DEPARTMENT OF COMPUTER APPLICATION

TKM COLLEGE OF ENGINEERING

KOLLAM – 691005

20MCA131 – PROGRAMMING LAB

PRACTICAL RECORD BOOK

First Semester MCA

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Submitted by:

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DEPARTMENT OF COMPUTER APPLICATION

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Certificate

This is a bonafide record of the work done by ARUN UDAY(TKM21MCA-2011) in the First Semester in Programming Lab Course(20MCA131) towards the partial fulfillment of the degree of Master of Computer Applications during the academic year 2021-2022

Staff Member in-charge Examiner

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LABCYCLE 1 QUESTION 1

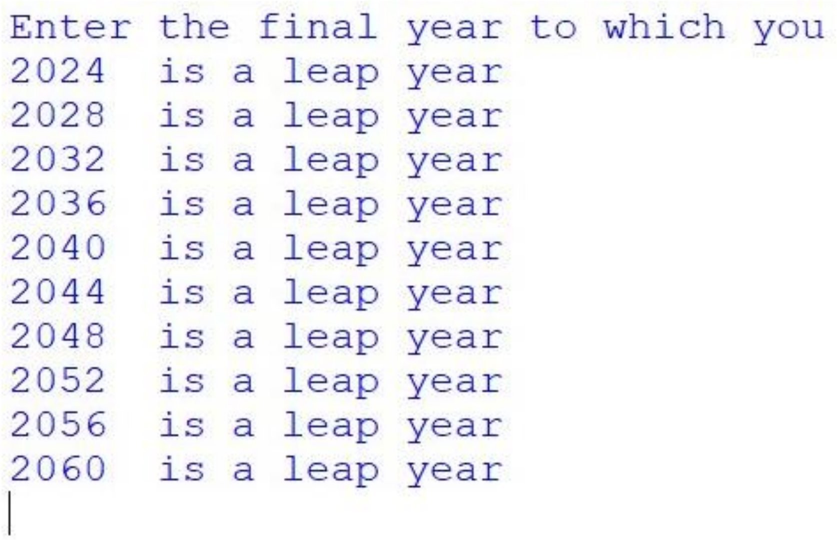
AIM: Display future leap years from current year to a final year entered by user

PROGRAM CODE:

Out1p1.py

```
import datetime
year=int(input("Enter the final year to which you want to display leap years : "))
tyear=datetime.datetime.now().year
for years in range(tyear,year+1):
    if years % 4 == 0 or years % 400 == 0:
        print(years," is a leap year")
```

OUTPUT:



```
Enter the final year to which you
2024  is a leap year
2028  is a leap year
2032  is a leap year
2036  is a leap year
2040  is a leap year
2044  is a leap year
2048  is a leap year
2052  is a leap year
2056  is a leap year
2060  is a leap year
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 1 QUESTION 2

AIM:

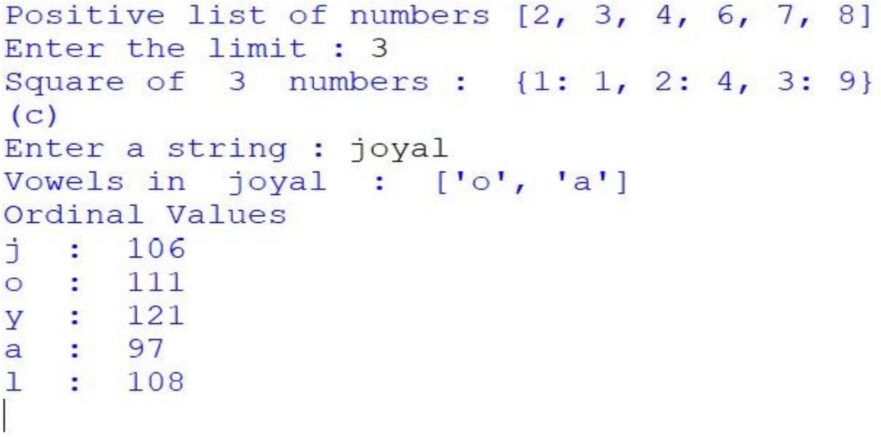
List comprehensions:
(a) Generate positive list of numbers from a given list of integers
(b) Square of N numbers
(c) Form a list of vowels selected from a given word
(d) List ordinal value of each element of a word (Hint: use ord() to get ordinal values) **:**

PROGRAM CODE:

Out1p2.py

```
l=[-1,2,3,4,-4,-5,6,7,8,-9,-10]
m=[x for x in l if x > 0 ]
print("Positive list of numbers",m)
c=int(input("Enter the limit : "))
n={x:x**2 for x in range(1,c+1)}
print("Square of ",c," numbers : ",n)
print("(c)")
v=['a','e','i','o','u']
s=input("Enter a string : ")
o=[x for x in s if x in v]
print("Vowels in ",s," : ",o)
print("Ordinal Values")
for x in s:
    print(x," : ",ord(x))
```

OUTPUT:



```
Positive list of numbers [2, 3, 4, 6, 7, 8]
Enter the limit : 3
Square of  3  numbers :  {1: 1, 2: 4, 3: 9}
(c)
Enter a string : joyal
Vowels in  joyal  :  ['o', 'a']
Ordinal Values
j  :  106
o  :  111
y  :  121
a  :  97
l  :  108
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 1 QUESTION 3

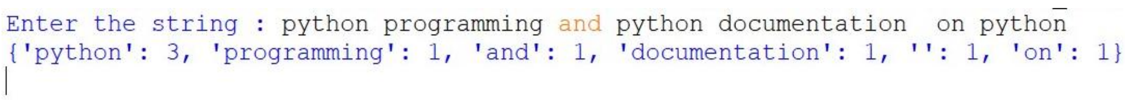
AIM: Count the occurrences of each word in a line of text

PROGRAM CODE:

