**LIST,TUPLE,DICTIONARY,CLASS & OBJECT**

**LAB WORK:**

**PROGRAMS PRACTICE(a):**

1. a=[]

print(a)

**OUTPUT:**

[]

1. a=[1,2,3]

for i in range(3):

print(a[i])

**OUTPUT:**

1

2

3

1. a=['abc','cde']

for i in range(2):

print(a[i])

**OUTPUT:**

abc

cde

1. a=[1,2,3,'SSUET']

for i in range(4):

print(a[i])

**OUTPUT:**

1

2

3

SSUET

1. a=[[1,2,3],[8,4,6],[4,6,7]]

for i in range(3):

for j in range(3):

print(a[i][j])

**OUTPUT:**

1

2

3

8

4

6

4

6

7

1. a=['S','S','U','E','T']

print(a[-5])

print(a[2:5])

print(a[ : ])

print(a[5: ])

**OUTPUT:**

S

['U', 'E', 'T']

['S', 'S', 'U', 'E', 'T']

[]

**PROGRAMS PRACTICE(b):**

1. **b=['NED','KU','SSUET']**

**print(b)**

**OUTPUT:**

['NED', 'KU', 'SSUET']

1. **b=['NED','KU','SSUET']**

**print(b)**

**b[0]='UBIT'**

**print(b)**

**OUTPUT:**

['NED', 'KU', 'SSUET']

['UBIT', 'KU', 'SSUET']

1. **b=['NED','KU','SSUET']**

**print(b)**

**b[0]='UBIT'**

**print(b)**

**b.append('UIT')**

**print(b)**

**OUTPUT:**

['NED', 'KU', 'SSUET']

['UBIT', 'KU', 'SSUET']

['UBIT', 'KU', 'SSUET', 'UIT']

1. **b=['NED','KU','SSUET']**

**print(b)**

**b[0]='UBIT'**

**print(b)**

**b.append('UIT')**

**print(b)**

**b.remove('KU')**

**print(b)**

**OUTPUT:**

['NED', 'KU', 'SSUET']

['UBIT', 'KU', 'SSUET']

['UBIT', 'KU', 'SSUET', 'UIT']

['UBIT', 'SSUET', 'UIT']

1. **b=['NED','KU','SSUET']**

**print(b)**

**b[0]='UBIT'**

**print(b)**

**b.append('UIT')**

**print(b)**

**b.remove('KU')**

**print(b)**

**del b[1:4]**

**print(b)**

**OUTPUT:**

['NED', 'KU', 'SSUET']

['UBIT', 'KU', 'SSUET']

['UBIT', 'KU', 'SSUET', 'UIT']

['UBIT', 'SSUET', 'UIT']

['UBIT']

1. **b=['NED','KU','SSUET']**

**print(b)**

**b[0]='UBIT'**

**print(b)**

**b.append('UIT')**

**print(b)**

**b.remove('KU')**

**print(b)**

**del b[1:4]**

**print(b)**

**b.insert(1,'MIT')**

**print(b)**

**OUTPUT:**

['NED', 'KU', 'SSUET']

['UBIT', 'KU', 'SSUET']

['UBIT', 'KU', 'SSUET', 'UIT']

['UBIT', 'SSUET', 'UIT']

['UBIT']

['UBIT', 'MIT']

1. **b=['NED','KU','SSUET']**

**b.sort()**

**print(b)**

**OUTPUT:**

['KU', 'NED', 'SSUET']

**8.** **print(len(b))**

**OUTPUT:**

3

**9.** **print(min(b))**

**OUTPUT:**

KU

**10.print(max(b))**

**OUTPUT:**

SSUET

**11. b.reverse()**

**print(b)**

**OUTPUT:**

['SSUET', 'NED', 'KU']

**12. b=['NED','KU','SSUET']**

**print(list(b))**

**OUTPUT:**

['NED', 'KU', 'SSUET']

**13. b=['NED','KU','SSUET']**

**print(b.count('KU'))**

**OUTPUT:**

1

**14. b=['NED','KU','SSUET']**

**print(b.index('SSUET'))**

**OUTPUT:**

2

**PROGRAM PRACTICE(c):**

**DICTIONARY:**

dict={'Color':'green','points':5}

dict['a']=0

dict['b']=4

print(dict.items())

print(dict.values())

**OUTPUT:**

dict\_items([('Color', 'green'), ('a', 0), ('points', 5), ('b', 4)])

dict\_values(['green', 0, 5, 4])

**PROGRAM PRACTICE(d):**

**Class:**

class student:

def \_\_init\_\_(attribute,first,last,marks):

attribute.first=first

attribute.last=last

attribute.marks=marks

attribute.email=first+'.'+last+'Quni.com'

print(attribute.email)

st1=student('ali','khan',70)

st2=student('asad','khan',60)

print(st1.first,st1.last,st1.marks)

**OUTPUT:**

ali.khanQuni.com

asad.khanQuni.com

ali khan 70

**EXERCISE:**

**Object 01:** Store the name of fruits in a list called Fruits, Print each fruit name by accessing

Each element in the list one at a time.

