FEDERAL INSTITUTE OF SCIENCE AND TECHNOLOGY (FISAT)™

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FOCUS ON EXCELLENCE

20MCA131 PROGRAMMING LAB LABORATORY RECORD

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FEDERAL INSTITUTE OF SCIENCE AND TECHNOLOGY (FISAT)™

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CERTIFICATE

This is to certify that this is a Bonafide record of the Practical work done by APARNA K NAIR(FIT21MCA-2035) in the 20MCA131 PROGRAMMING LAB Laboratory towards the partial fulfilment for the award of the Master Of Computer Applications during the academic year 2021-2022.

Signature of Staff in Charge — Signature of H O D

Name: — Name:

Date of University practical examination ………………………

Signature of Internal Examiner — Signature of External Examiner

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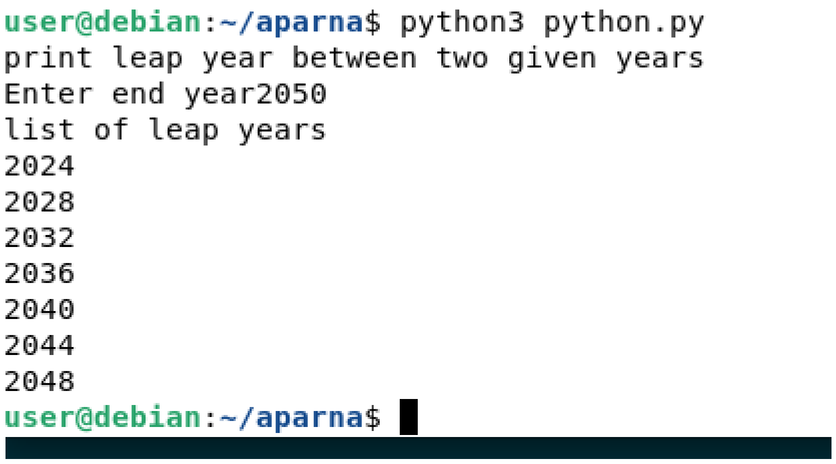
COURSE OUTCOME 1

1) Display future leap years from current year to a final year entered by User.

Source code

```
print("print leap year
between two given years");
startyear=2021
endyear=int(input("Enter end year")) print("list of leap years")
for year in
        range(startyear,endyear
        ): if(0==year%4):
                print(year)
```

Output



```
user@debian:~/aparna$ python3 python.py
print leap year between two given years
Enter end year2050
list of leap years
2024
2028
2032
2036
2040
2044
2048
user@debian:~/aparna$
```

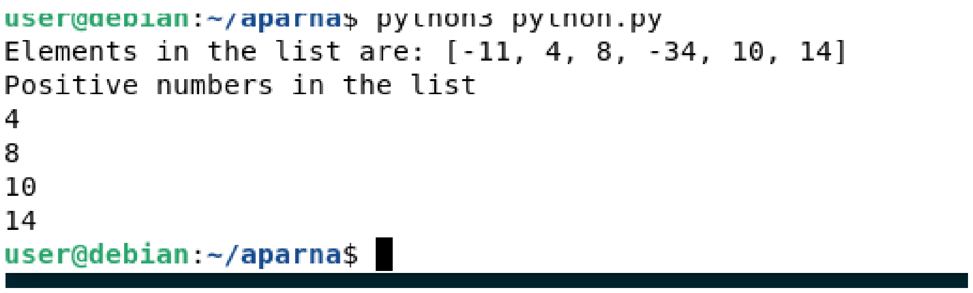
2) List comprehensions:

a. Generate positive list of numbers from a given list of integers.

Source code

```
list=[-11,4,8,-34,10,14]
print("Elements in the list are:",list) print("Positive numbers in the list")
for num in list:
        if num>=0:
                print(num)
```

Output



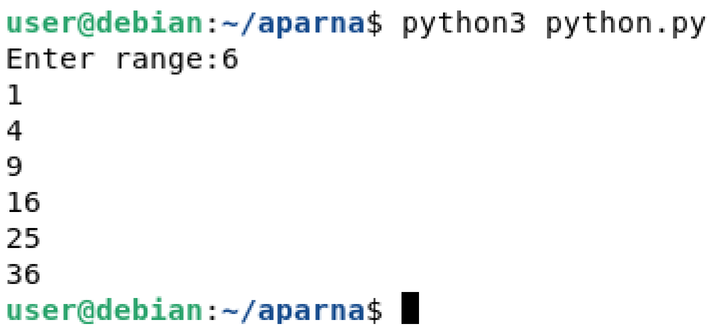
```
user@debian:~/aparna$ python3 python.py
Elements in the list are: [-11, 4, 8, -34, 10, 14]
Positive numbers in the list
4
8
10
14
user@debian:~/aparna$
```

b. Square of N numbers

Source code

```
n=int(input('Enter range:'))
for num in range(1,n+1):
        num=num*num
        print(num)
```

Output



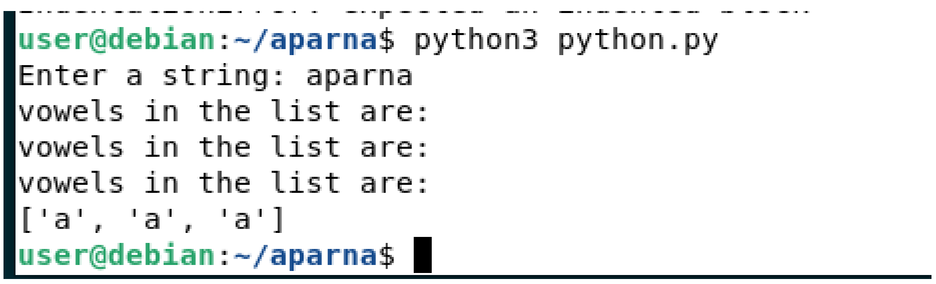
```
user@debian:~/aparna$ python3 python.py
Enter range:6
1
4
9
16
25
36
user@debian:~/aparna$
```

c.Form a list of vowels selected from a given word.

Source code

```
s=input("Enter a string: ")
list=[]
for i in s:
   if i in "aeiouAEIOU":
            list.append(i)
print("vowels in the list are:")
print(list)
```

output



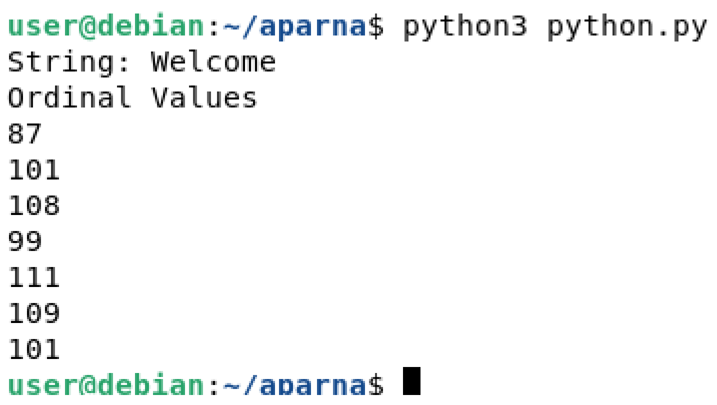
```
user@debian:~/aparna$ python3 python.py
Enter a string: aparna
vowels in the list are:
vowels in the list are:
vowels in the list are:
['a', 'a', 'a']
user@debian:~/aparna$
```

d. find ordinal values of each element of a word.