Out1p3.py

```
s1=input("Enter the string : ")
s2=s1.split( )
d={}
for i in s2:
    if i in d:
        d[i.lower()]+=1
    else:
         d[i.lower()]=1
print(d)
```

OUTPUT:



```
Enter the string : python programming and python documentation  on python
{'python': 3, 'programming': 1, 'and': 1, 'documentation': 1, '': 1, 'on': 1}
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 1 QUESTION 4

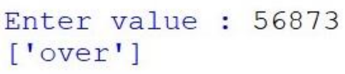
AIM: Prompt the user for a list of integers. For all values greater than 100, store ‘over’ instead.

PROGRAM CODE:

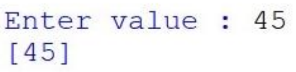
Out1p4.py

```
s=input("Enter value : ")
s=s.split(",")
l=[]
c=0
for i in s:
    l.append(int(i))
for i in l:
    if i>100:
        l[c]='over'
    c+=1
print(l)
```

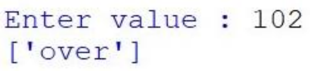
OUTPUT:



```
Enter value : 56873
['over']
```



```
Enter value : 45
[45]
```



```
Enter value : 102
['over']
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 1 QUESTION 5

AIM: Store a list of first names. Count the occurrences of ‘a’ within the list

PROGRAM CODE:

Out1p5.py

```
l=['amal','akash','bharath','divin','rakesh']
c=0
for i in l:
    if 'a' in i:
        c+=i.count('a')
print(c)
```

OUTPUT:

```
7
```

RESULT: The program was executed successfully and output obtained.

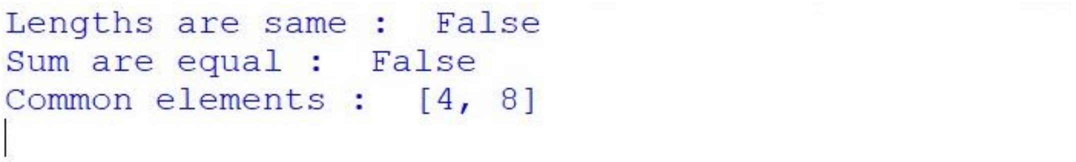
LABCYCLE 1 QUESTION 6

AIM: Enter 2 lists of integers. Check (a) Whether list are of same length (b) whether list sums to same value (c) whether any value occur in both

PROGRAM CODE:

Out1p6.py	l1=[2,4,1,3,5,8,9]
	l2=[4,6,0,6,8]
	s=len(l1)==len(l2)
	p=sum(l1)==sum(l2)
	print("Lengths are same : ",s)
	print("Sum are equal : ",p)
	m=[i for i in l1 if i in l2]
	print("Common elements : ",m)

OUTPUT:



```
Lengths are same :  False
Sum are equal :  False
Common elements :  [4, 8]
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 1 QUESTION 7

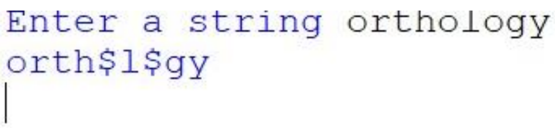
AIM: Get a string from an input string where all occurrences of first character replaced with ‘$’, except first character.[eg: onion -> oni$n] **:**

PROGRAM CODE:

Out1p7.py

```
s1=input("Enter a string ")
s2=s1[0]
s3=s1[1:]
s4=s3.replace(s2,'$')
replaced=s2+s4
print(replaced)
```

OUTPUT:



```
Enter a string orthology
orth$l$gy
```

RESULT: The program was executed successfully and output obtained.

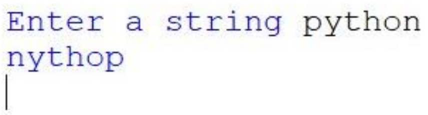
LABCYCLE 1 QUESTION 8

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

PROGRAM CODE:

Out1p8.py	s1=input("Enter a string ")
	s2=s1[0]
	s3=s1[-1]
	s4=s1.replace(s2,s3)
	s5=s4[0]
	s6=s4[1:]
	s7=s6.replace(s3,s2)
	s8=s5+s7
	print(s8)

OUTPUT:



```
Enter a string python
nythop
```

RESULT: The program was executed successfully and output obtained.

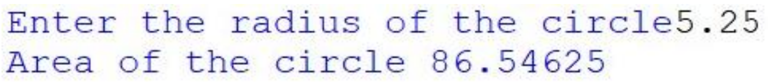
LABCYCLE 1 QUESTION 9

AIM: Accept the radius from user and find area of circle

PROGRAM CODE:

Out1p9.py	a=float(input("Enter the radius of the circle")) area=3.14*a*a print("Area of the circle",area)

OUTPUT:



```
Enter the radius of the circle5.25
Area of the circle 86.54625
```

RESULT: The program was executed successfully and output obtained.

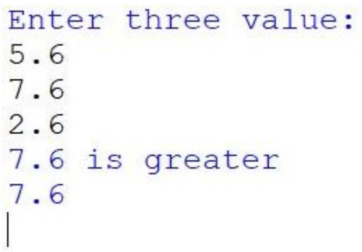
LABCYCLE 1 QUESTION 10

AIM: Find biggest of 3 numbers entered

PROGRAM CODE:

Out1p10.py	print("Enter three value:")
	a,b,c=input(),input(),input()
	if((a>b) and (a>c)):
	    print(a, "is greater")
	elif ((b>a) and (b>c)):
	    print(b, "is greater")
	else:
	    print(c, "is greater")
	print(max(a,b,c))

OUTPUT:



