```
                                                        #PRINT - 1


a = 'This is variable'   #This is string i'm intializing and print it.
print(a)

b = "I'm a student"       #This is string i'm intializing and print it.
print(b)

multi_str = ('How do you think of this course? \n'
             'Describe your feeling of this course') # Using the '\n' for next li
ne.
print(multi_str)


                                                      #OPERATORS - 2

a = 100
b = 9
c=a+b
print(c)
print(a/b)  #  single / returns the quotient with point values.
print(a//b) # double // skips the point values.
print(a%b)  #  Modulo operation returns remainder values.
print(a**b) # using double(*) for the power.
print(a!=b) # return unequal using logic operator.
print(a>b)  # return greater value using logic operator.


                                                       #List Practice - 3


List_A = [5, 6.6, 'a', 'b', 7,9] # Defining the List_A greater than 5 in length(i
.e 6) with Int, Float, String
print("List A: ",List_A)

List_B = [9,6.7,'h','s',5,'b']                      # Defining the List_B

List_A.append(List_B)                               # Append List_A to List_B
print("Append List_A to List_B: ",List_A)

List_A.extend(List_B)                               # Extend List_A to List_B.
print("Extend List_A to List_B: ",List_A)
```

```
List_A.insert(1,'FE520')                                # insert 'FE520' to the seco
nd position[1] i.e index 0,1,2,3....n.
print("Insert into 2 Position: ",List_A)

del List_A[1]
print("Delete 2 element: ",List_A)                      # delete second element usin
g delete method.

print("Return the last element: ",List_A[-1])           # get the last element

List_A.pop()                                            # pop method used to delete
the last element
print("Delete last element: ",List_A)

List_C = List_A[2:]                                     # Return New List C.
print("New List_C: ",List_C)

List_D = 2*List_C
print("Double Size of List_C: ",List_D)                 # it's double size of list.

print("List C",List_C)
print("Reversed of List_C: ",list(reversed(List_C)))     # Reversed the sequence
of the list.


                                                       #Practice Dictionary - 4


list_A = [1, 2, 3, 2, 1, 7]
final_dict = {}
for key in set(list_A):  # Set function used to give unique element or value.
        dict_val=list_A.count(key)
        final_dict[key]=dict_val
print("Key:Value",final_dict)

                                                       # Loop Practice  - 5

list_A = [1, 2, 3, 4, 5, 6]

sum = 0
for i in list_A:
    sum = sum + i
Average = sum/len(list_A)
print("The Average of list: ",Average)
```

```
                                                    # Loop Practice: Gradient De
cent - 6

w=0
c=0
L = 0.001
num_interation = 200   # Declare and initialize num_iteration variable.
x = [[0.18], [1.0], [0.92], [0.07], [0.85], [0.99], [0.87]]   # value of X(act as
 a list)
y = [109.85, 155.72, 137.66, 76.17, 139.75, 162.6, 151.77]    # value of y

# Number of elements in X

Dw=[]; # Declare Empty List
Dc=[]; # Declare Emplty List

def cal_list(x,y):
    #w=0
    #c=0
    n = len(x)
    for i in range(n):
      y_pred = x[i][0] * w + c
      Dw.append(x[i][0]*(y_pred-y[i])),
      Dc.append((y_pred-y[i]))

    return Dw,Dc;



for i in range(num_interation):   #Use function for iteration

      Dw,Dc=cal_list(x,y)

#Calculate the average.
      Dw_sum = 0
      for i in Dw:
        Dw_sum = Dw_sum + i
      dw = Dw_sum/len(Dw)
      Dc_sum = 0
      for i in Dc:
         Dc_sum = Dc_sum + i
      dc = Dc_sum/len(Dc)
```

```
      w = w - L * dw
      c = c - L * dc
#print value of w and c
      print (w, c)
```