Source code

```
print("String: Welcome")
print("Ordinal Values")
for i in 'W','e','l','c','o','m','e':
   x=ord(i)
   print(x)
```

Output



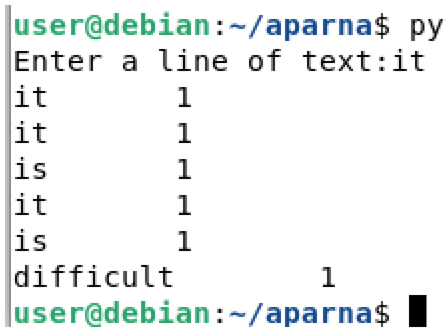
```
user@debian:~/aparna$ python3 python.py
String: Welcome
Ordinal Values
87
101
108
99
111
109
101
user@debian:~/aparna$
```

3) Count the occurrences of each word in a line of text.

Source code

```
list1=[]
list2=[]
x=input("Enter a line of text:")
for i in x.split(" "):
        list1.append(i)
        if i not in list2:
                list2.append(i)
for i in list2:
print(i,"\t",list1.count(i))
```

Output



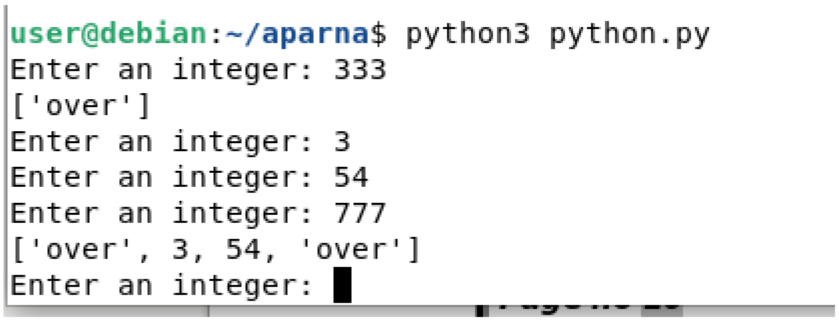
```
user@debian:~/aparna$ python3 python.py
Enter a line of text:it is difficult is it
it       1
it       1
is       1
it       1
is       1
difficult        1
user@debian:~/aparna$ 
```

4. Prompt the user for a list of integers. For all values greater than 100, store 'over' instead.

Source code

```
list=[]
while True:
 n=int(input('Enter an integer: '))
if(n<=100):
 list.append(n)
 else:
list.append('over')


print(list)
```

output



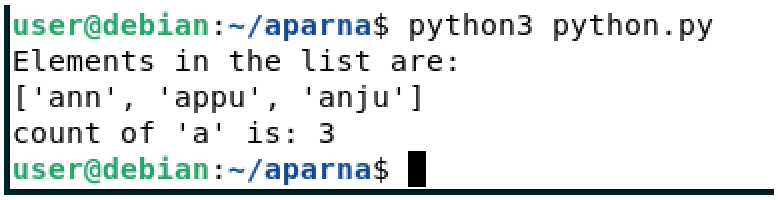
```
user@debian:~/aparna$ python3 python.py
Enter an integer: 333
['over']
Enter an integer: 3
Enter an integer: 54
Enter an integer: 777
['over', 3, 54, 'over']
Enter an integer: 
```

5)Store a list of first names. Count the occurrences of 'a' within the list.

Source code

```
List=['ann','appu','anju']
print("Elements in the list are:")
print(list)
count=0
for word in list:
        for i in word:
                if i=='a':
                        count+=1
print("count of 'a' is:", count)
```

Output



```
user@debian:~/aparna$ python3 python.py
Elements in the list are:
['ann', 'appu', 'anju']
count of 'a' is: 3
user@debian:~/aparna$ 
```

6)Enter 2 lists of integers.Check

a. **whether list are of same length**

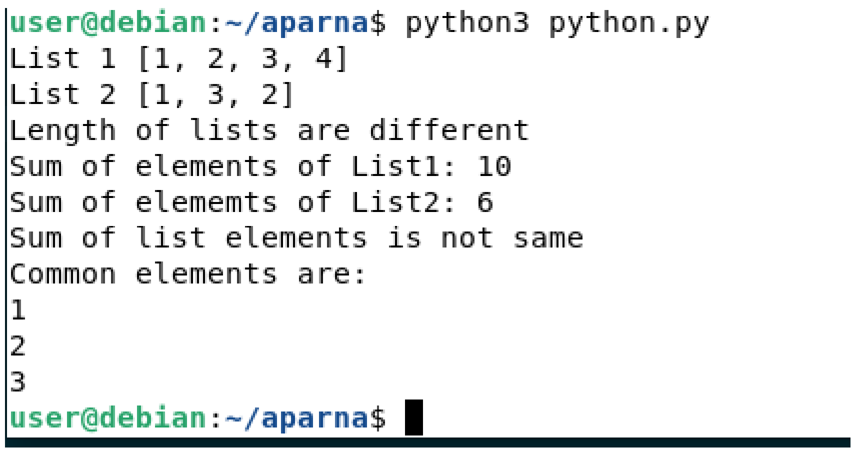
b. **whetherlist sums of same value**

c. **whether any value occur in both.**

Source code

```
l1=[1,2,3,4]
l2=[1,3,2]
print("List 1",l1)
print("List 2",l2)
x=len(l1)
y=len(l2)
if x==y:
 print("List are of same length")
else:
 print("Length of lists are different")
s1=0
s2=0
for i in range(x):
 s1=s1+l1[i]
print("Sum of elements of List1:",s1)
for j in range(y):
 s2=s2+l2[j]
print("Sum of elememts of List2:",s2)
if s1==s2:
 print("Sum of list elements is same")
else:
 print("Sum of list elements is not same")
print("Common elements are:")
for i in range(x):
 for j in range(y):
  if l1[i]==l2[j]:
   print(l1[i])
```

Output



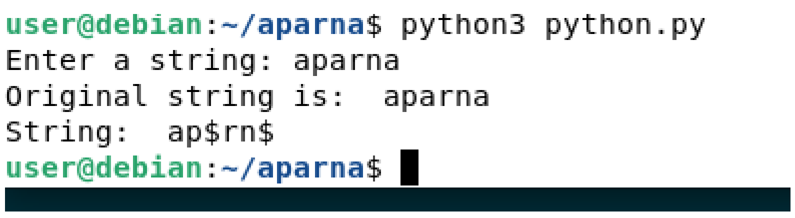
```
user@debian:~/aparna$ python3 python.py
List 1 [1, 2, 3, 4]
List 2 [1, 3, 2]
Length of lists are different
Sum of elements of List1: 10
Sum of elememts of List2: 6
Sum of list elements is not same
Common elements are:
1
2
3
user@debian:~/aparna$
```

7)Get a string from an input string where all occurrences of first character replaced with '$',except first character.[eg:onion->oni$n]

Source code

```
str=input("Enter a string: ")
print("Original string is: ",str)
char=str[0]
str=str.replace(char,'$')
str=char+str[1:]
print("String: ",str)
```

Output



```
user@debian:~/aparna$ python3 python.py
Enter a string: aparna
Original string is:  aparna
String:  ap$rn$
user@debian:~/aparna$
```

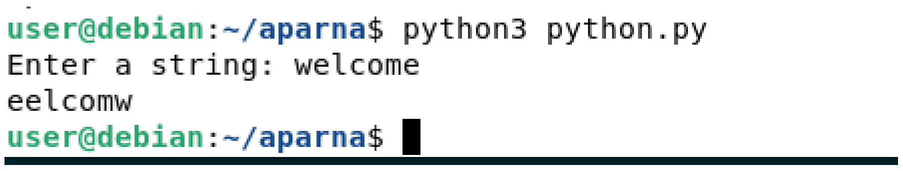
8)Create a string from given string where first and last characters exchanged.[eg:python->nythop]

Source code

```
s=input("Enter a string: ")
```

```
t=s[0]
t1=s[-1]
n=len(s)
ns=t1+s[1:n-1]+t
print(ns)
```

Output



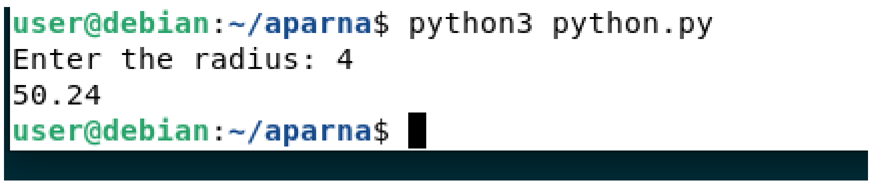
```
user@debian:~/aparna$ python3 python.py
Enter a string: welcome
eelcomw
user@debian:~/aparna$
```

9)Accept the radius from the user and find the area of the circle.