```
Enter three value:
5.6
7.6
2.6
7.6 is greater
7.6
```

RESULT: The program was executed successfully and output obtained.

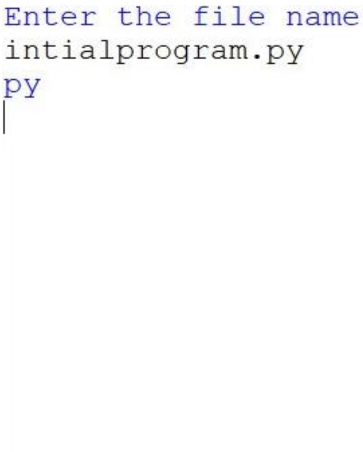
LABCYCLE 1 QUESTION 11

AIM: Accept a file name from user and print extension of that.

PROGRAM CODE:

Out1p11.py	filename=input("Enter the file name\n")
	l=filename.split(".")
	print(l[-1])

OUTPUT:



```
Enter the file name
intialprogram.py
py
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 1 QUESTION 12

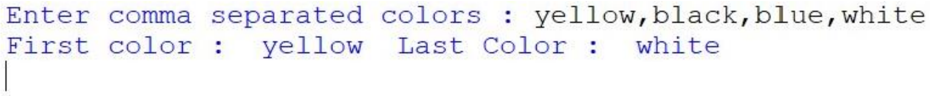
AIM: Create a list of colors from comma-separated color names entered by user. Display first and last colors.

PROGRAM CODE:

Out1p12.py

```
s=input("Enter comma separated colors : ")
s=s.split(",")
l=[]
c=0
for i in s:
   l.append(i)
print("First color : ",l[0]," Last Color : ",l[-1])
```

OUTPUT:



```
Enter comma separated colors : yellow,black,blue,white
First color :  yellow  Last Color :  white
```

RESULT: The program was executed successfully and output obtained.

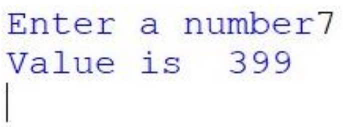
LABCYCLE 1 QUESTION 13

AIM: Accept an integer n and compute n+nn+nnn.

PROGRAM CODE:

Out1p13.py	n=int(input("Enter a number"))
	sum=n+(n*n)+(n*n*n)
	print("Value is ",sum)

OUTPUT:



```
Enter a number7
Value is  399
```

RESULT: The program was executed successfully and output obtained.

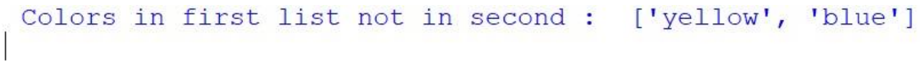
LABCYCLE 1 QUESTION 14

AIM: Print out all colors from color-list1 not contained in color-list2

PROGRAM CODE:

Out1p14.py	c1=['yellow','green','blue','white']
	c2=['white','green','violet','black']
	
	m=[i for i in c1 if i not in c2]
	print(" Colors in first list not in second : ",m)

OUTPUT:



```
 Colors in first list not in second :  ['yellow', 'blue']
```

RESULT: The program was executed successfully and output obtained.

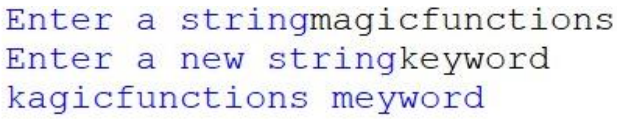
LABCYCLE 1 QUESTION 15

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

PROGRAM CODE:

Out1p15.py	s1=input("Enter a string")
	s2=input("Enter a new string")
	s3=s1[0]
	s4=s2[0]
	s5=s4+s1[1:]+" "+s3+s2[1:]
	print(s5)

OUTPUT:



```
Enter a stringmagicfunctions
Enter a new stringkeyword
kagicfunctions meyword
```

RESULT: The program was executed successfully and output obtained.

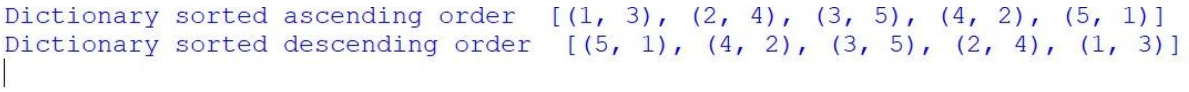
LABCYCLE 1 QUESTION 16

AIM: Sort dictionary in ascending and descending order.

PROGRAM CODE:

Out1p16.py	import operator
	d={3:5,1:3,4:2,5:1,2:4}
	sort_as=(sorted(d.items(), key=operator.itemgetter(0)))
	sort_dec=(sorted(d.items(), key=operator.itemgetter(0), reverse=True))
	print("Dictionary sorted ascending order ",sort_as)
	print("Dictionary sorted descending order ",sort_dec)

OUTPUT:



```
Dictionary sorted ascending order  [(1, 3), (2, 4), (3, 5), (4, 2), (5, 1)]
Dictionary sorted descending order  [(5, 1), (4, 2), (3, 5), (2, 4), (1, 3)]
```

RESULT: The program was executed successfully and output obtained.

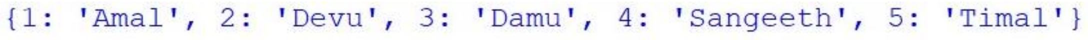
LABCYCLE 1 QUESTION 17

AIM: Merge two dictionaries

PROGRAM CODE:

Out1p17.py	d1={1:'Amal',2:'Devu',3:'Damu'}
	d2={4:'Sangeeth',5:'Timal'}
	d1.update(d2)
	print(d1)

OUTPUT:



```
{1: 'Amal', 2: 'Devu', 3: 'Damu', 4: 'Sangeeth', 5: 'Timal'}
```

RESULT: The program was executed successfully and output obtained.