**Source Code:**

fruites=['Apple','Banana','Mango','Pinapple','Cherries','Blueberry','Peach','Orange','Graps','Date']

for a in range(10):

print((a+1),"."+fruites[a])

**Output:**

1 .Apple

2 .Banana

3 .Mango

4 .Pinapple

5 .Cherries

6 .Blueberry

7 .Peach

8 .Orange

9 .Graps

10 .Date

**Object 02:** If you could invite anyone ,living or deceared to dinner , who would you invite .Make a nested list that includes at least one person from each list to invite to dinner .Then use your list to print a message to each person inviting them to dinner.

**Source Code:**

person=[['ali','hina'],['usman','Shakeeb'],['inviting for dinner','Not living for dinner']]

print(person[0][0]+" & "+person[1][0]+" is "+person[2][0])

print(person[0][1]+" & "+person[1][1]+" is "+person[2][0])

print(person[0][0]+" & "+person[1][1]+" is "+person[2][1])

**Output:**

ali & usman is inviting for dinner

hina & Shakeeb is inviting for dinner

ali & Shakeeb is Not living for dinner

**Object 03:**

You just heard that two of your guest can not make the dinner so you need to send out a new set of invitation

* Modify your list replacing the name of guest who can not make it
* Print a second set of invitation message one for each person who is still in list.

**Source Code:**

person=[['ali','hina'],['usman','Shakeeb'],['inviting for dinner','Not living for dinner']]

for i in range(2):

print(person[0][i]+" & "+person[1][i]+" is "+person[2][0])

print(person[0][1]+" & "+person[1][1]+" is "+person[2][1])

print("list of invited persons")

for a in range(2):

for b in range(2):

print(person[a][b])

print(person[0][1]+" & "+person[1][1]+" is "+person[2][1]+" That,s why")

person[0][1]=('umer')

person[1][1]=('huma')

for a in range(2):

for b in range(2):

print(person[a][b])

**Output:**

ali & usman is inviting for dinner

hina & Shakeeb is inviting for dinner

hina & Shakeeb is Not living for dinner

list of invited persons

ali

hina

usman

Shakeeb

hina & Shakeeb is Not living for dinner That,s why

ali

umer

usman

huma

**Object 04:**

Create a class “Employee” it is a common base class for all employee .Initialize employees parameters like Name, Designation, Grade, Salary:

* Insert five employees information
* Print Employee Name & Grade
* Print Employee Name, Designation & Salary

**Source Code:**

class Employee:

def \_\_init\_\_ (attribute,name,designation,grade,salary):

attribute.name=name

attribute.designation=designation

attribute.grade=grade

attribute.salary=salary

E1=Employee('sana','financial officer',16,33000)

E2=Employee('Ali','Chief Executive Officer',18,25000)

E3=Employee('hina','Chief Marketing Officer',16,55000)

E4=Employee('huma','Chief Legal Officer',18,67000)

E5=Employee('usman','Departmental Manager',19,44000)

print('Name='+E1.name+" Grade=",E1.grade)

print('Name='+E1.name+" Designation="+E1.designation+" Salary=",E1.salary)

print('Name='+E2.name+" Grade=",E2.grade)

print('Name='+E2.name+" Designation="+E2.designation+" Salary=",E2.salary)

print('Name='+E3.name+" Grade=",E3.grade)

print('Name='+E3.name+" Designation="+E3.designation+" Salary=",E3.salary)

print('Name='+E4.name+" Grade=",E4.grade)

print('Name='+E4.name+" Designation="+E4.designation+" Salary=",E4.salary)

print('Name='+E5.name+" Grade=",E5.grade)

print('Name='+E5.name+" Designation="+E5.designation+" Salary=",E5.salary)

**Output:**

Name=sana Grade= 16

Name=sana Designation=financial officer Salary= 33000

Name=Ali Grade= 18

Name=Ali Designation=Chief Executive Officer Salary= 25000

Name=hina Grade= 16

Name=hina Designation=Chief Marketing Officer Salary= 55000

Name=huma Grade= 18

Name=huma Designation=Chief Legal Officer Salary= 67000

Name=usman Grade= 19

Name=usman Designation=Departmental Manager Salary= 44000

**Object 05:**

Create a dictionary which contains each alphabet as key & word as a value:

* Print key+value pair
* Print values

**Source Code:**

dict={'A':'Apples','B':'Banana','C':'Cat','D':'Duck','E':'Egg','F':'Fish'}

print("Item List:")

for i in dict.items():

print(i)

print("Value List:")

for j in dict.values():

print(j)

**Output:**

Item List:

('A', 'Apples')

('C', 'Cat')

('B', 'Banana')

('E', 'Egg')

('D', 'Duck')

('F', 'Fish')

Value List:

Apples

Cat

Banana

Egg

Duck

Fish