Source code

```
r=int(input('Enter the radius: '))
A=3.14*r*r
print(A)
```

Output



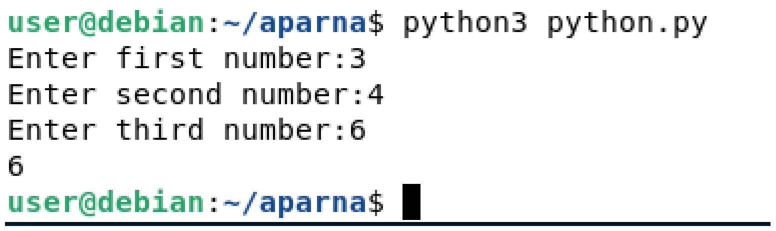
```
user@debian:~/aparna$ python3 python.py
Enter the radius: 4
50.24
user@debian:~/aparna$
```

10)Find the biggest of 3 numbers

Source code

```
a=int(input('Enter first number:'))
b=int(input('Enter second number:'))
c=int(input('Enter third number:'))
if a>b and a>c:
 print(a)
if b>a and b>c:
 print(b)
if c>a and c>b:
 print(c)
```

Output



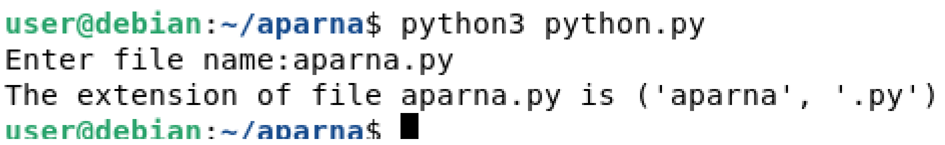
```
user@debian:~/aparna$ python3 python.py
Enter first number:3
Enter second number:4
Enter third number:6
6
user@debian:~/aparna$
```

11)Accept a file name from user and print extension of that.

Source code

```
import os
a=input("Enter file name:")
print("The extension of file",a,"is",os.path.splitext(a))
```

Output



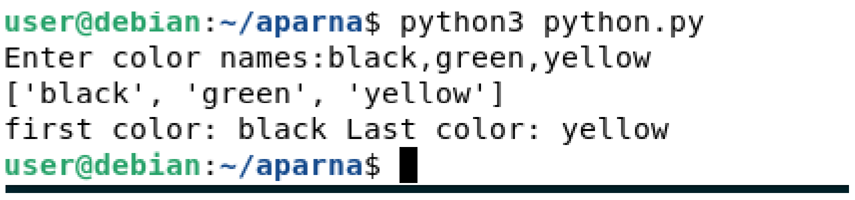
```
user@debian:~/aparna$ python3 python.py
Enter file name:aparna.py
The extension of file aparna.py is ('aparna', '.py')
user@debian:~/aparna$
```

12)Create a list of colors from comma-separated color names entered by user. Display first and last colors.

Source code

```
colors=[]
str=(input("Enter color names:"))
for i in str.split(','):
 colors.append(i)
print(colors)
print("first color:",colors[0],"Last color:",colors[-1])
```

Output



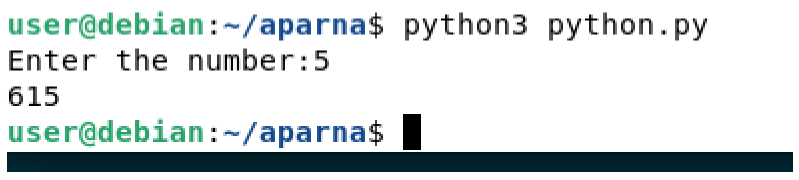
```
user@debian:~/aparna$ python3 python.py
Enter color names:black,green,yellow
['black', 'green', 'yellow']
first color: black Last color: yellow
user@debian:~/aparna$
```

13)Accept an integer n and compute n+nn+nnn.

Source code

```
n=int(input("Enter the number:"))

a=n*1

b=n*11

c=n*111

s=a+b+c

print(s)
```

OUTPUT



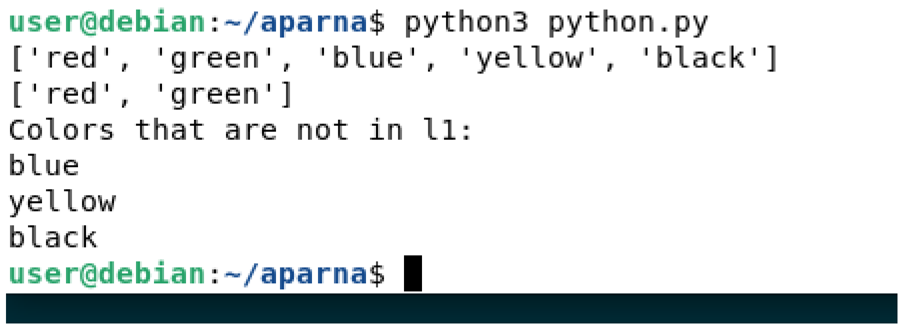
```
user@debian:~/aparna$ python3 python.py
Enter the number:5
615
user@debian:~/aparna$
```

14)Print out all color from color-list1 not contained in color-list2

Source code

```
l1=['red','green','blue','yellow','black']

l2=['red','green',]

print(l1)

print(l2)

print("Colors that are not in l1:")

for i in l1:

 if i not in l2:

            print(i)
```

Output



```
user@debian:~/aparna$ python3 python.py
['red', 'green', 'blue', 'yellow', 'black']
['red', 'green']
Colors that are not in l1:
blue
yellow
black
user@debian:~/aparna$
```

15)Create a single string separated with space from two strings by swapping the character at position 1.

Source code

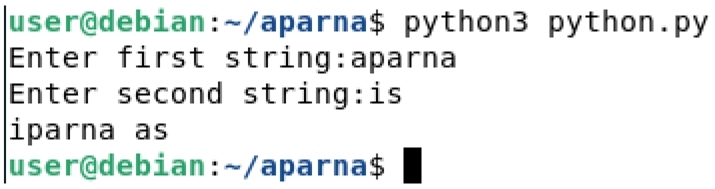
str1=input("Enter first string:")

str2=input("Enter second string:")

str3=str2[0]+str1[1:]+" "+str1[0]+str2[1:]

print(str3)

Output



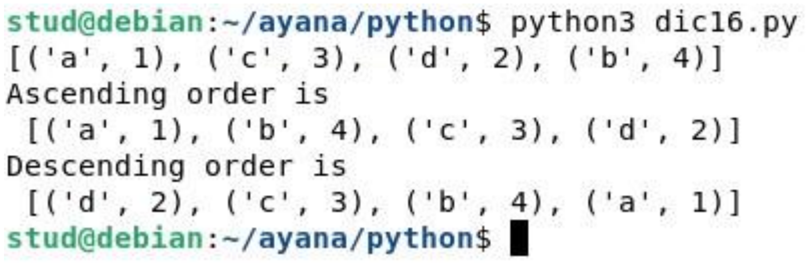
```
user@debian:~/aparna$ python3 python.py
Enter first string:aparna
Enter second string:is
iparna as
user@debian:~/aparna$ 
```

16) Sort dictionary in ascending and descending order.