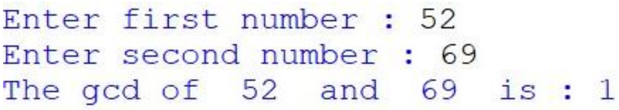
LABCYCLE 1 QUESTION 18

AIM: Find gcd of 2 numbers

PROGRAM CODE:

Out1p18.py	import math
	
	s=int(input("Enter first number : "))
	t=int(input("Enter second number : "))
	print("The gcd of ",s," and ",t," is : ", end="")
	print(math.gcd(s, t))

OUTPUT:



```
Enter first number : 52
Enter second number : 69
The gcd of  52  and  69  is : 1
```

RESULT: The program was executed successfully and output obtained.

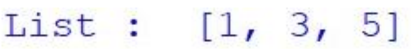
LABCYCLE 1 QUESTION 19

AIM: From a list of integers, create a list removing even numbers.

PROGRAM CODE:

<table>
<tr>
<td><b>Out1p19.py</b></td>
<td><pre>
l=[1,2,3,4,5]
odd=[]
for i in l:
    if i%2!=0:
        odd.append(i)
print("List : ",odd)
</pre></td>
</tr>
</table>

OUTPUT:



```
List :  [1, 3, 5]
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 1

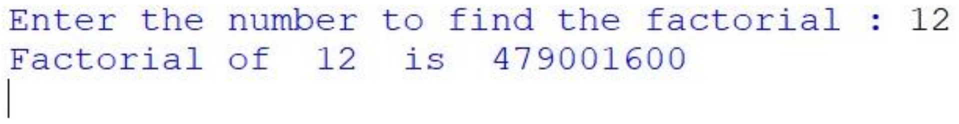
AIM: Program to find the factorial of a number

PROGRAM CODE:

Out2p1.py

```
fact=1
n=int(input("Enter the number to find the factorial : "))
for i in range(1,n+1):
    fact=fact*i
print("Factorial of ",n," is ",fact)
```

OUTPUT:



```
Enter the number to find the factorial : 12
Factorial of  12  is  479001600
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 2

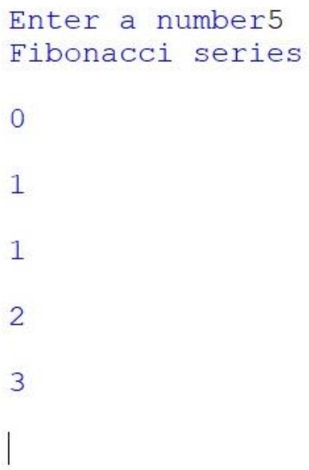
AIM: Generate Fibonacci series of N terms

PROGRAM CODE:

Out2p2.py

```
num=int(input("Enter a number"))
a=0
b=1
sum=0
count=1
print("Fibonacci series\n")
while count<=num:
    print(sum,"\n")
    a=b
    b=sum
    sum=a+b
    count+=1
```

OUTPUT:



```
Enter a number5
Fibonacci series

0

1

1

2

3

```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 3

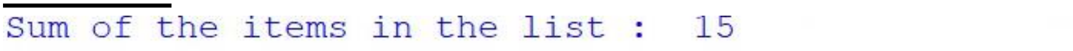
AIM: Find the sum of all items in a list

PROGRAM CODE:

Out2p3.py

```
l=[1,2,3,4,5]
sum=0
for i in l:
    sum=sum+i
print("Sum of the items in the list : ",sum)
```

OUTPUT:



```
Sum of the items in the list :  15
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 4

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

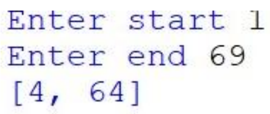
PROGRAM CODE:

Out2p4.py

```
import math

lists =[]
start=int(input("Enter start "))
end=int(input("Enter end "))
for a in range(start,end+1):
    for b in str(a):
        if int(b) % 2 != 0:
            break
    else:
        root=math.sqrt(a)
        if root % 1 == 0:
            lists.append(a)
print(lists)
```

OUTPUT:



```
Enter start 1
Enter end 69
[4, 64]
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 5

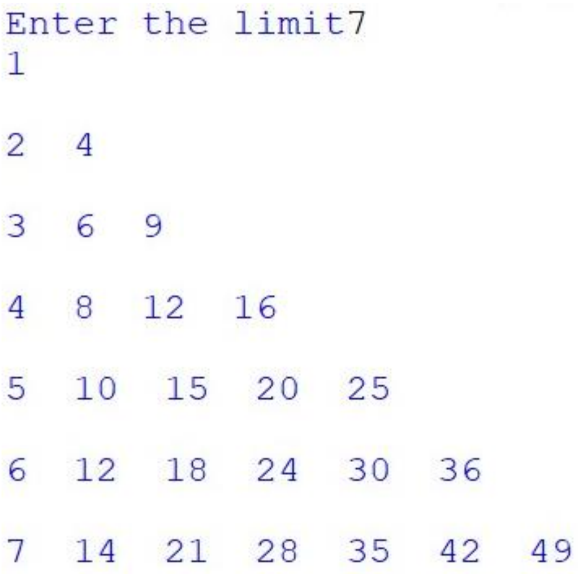
AIM:

Display the given pyramid with step number accepted from user.
Eg: N=4
1
2 4
3 6 9
4 8 12 16

PROGRAM CODE:

Out2p5.py	num=int(input("Enter the limit"))
	for i in range(1,num+1):
	    for j in range(1,i+1):
	        print(i*j," ",end=")
	    print("\n")

OUTPUT:



```
Enter the limit7
1

2  4

3  6  9

4  8  12  16

5  10  15  20  25

6  12  18  24  30  36

7  14  21  28  35  42  49
```

RESULT: The program was executed successfully and output obtained.

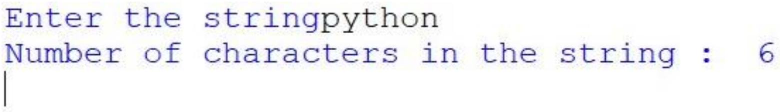
LABCYCLE 2 QUESTION 6

AIM: Count the number of characters (character frequency) in a string.

