, 432);*

*print(tupleex) # this will print the complete tuple*

*print(tupleex[1:4]) # this will print the elements starting from 2nd till 4th*

*print(tupleex[1:]) # this will print the elements starting from the 2nd element*

*print(tupleex[0]) # this wil print the first element of the tuple*

*print(tupleex \* 2) # this will print the tuple two times*

c) Dictionary

*#!/usr/bin/python*

*student = {'rollno': 1, 'name': 'Joseph', 'age': 26}*

*print student*

*print student.items()*

*print student.keys()*

*print student.values()*

2) Looping and conditions

1. For loop

#!/usr/bin/python

primes = [2, 3, 5, 7]

for prime in primes:

print(prime)

for x in range(5):

print(x)

# Prints out 3,4,5

for x in range(3, 6):

print(x)

# Prints out 3,5,7

for x in range(3, 8, 2):

print(x)

>> Matrix addition program

#!/usr/bin/python

X = [[12,7,3],

[4 ,5,6],

[7 ,8,9]]

Y = [[5,8,1],

[6,7,3],

[4,5,9]]

result = [[0,0,0],

[0,0,0],

[0,0,0]]

# iterate through rows

for i in range(len(X)):

# iterate through columns

for j in range(len(X[0])):

result[i][j] = X[i][j] + Y[i][j]

for r in result:

print(r)

b) If.. else

#!/usr/bin/python

balance = input("Enter your balance:")

if balance < 0:

print("Balance is %d, add funds now or you will be charged a penalty.") %(balance)

elif balance == 0:

print("Balance is %d, add funds soon.") %(balance)

else:

print("Your balance is %d") %(balance)

>> Calculate grade

#!/usr/bin/python

grade = 55

if grade >= 90:

print("A grade")

elif grade >=80:

print("B grade")

elif grade >=70:

print("C grade")

elif grade >= 65:

print("D grade")

else:

print("Failing grade")