Source code:

```
dict1={"a":1,"c":3,"d":2,"b":4}

l=list(dict1.items())

print(l)

l.sort()

print("Ascending order is\n",l)

l=list(dict1.items())

l.sort(reverse=True)

print("Descending order is\n",l)
```

OUTPUT



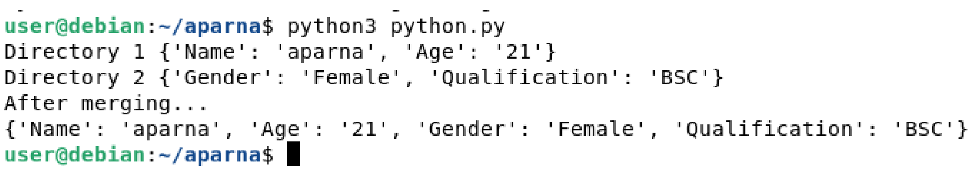
```
stud@debian:~/ayana/python$ python3 dic16.py
[('a', 1), ('c', 3), ('d', 2), ('b', 4)]
Ascending order is
 [('a', 1), ('b', 4), ('c', 3), ('d', 2)]
Descending order is
 [('d', 2), ('c', 3), ('b', 4), ('a', 1)]
stud@debian:~/ayana/python$ 
```

17)Merge two dictionaries.

Source code

```
D1={"Name":”aparna","Age":"21"}
print("Directory 1",D1)
D2={"Gender":"Female","Qualification":"BSC"}
print("Directory 2",D2)
D1.update(D2)
print("After merging...")
print(D1)
```

Output



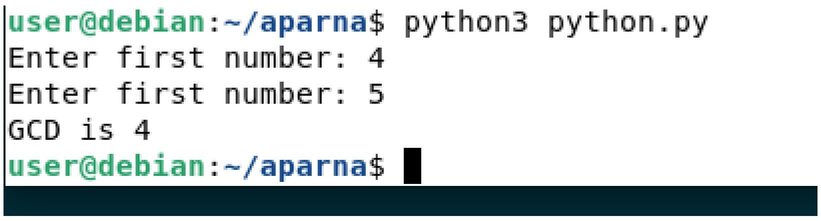
```
user@debian:~/aparna$ python3 python.py
Directory 1 {'Name': 'aparna', 'Age': '21'}
Directory 2 {'Gender': 'Female', 'Qualification': 'BSC'}
After merging...
{'Name': 'aparna', 'Age': '21', 'Gender': 'Female', 'Qualification': 'BSC'}
user@debian:~/aparna$
```

18)Find gcd of 2 numbers

Source code

```
a=int(input("Enter first number: "))
b=int(input("Enter first number: "))
x=min(a,b)
gcd=0
for i in range (1,x+1):
 if((a%x==0) and (b%x==0)):
          gcd=i
print("GCD is",i)
```

Output



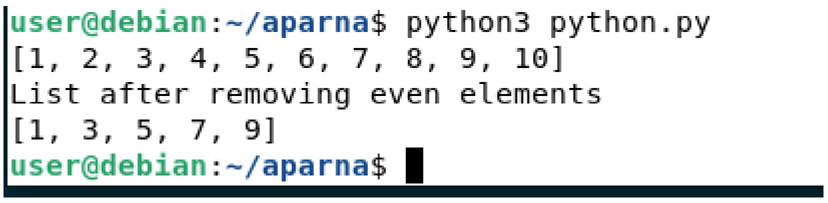
```
user@debian:~/aparna$ python3 python.py
Enter first number: 4
Enter first number: 5
GCD is 4
user@debian:~/aparna$
```

19)From a list of integers,create a list removing even numbers.

Source code

```
l1=[1,2,3,4,5,6,7,8,9,10]
print(l1)
l2=[]
for i in range(len(l1)):
 if l1[i]%2!=0:
           l2.append(l1[i])
print("List after removing even elements")
print(l2)
```

Output



```
user@debian:~/aparna$ python3 python.py
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
List after removing even elements
[1, 3, 5, 7, 9]
user@debian:~/aparna$
```

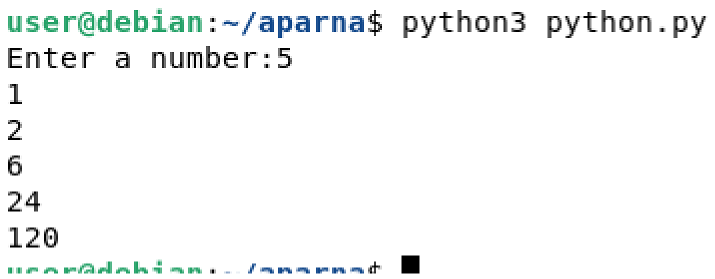
<u>COURSE OUTCOME 2</u>

20)Program to find the factorial of a number.

Source code

```
n=int(input('Enter a number:'))
fact=1
for i in range (1,n+1):
   fact=fact*i
print(fact)
```

Output



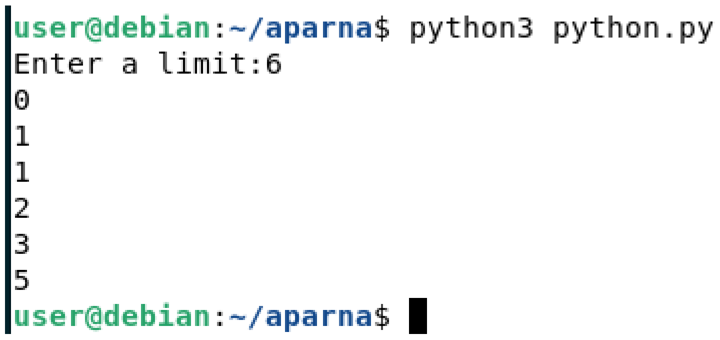
```
user@debian:~/aparna$ python3 python.py
Enter a number:5
1
2
6
24
120
user@debian:~/aparna$
```

21)Generate fibonacci series of N terms.

Source code

```
n=int(input('Enter a limit:'))
a=0
b=1
print(a)
print(b)
for i in range (2,n):
        c=a+b
        print(c)
        a=b
        b=c
```

Output



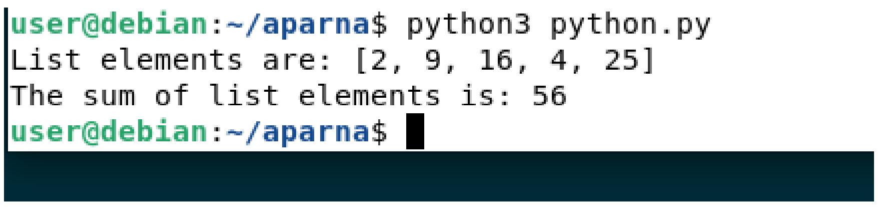
```
user@debian:~/aparna$ python3 python.py
Enter a limit:6
0
1
1
2
3
5
user@debian:~/aparna$
```

22)Find the sum of all items in a list.

Source code

```
list=[2,9,16,4,25]
print("List elements are:",list)
sum=0
for i in list:
        sum=sum+i
print("The sum of list elements is:",sum)
```

Output



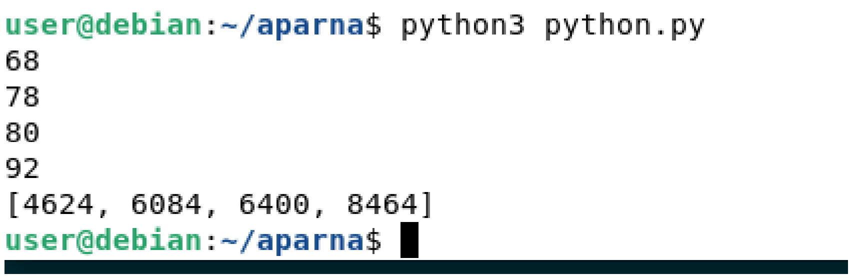
```
user@debian:~/aparna$ python3 python.py
List elements are: [2, 9, 16, 4, 25]
The sum of list elements is: 56
user@debian:~/aparna$ 
```

23)Generate a list of four digit numbers in a given range with all their digits even and the number is a perfect square.