PROGRAM CODE:

Out2p6.py	char=input("Enter the string")
	count=len(char)
	print("Number of characters in the string : ",count)

OUTPUT:



```
Enter the stringpython
Number of characters in the string :  6
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 7

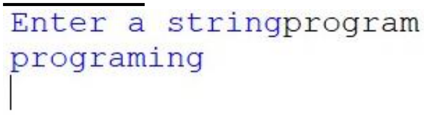
AIM: Add ‘ing’ at the end of a given string. If it already ends with ‘ing’, then add ‘ly’

PROGRAM CODE:

Out2p7.py

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

OUTPUT:



```
Enter a stringprogram
programing
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 8

AIM: Accept a list of words and return length of longest word

PROGRAM CODE:

Out2p8.**py**

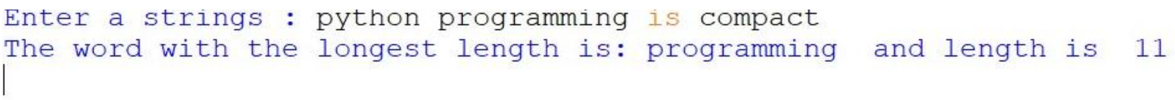
```
s=input("Enter a strings : ")
s=s.split(" ")
a=[]
for i in s:
    a.append(i)

max = len(a[0])
temp = a[0]

for i in a:
    if(len(i) > max):
        max = len(i)
        temp = i

print("The word with the longest length is:", temp," and length is ", max)
```

OUTPUT:



```
Enter a strings : python programming is compact
The word with the longest length is: programming  and length is  11
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 9

AIM:

Construct following pattern using nested loop

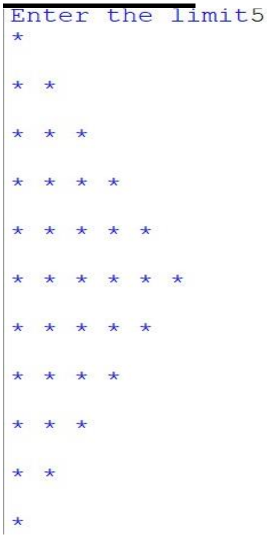
```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

PROGRAM CODE:

Out2p9.py

```
num=int(input("Enter the limit"))
for i in range(1,num+1):
    for j in range(1,i+1):
        print("* ",end='')
    print("\n")
for i in range(num+1,0,-1):
    for j in range(1,i+1):
        print("* ",end='')
    print("\n")
```

OUTPUT:



```
Enter the limit5
*

* *

* * *

* * * *

* * * * *

* * * * * *

* * * * *

* * * *

* * *

* *

*
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 10

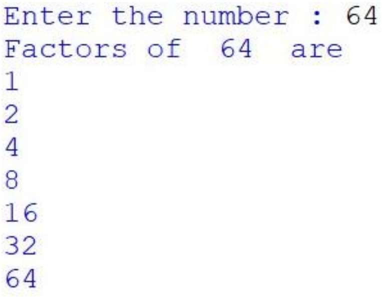
AIM: Generate all factors of a number.

PROGRAM CODE:

Out2p10.py

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

OUTPUT:



```
Enter the number : 64
Factors of  64  are
1
2
4
8
16
32
64
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 2 QUESTION 11

AIM: Write lambda functions to find area of square, rectangle and triangle.

PROGRAM CODE:

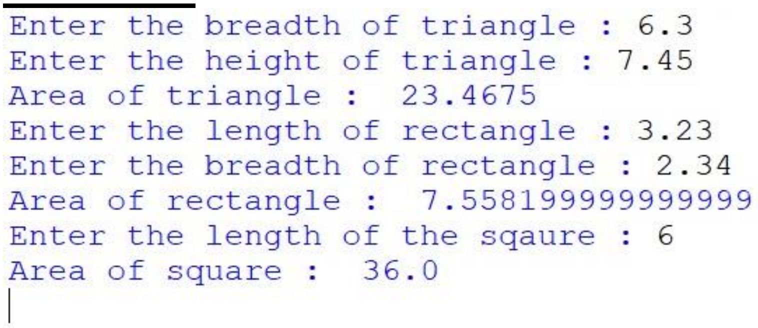
Out2p11.py

```
import math

t_area= lambda b,h : 1/2*(b*h)
r_area= lambda l,b : l*b
s_area= lambda a : a*a

s=float(input("Enter the breadth of triangle : "))
t=float(input("Enter the height of triangle : "))
print("Area of triangle : ",t_area(s,t))
u=float(input("Enter the length of rectangle : "))
v=float(input("Enter the breadth of rectangle : "))
print("Area of rectangle : ",r_area(u,v))
w=float(input("Enter the length of the sqaure : "))
print("Area of square : ",s_area(w))
```

OUTPUT:



```
Enter the breadth of triangle : 6.3
Enter the height of triangle : 7.45
Area of triangle :  23.4675
Enter the length of rectangle : 3.23
Enter the breadth of rectangle : 2.34
Area of rectangle :  7.558199999999999
Enter the length of the sqaure : 6
Area of square :  36.0
```

RESULT: The program was executed successfully and output obtained.