Source code

```
limit1=1000
limit2=9999
list1=[]
for i in range(limit1,limit2):
   j=i
   digit=[]
   while(i!=0):
            digit.append(i%10)
            i=int(i/10)
   count=0
   for n in digit:
            if n%2==0:
                     count=count+1
            if count==4:
                     for k in range(31,100):
                              if((k**2)==j):
                                       list1.append(j)
                                       print(k)
print(list1)
```

Output



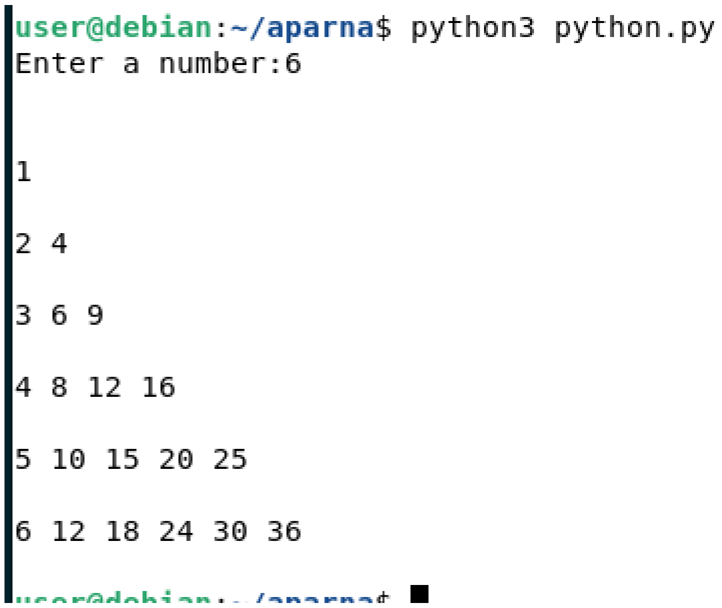
```
user@debian:~/aparna$ python3 python.py
68
78
80
92
[4624, 6084, 6400, 8464]
user@debian:~/aparna$ 
```

24)Display the given pyramid with step number accepted from user.

Source code

```
n=int(input("Enter a number:"))
for j in range(0,n+1):
    for i in range(1,j+1):
            i=j*i
            print(i,end=" ")
    print("\n")
```

Output



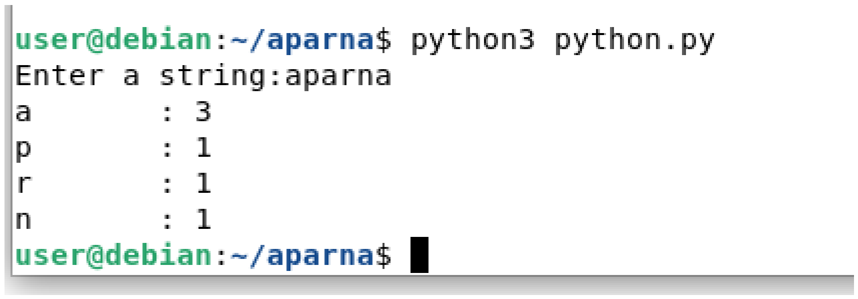
```
user@debian:~/aparna$ python3 python.py
Enter a number:6


1

2 4

3 6 9

4 8 12 16

5 10 15 20 25

6 12 18 24 30 36

user@debian:~/aparna$ 
```

25)count the number of characters (character frequency) in a string.

Source code

```
string=input("Enter a string:")
list1=[]
for i in string:
    if i not in list1:
            list1.append(i)
for i in list1:
    count=0
    for j in string:
            if(i==j):
                        count=count+1
    print(i,"\t:",count)
```

Output



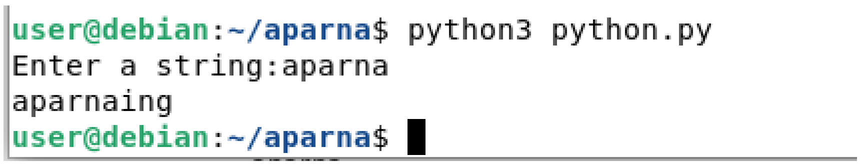
```
user@debian:~/aparna$ python3 python.py
Enter a string:aparna
a       : 3
p       : 1
r       : 1
n       : 1
user@debian:~/aparna$
```

26)Add 'ing' at the end of a given string. If it already ends with 'ing', then add'ly'.

Source code

```
string=input("Enter a string:")
if(string[-3:]=="ing"):
        string+="ly"
else:
        string+="ing"
print(string)
```

Output



```
user@debian:~/aparna$ python3 python.py
Enter a string:aparna
aparnaing
user@debian:~/aparna$
```

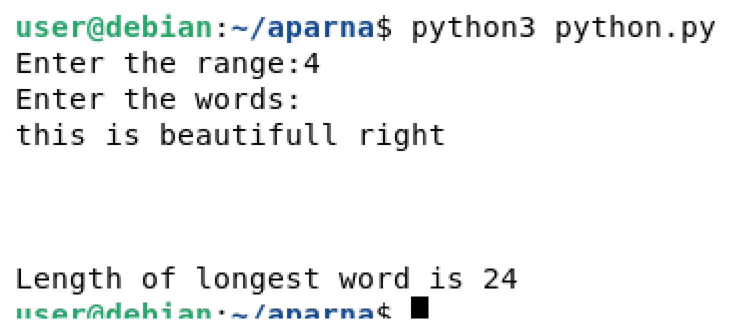
27)Accept a list of words and return length of longest word.

Source code

```
lis=[]
n=int(input("Enter the range:"))
print("Enter the words:")
for i in range(0,n):
```

```
            lis.append(input(""))
longest=lis[0]
for i in range(1,n):
            if(len(lis[i])>len(longest)):
              longest=lis[i]
print("Length of longest word is",len(longest))
```

Output



```
user@debian:~/aparna$ python3 python.py
Enter the range:4
Enter the words:
this is beautifull right



Length of longest word is 24
user@debian:~/aparna$
```

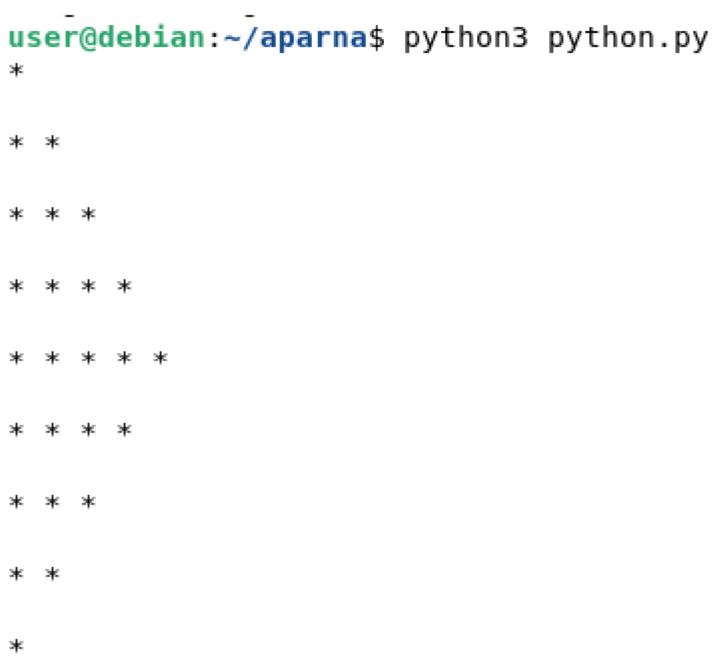
28)Construct following pattern using nested loop.

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

Source code

```
for i in range(1,6):
   for j in range(1,i+1):
             print("*",end=" ")
   print("\n")
for i in range(4,0,-1):
   for j in range(1,i+1):
             print("*",end=" ")
   print("\n")
```

Output



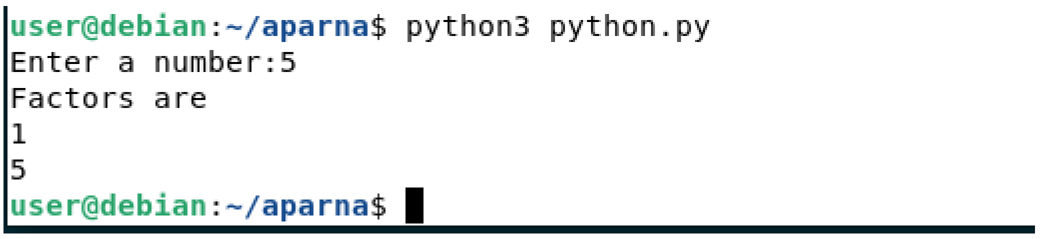
```
user@debian:~/aparna$ python3 python.py
*

* *

* * *

* * * *

* * * * *

* * * *

* * *

* *

*
```

29)Generate all factors of a number.

Source code

```
n=int(input("Enter a number:"))
print("Factors are")
for i in range(1,n+1):
   if(n%i==0):
             print(i)
```

Output



```
user@debian:~/aparna$ python3 python.py
Enter a number:5
Factors are
1
5
user@debian:~/aparna$ 
```

COURSE OUTCOME 3

30)Create a package graphics with modules rectangle, circle and sub-package 3D-graphics with modules cuboid and sphere. Include methods to find area and perimeter of respective figures in each module. Write programs that finds area and perimeter of figures by different importing statements. (Include selective import of modules and import * statements)

Source code

Graphice\circle.py

```
from math import pi
def area_circle(radius):
   return pi*radius*radius
def perimeter_circle(radius):
   return 2*pi*radius
```

Graphics\rectangle.py

```
def area_rec(length,width):
   return length*width
def perimeter_rec(length,width):
   return 2*(length+width)
```

Graphics\tdgraphics\cuboid.py

```
def area_cuboid(l,b,h):
    return 2*(l*h + b*h + l*b)
def volume_cuboid(l,b,h):
    return l*b*h
```

Graphics\tdgraphics\sphere.py

```
from math import pi
def area_sphere(radius):
    return 4*(pi*radius*radius)
def perimeter_sphere(radius):
    return 2*pi*radius
```

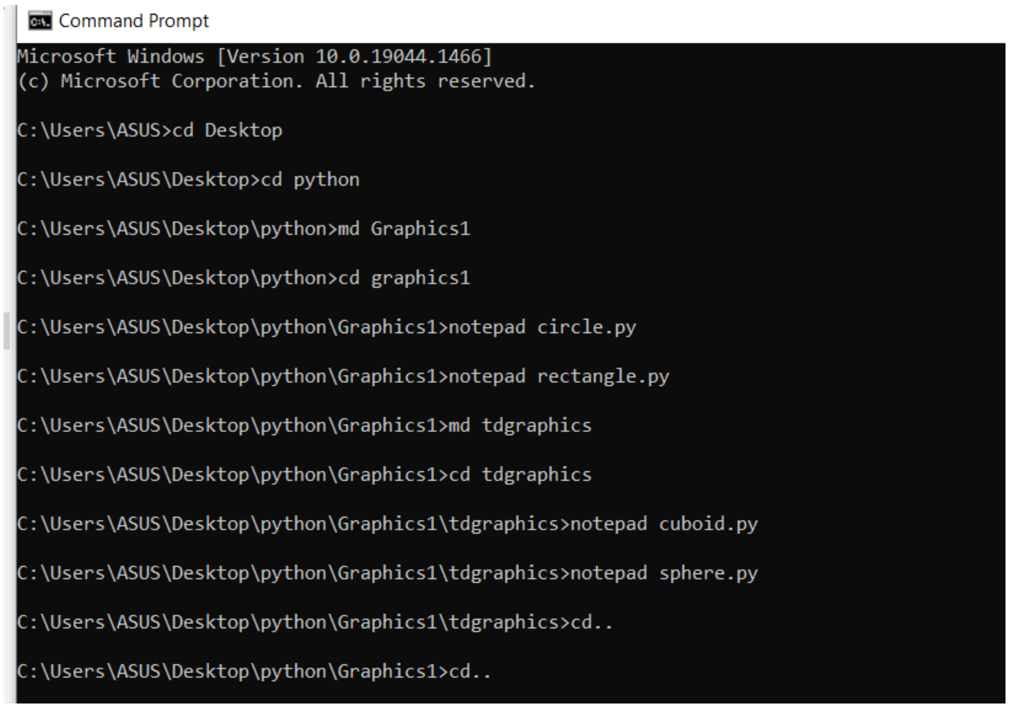
graphics.py (driver code)

```
import Graphics
from Graphics import circle,rectangle
from Graphics.tdgraphics import cuboid,sphere
from Graphics.circle import *
print("Area of a circle with radius 10 is : ",circle.area_circle(10))
print("Permeter of a circle with radius 10 is ",circle.perimeter_circle(10))
print("\n")


print("Area of a Rectangle with length and width 10 is :
        ",rectangle.area_rec(10,10))
print("Permeter of a Rectangle with length and width 10 is :
        ",rectangle.perimeter_rec(10,10))
print("\n")


print("Area of a  cuboid with length,width,height 10 is :
        ",cuboid.area_cuboid(10,10,10))
print("Volume of a cuboid with length,width,height 10 is :
        ",cuboid.volume_cuboid(10,10,10))
print("\n")
```

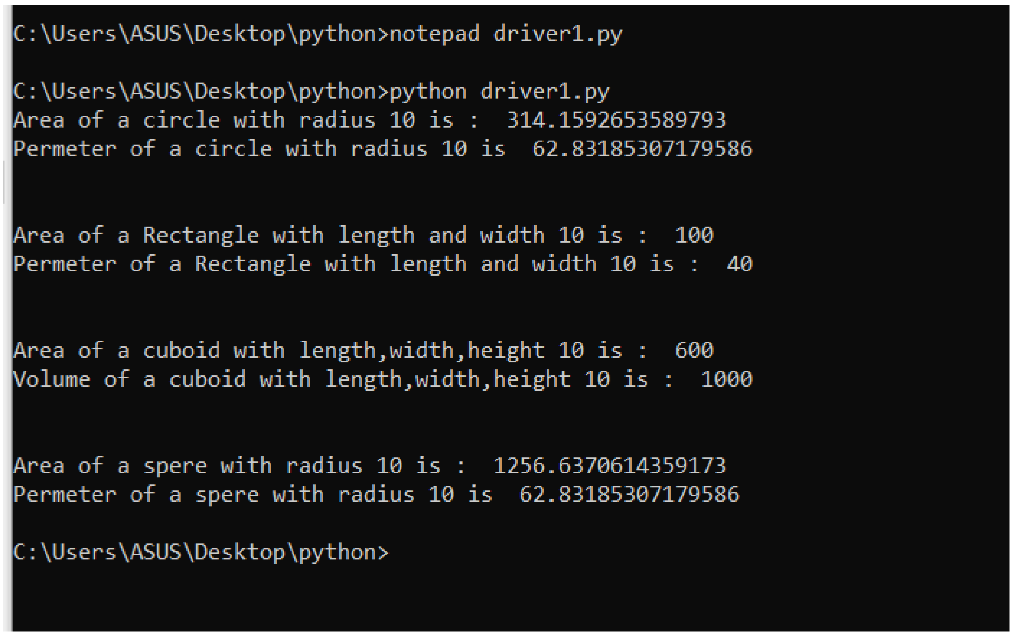
print("Area of a spere with radius 10 is : ",sphere.area_sphere(10))

print("Permeter of a spere with radius 10 is ",sphere.perimeter_sphere(10))