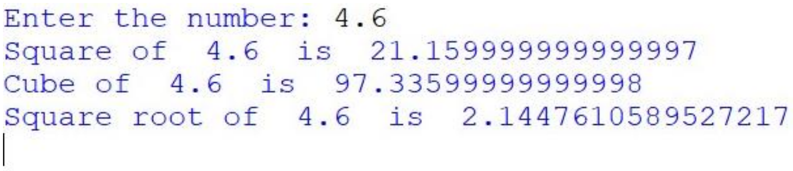
LABCYCLE 3 QUESTION 1

AIM: Work with built-in packages

PROGRAM CODE:

Out3p1.py	import math
	n=int(input("Enter the number: "))
	print("Square of ",n," is ",pow(n,2))
	print("Cube of ",n," is ",pow(n,3))
	print("Square root of ",n," is ",math.sqrt(n))

OUTPUT:



```
Enter the number: 4.6
Square of  4.6  is  21.159999999999997
Cube of  4.6  is  97.33599999999998
Square root of  4.6  is  2.1447610589527217
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 3 QUESTION 2

AIM: 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)

PROGRAM CODE:

Out3p2.py

```
from graphics.rectangle import *
from graphics._3D_graphics.cuboid import *
from graphics._3D_graphics.sphere import *
from graphics.circle import *
print("********Rectangle**********")
l=float(input("Enter the length: "))
b=float(input("Enter the breadth: "))
arearect(l,b)
perirect(l,b)
h=float(input("Enter the height of cuboid: "))
cuboidarea(l,b,h)
cuboidperi(l,b,h)
print("********Circle********")
r=float(input("Enter the radius: "))
areac(r)
circumc(r)
sphere(r)
```

GRAPHICS MODULE

Rectangle.py

```
def arearect(l,b):
    a=l*b
    print("Area of rectangle: ",a)
def perirect(l,b):
    p=2*(l+b)
    print("Perimeter of rectangle: ",p)
```

Circle.py

```
def areac(r):
    a=3.14*r*r
    print("Area of circle: ",a)
def circumc(r):
```

	c=2*3.14*r
	c=round(c,2)
	print("Circumference of circle: ",c)

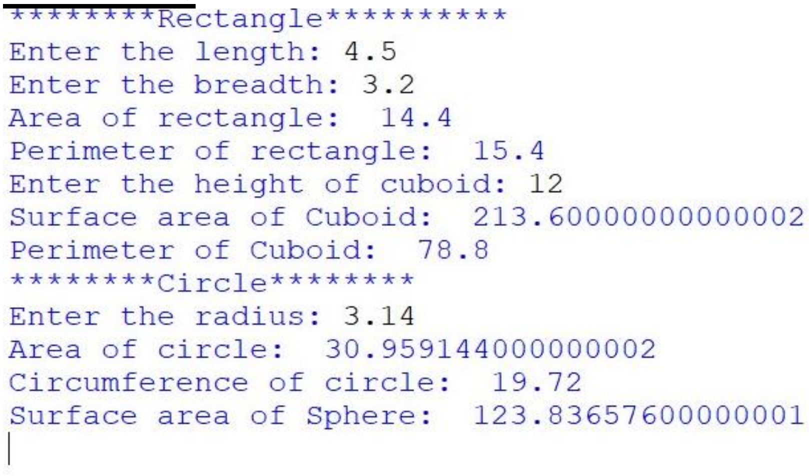
SUB MODULE

__3D__GRAPHICS

Cuboid.py	def cuboidarea(l,b,h):
	    s=2*((l*b)+(b*h)+(l*h))
	    print("Surface area of Cuboid: ",s)
	def cuboidperi(l,b,h):
	    p=4*(l+b+h)
	    print("Perimeter of Cuboid: ",p)

Sphere.py	def sphere(r):
	    s=4*3.14*r*r
	    print("Surface area of Sphere: ",s)

OUTPUT:



```
********Rectangle**********
Enter the length: 4.5
Enter the breadth: 3.2
Area of rectangle:  14.4
Perimeter of rectangle:  15.4
Enter the height of cuboid: 12
Surface area of Cuboid:  213.60000000000002
Perimeter of Cuboid:  78.8
********Circle********
Enter the radius: 3.14
Area of circle:  30.959144000000002
Circumference of circle:  19.72
Surface area of Sphere:  123.83657600000001
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 4 QUESTION 1

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

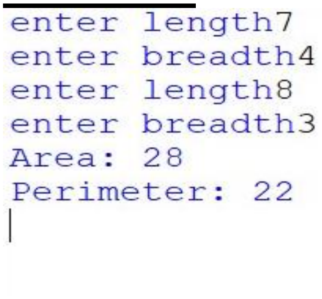
PROGRAM CODE:

Out4p1.py

```
class Rectangle:
    def __init__(self,lenth,bread):
        self.lenth=lenth
        self.bread=bread
    def area(self):
        self.result=self.lenth*self.bread
        print("Area:",self.result)
    def peri(self):
        self.result=2*(self.lenth+self.bread)
        print("Perimeter:",self.result)
    def compare(self):
        print("Area of Rectangle1")

obj2=Rectangle(int(input("enter length")),int(input("enter breadth")))
obj1=Rectangle(int(input("enter length")),int(input("enter breadth")))
obj2.area()
obj1.peri()
```

OUTPUT:



```
enter length7
enter breadth4
enter length8
enter breadth3
Area: 28
Perimeter: 22
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 4 QUESTION 2

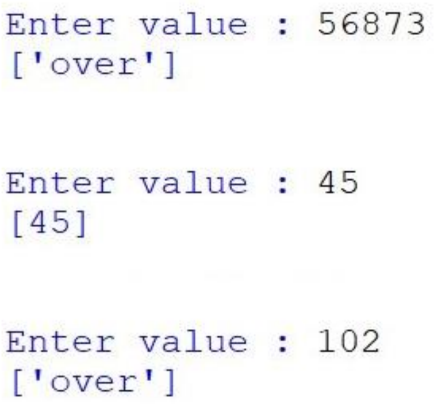
AIM: Create a Bank account with members account number, name, type of account and balance. Write constructor and methods to deposit at the bank and withdraw an amount from the bank.

PROGRAM CODE:

Out4p2.py