Output



```
Microsoft Windows [Version 10.0.19044.1466]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ASUS>cd Desktop

C:\Users\ASUS\Desktop>cd python

C:\Users\ASUS\Desktop\python>md Graphics1

C:\Users\ASUS\Desktop\python>cd graphics1

C:\Users\ASUS\Desktop\python\Graphics1>notepad circle.py

C:\Users\ASUS\Desktop\python\Graphics1>notepad rectangle.py

C:\Users\ASUS\Desktop\python\Graphics1>md tdgraphics

C:\Users\ASUS\Desktop\python\Graphics1>cd tdgraphics

C:\Users\ASUS\Desktop\python\Graphics1\tdgraphics>notepad cuboid.py

C:\Users\ASUS\Desktop\python\Graphics1\tdgraphics>notepad sphere.py

C:\Users\ASUS\Desktop\python\Graphics1\tdgraphics>cd..

C:\Users\ASUS\Desktop\python\Graphics1>cd..
```



```
C:\Users\ASUS\Desktop\python>notepad driver1.py

C:\Users\ASUS\Desktop\python>python driver1.py
Area of a circle with radius 10 is :  314.1592653589793
Permeter of a circle with radius 10 is  62.83185307179586


Area of a Rectangle with length and width 10 is :  100
Permeter of a Rectangle with length and width 10 is :  40


Area of a cuboid with length,width,height 10 is :  600
Volume of a cuboid with length,width,height 10 is :  1000


Area of a spere with radius 10 is :  1256.6370614359173
Permeter of a spere with radius 10 is  62.83185307179586

C:\Users\ASUS\Desktop\python>
```

COURSE OUTCOME 4

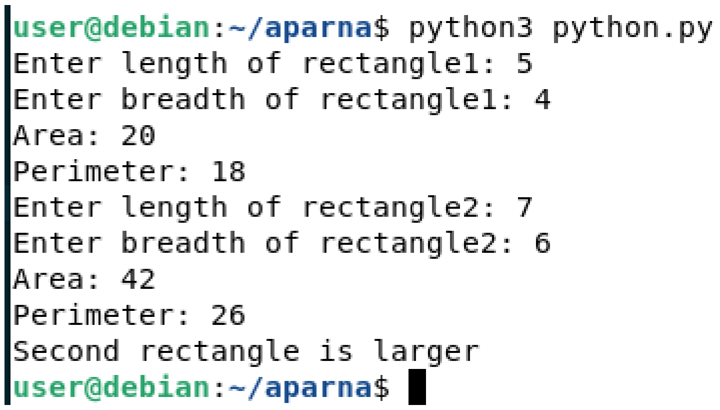
31)Create Rectangle class with attributes length and breadth and methods to find area and perimeter. Compare two Rectangle objects by their area.

Source code

```
class Rectangle:

   def __init__(self,length,breadth):

           self.length = length

           self.breadth = breadth

   def area(self):

           return self.length * self.breadth

   def perimeter(self):

           return 2*(self.length + self.breadth)

l=int(input("Enter length of rectangle1: "))

b=int(input("Enter breadth of rectangle1: "))

rect1 = Rectangle(l,b)

a1=rect1.area()

p1=rect1.perimeter()

print("Area:",a1)

print("Perimeter:",p1)

l=int(input("Enter length of rectangle2: "))

b=int(input("Enter breadth of rectangle2: "))

rect2 = Rectangle(l,b)
```

```
a2=rect2.area()

p2=rect2.perimeter()

print("Area:",a2)

print("Perimeter:",p2)

if (a1>a2):

   print("First rectangle is larger")

elif a1==a2:

   print("Rectangles are of same area")

else:

   print("Second rectangle is larger")
```

Output



```
user@debian:~/aparna$ python3 python.py
Enter length of rectangle1: 5
Enter breadth of rectangle1: 4
Area: 20
Perimeter: 18
Enter length of rectangle2: 7
Enter breadth of rectangle2: 6
Area: 42
Perimeter: 26
Second rectangle is larger
user@debian:~/aparna$
```

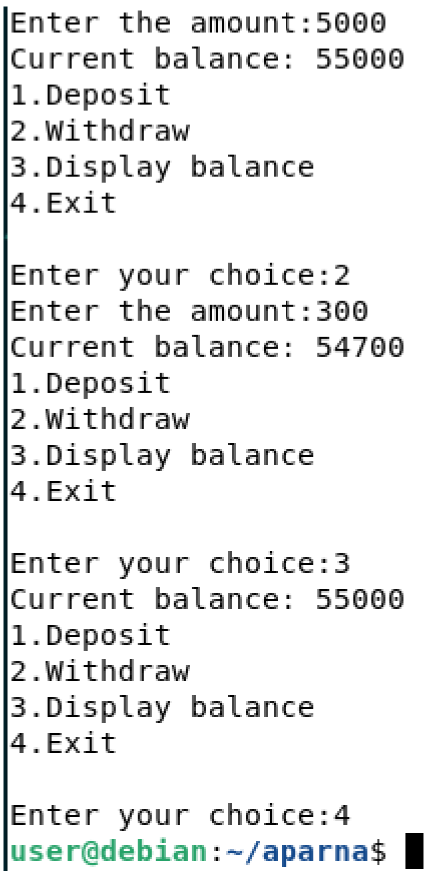
32)Create a Bank account with members account number, name, type of account and balance. Write constructor and methods to deposit at the bank and withdraw an amount from the bank.

Source code

```
class bank:
def __init__(self,acc_no,name,acc_type,bal):

            self.acc_no=acc_no
```

```
        self.name=name
        self.acc_type=acc_type
        self.bal=bal

    def deposit(self):
        self.bal=self.bal+y
        return self.bal
    def withdraw(self):
        return self.bal-y
    def display_balance(self):
        return self.bal
acc1=bank("b11","aparna","Savings",50000)
while(1):
    print("1.Deposit\n2.Withdraw\n3.Display balance\n4.Exit\n")
    ch=int(input("Enter your choice:"))
    if ch==1:
        amt=int(input("Enter the amount:"))
        b=acc1.deposit(amt)
        print("Current balance:",b)
    elif ch==2:
        amt=int(input("Enter the amount:"))
        b=acc1.withdraw(amt)
        print("Current balance:",b)
    elif ch==3:
        cb=acc1.display_balance()

        print("Current balance:",cb)

    elif ch==4:

        exit(1)

    else:

        print("Invalid choice")
```

Output



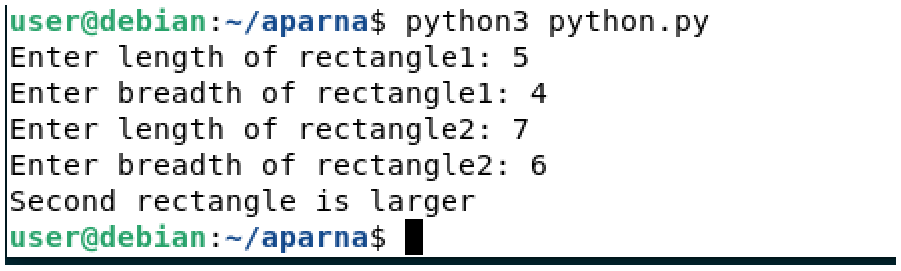
```
Enter the amount:5000
Current balance: 55000
1.Deposit
2.Withdraw
3.Display balance
4.Exit

Enter your choice:2
Enter the amount:300
Current balance: 54700
1.Deposit
2.Withdraw
3.Display balance
4.Exit

Enter your choice:3
Current balance: 55000
1.Deposit
2.Withdraw
3.Display balance
4.Exit

Enter your choice:4
user@debian:~/aparna$
```

33)Create a class Rectangle with private attributes length and width. Overload '<' operator to compare the area of 2 rectangles.

Source code

```
class Rectangle:
   def __init__(self,length,breadth):
        self.__length = length
        self.__breadth = breadth
   def __lt__ (self,rect2):
        if self.__length*self.__breadth < rect2.__length*rect2.__breadth:
            return True
        else:
            return False
l=int(input("Enter length of rectangle1: "))
b=int(input("Enter breadth of rectangle1: "))
rect1 = Rectangle(l,b)
l=int(input("Enter length of rectangle2: "))
b=int(input("Enter breadth of rectangle2: "))
rect2 = Rectangle(l,b)
if rect1 < rect2:
   print("Second rectangle is larger")
else:
   print("First rectangle is larger")
```

output



```
user@debian:~/aparna$ python3 python.py
Enter length of rectangle1: 5
Enter breadth of rectangle1: 4
Enter length of rectangle2: 7
Enter breadth of rectangle2: 6
Second rectangle is larger
user@debian:~/aparna$
```

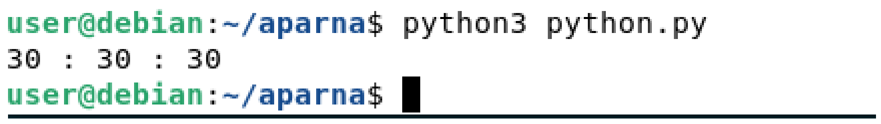
34)Create a class Time with private attributes hour, minute and second. Overload '+' operator to find sum of 2 time.

Source code

```
class Time:
    def __init__(self,hr,min,sec):
            self.__hr=hr
            self.__min=min
            self.__sec=sec
    def __add__(t1,t2):
            hr=t1.__hr+t2.__hr
            min=t1.__min+t2.__min
            sec=t1.__sec+t2.__sec
            print(hr,":",min,":",sec)
t1=Time(10,10,10)
t2=Time(20,20,20)
```

t1+t2

Output



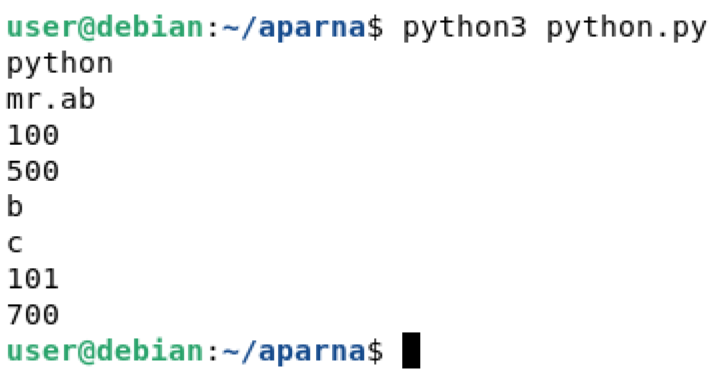
```
user@debian:~/aparna$ python3 python.py
30 : 30 : 30
user@debian:~/aparna$ 
```

35)Create a class Publisher (name). Derive class Book from Publisher with attributes title and author. Derive class Python from Book with attributes price and no_of_pages. Write a program that displays information about a Python book. Use base class constructor invocation and method overriding.

Source code

```
class Publisher(object):
    def __init__(self,name):
        self.name=name
    def display1(self):
        print(self.title)
        print(self.author)

class Book(Publisher):
    def __init__(self,name,title,author):
        super().__init__(name)
        self.title=title
        self.author=author
    def display2(self):
        #super().display1()
        print(self.title)
        print(self.author)
class Python(Book):
    def __init__(self,name,title,author,price,no_of_pages):
        super().__init__(name,title,author)
        self.price=price
        self.no_of_pages=no_of_pages
    def display3(self):
        super().display2()
        print(self.price)
        print(self.no_of_pages)
p=Python("textbook","Python programming","mr.abc",100,500)
p.display3()
q=Python("a","b","c",101,700)
q.display3()
```

Output



```
user@debian:~/aparna$ python3 python.py
python
mr.ab
100
500
b
c
101
700
user@debian:~/aparna$
```

COURSE OUTCOME 5

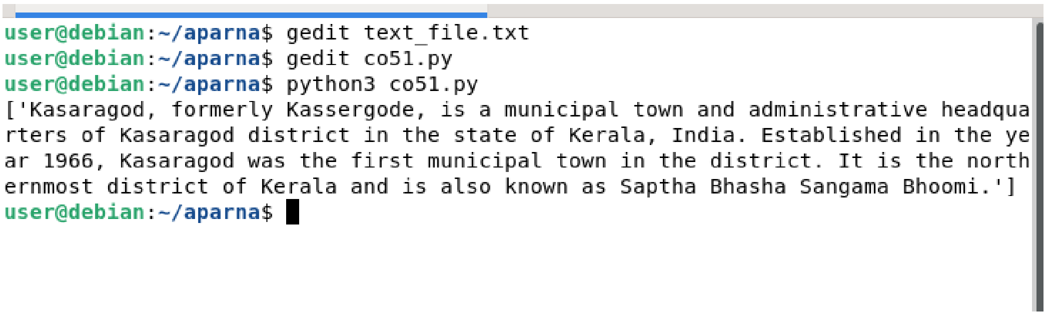
36)Write a Python program to read a file line by line and store it into a list.

Source code

```
fp=open("text_file.txt",'r')
lines=[]
for line in fp:
```

```
            lines.append(line.strip())
    print(lines)
```

Output



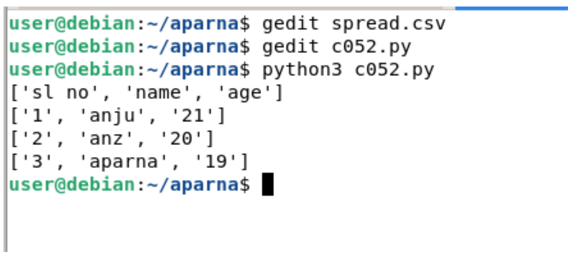
```
user@debian:~/aparna$ gedit text_file.txt
user@debian:~/aparna$ gedit co51.py
user@debian:~/aparna$ python3 co51.py
['Kasaragod, formerly Kassergode, is a municipal town and administrative headqua
rters of Kasaragod district in the state of Kerala, India. Established in the ye
ar 1966, Kasaragod was the first municipal town in the district. It is the north
ernmost district of Kerala and is also known as Saptha Bhasha Sangama Bhoomi.']
user@debian:~/aparna$ 
```

37)Write a Python program to read each row from a given csv file and print a list of strings.

Source code

```
import csv

with open('people.csv', 'r') as file:

    reader = csv.reader(file)

    for row in reader:
        print(row)
```

Output



```
user@debian:~/aparna$ gedit spread.csv
user@debian:~/aparna$ gedit c052.py
user@debian:~/aparna$ python3 c052.py
['sl no', 'name', 'age']
['1', 'anju', '21']
['2', 'anz', '20']
['3', 'aparna', '19']
user@debian:~/aparna$ 
```