```
class Account:
    def __init__(self,ac,name,typeofac,balance):
        self.ac=ac
        self.name=name
        self.typeofac=typeofac
        self.balance=balance
    def display(self):
        print("Account number", self.ac)
        print("Name:",str(self.name))
    def withdraw(self):
        if(self.balance==0):
            print("Acount balance =",self.balance)
        n=int(input("Enter amount to withdraw"))
        if(n>self.balance):
            print("insufficient balance")
        else:
            self.balance=self.balance-n
            print("Account balance",self.balance)
    def deposit(self):
        n=int(input("Enter amount to deposit"))
        self.balance=self.balance+n
        print("Account balance",self.balance)
obj=Account(112,"joyal","savings",100000)
obj.display()
print("1:deposit\n 2:withdraw")
n=int(input("enter your option"))
if(n==2):
    obj.withdraw()
elif(n==1):
    obj.deposit()
```

OUTPUT:



```
Enter value : 56873
['over']


Enter value : 45
[45]


Enter value : 102
['over']
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 4 QUESTION 3

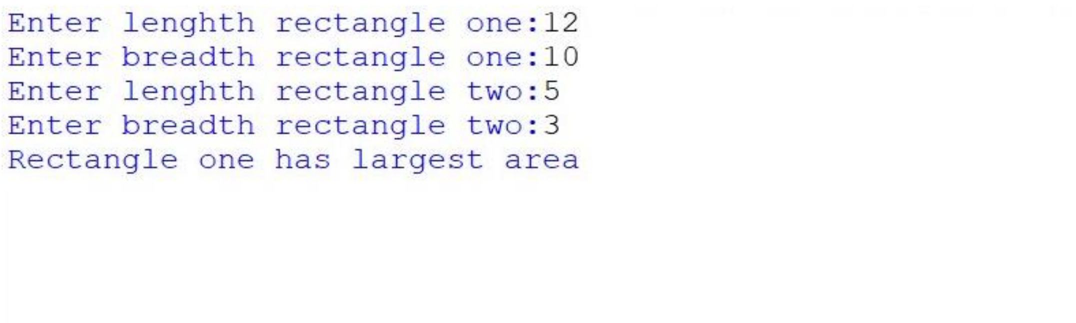
AIM: Create a class Rectangle with private attributes length and width. Overload '<' operator to Compare the area of 2 rectangles

PROGRAM CODE:

Out4p3.py

```python
class Rectangle:
    def __init__(self,length,breadth):
        self.__length=length
        self.__breadth=breadth
        self.__area=length*breadth
    def __lt__(self,m):
        return self.__area<m.__area
r=Rectangle(int(input("Enter lenghth rectangle one:")),int(input("Enter breadth rectangle one:")))
r1=Rectangle(int(input("Enter lenghth rectangle two:")),int(input("Enter breadth rectangle two:")))
if r<r1:
    print("Rectangle two has largest area")
else:
    print("Rectangle one has largest area")
```

OUTPUT:



```
Enter lenghth rectangle one:12
Enter breadth rectangle one:10
Enter lenghth rectangle two:5
Enter breadth rectangle two:3
Rectangle one has largest area
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 4 QUESTION 4

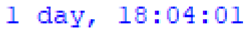
AIM: Create a class Time with private attributes hour, minute and second. Overload ‘+’ operator to find sum of 2 times.

PROGRAM CODE:

Out4p4.py

```
import math
import datetime
class time:
    def __init__(self,hour,minute,sec):
        self.__hour=hour
        self.__minute=minute
        self.__sec=sec
    def __add__(self,other):
        s1 = datetime.timedelta(hours=self.__hour,
minutes=self.__minute, seconds=self.__sec)
        s2 = datetime.timedelta(hours=other.__hour,
minutes=other.__minute, seconds=other.__sec)
        return s1+s2
t1=time(60,2,60)
t2=time(72,1,1)
print(t1+t2)
```

OUTPUT:



```
1 day, 18:04:01
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 4 QUESTION 5

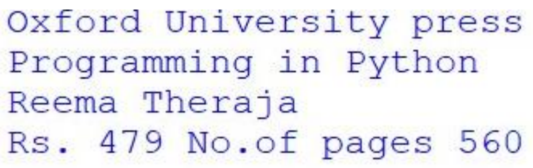
AIM: Create a class Publisher (name). Derive class Book from Publisher with attributes title and Author. Derive class Python from Book with attributes price and no of pages. Write a Program that displays information about a Python book. Use base class constructor invocation and method overriding. **:**

PROGRAM CODE:

Out4p5.py

```
class Publisher:
    def __init__(self,name):
        self.name=name
    def disp(self):
        print(self.name)
class Book(Publisher):
    def __init__(self,name,title,auth):
        Publisher.__init__(self,name)
        self.title=title
        self.auth=auth
    def disp(self):
        print(self.title,self.author)
class Python(Book):
    def __init__(self,name,title,auth,price,nop):
        Book.__init__(self,name,title,auth)
        self.price=price
        self.nop=nop
    def disp(self):
        print(self.name)
        print(self.title)
        print(self.auth)
        print("Rs.",self.price,"No.of pages",self.nop)
obj=Python("Oxford University press","Programming in Python","Reema Theraja",479,560)
obj.disp()
```

OUTPUT:



```
Oxford University press
Programming in Python
Reema Theraja
Rs. 479 No.of pages 560
```

RESULT: The program was executed successfully and output obtained.

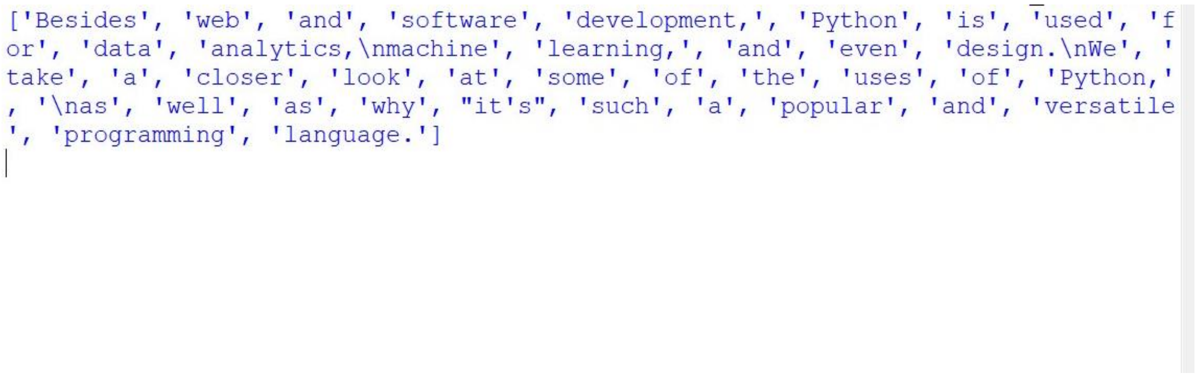
LABCYCLE 5 QUESTION 1

AIM: Write a Python program to read a file line by line and store it into a list

PROGRAM CODE:

Out5p1.py	fr=open("test.txt","r")
	s=fr.read()
	w=s.split(" ")
	print(w)

OUTPUT:



```
['Besides', 'web', 'and', 'software', 'development,', 'Python', 'is', 'used', 'f
or', 'data', 'analytics,\nmachine', 'learning,', 'and', 'even', 'design.\nWe', '
take', 'a', 'closer', 'look', 'at', 'some', 'of', 'the', 'uses', 'of', 'Python,'
, '\nas', 'well', 'as', 'why', "it's", 'such', 'a', 'popular', 'and', 'versatile
', 'programming', 'language.']
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 5 QUESTION 2

AIM: Python program to copy odd lines of one file to other

PROGRAM CODE:

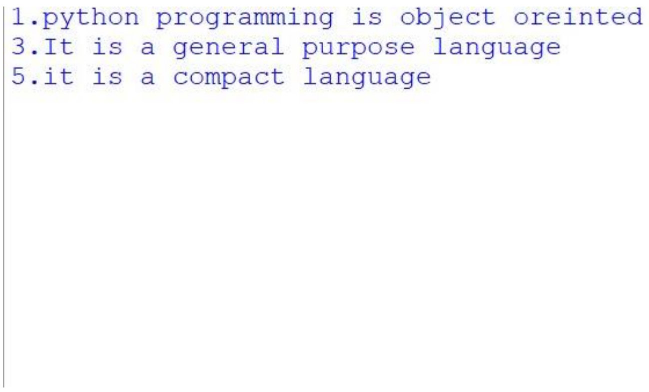
Out5p2.py

```
fn = open('test1.txt', 'r')
fn1 = open('nfile.txt', 'w')
cont = fn.readlines()
type(cont)
for i in range(0, len(cont)):
        if(i%2!=0):
                fn1.write(cont[i])
        else:
                pass
fn1.close()
fn1 = open('nfile.txt', 'r')

cont1 = fn1.read()
print(cont1)

fn.close()
fn1.close()
```

OUTPUT:



```
1.python programming is object oreinted
3.It is a general purpose language
5.it is a compact language
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 5 QUESTION 3

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

PROGRAM CODE:

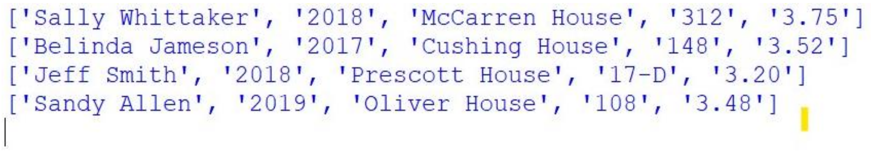
Out5p3.py

```
import csv

with open("csvtest.csv","r") as csv_file:
    csv_reader=csv.reader(csv_file)

    for line in csv_reader:
        print(line)
```

OUTPUT:



```
['Sally Whittaker', '2018', 'McCarren House', '312', '3.75']
['Belinda Jameson', '2017', 'Cushing House', '148', '3.52']
['Jeff Smith', '2018', 'Prescott House', '17-D', '3.20']
['Sandy Allen', '2019', 'Oliver House', '108', '3.48']
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 5 QUESTION 4

AIM: Write a Python program to read specific columns of a given CSV file and print the content of the columns

PROGRAM CODE:

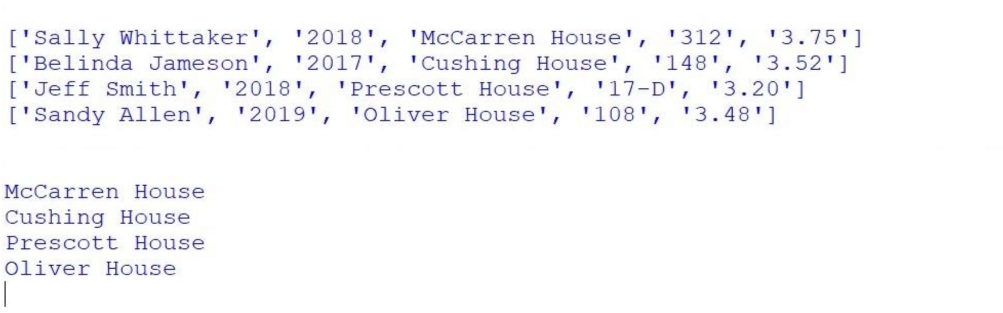
Out5p4.py

```
import csv

with open("csvtest.csv","r") as csv_file:
    csv_reader=csv.reader(csv_file)

    for line in csv_reader:
        print(line[2])#column 3
```

OUTPUT:



```
['Sally Whittaker', '2018', 'McCarren House', '312', '3.75']
['Belinda Jameson', '2017', 'Cushing House', '148', '3.52']
['Jeff Smith', '2018', 'Prescott House', '17-D', '3.20']
['Sandy Allen', '2019', 'Oliver House', '108', '3.48']


McCarren House
Cushing House
Prescott House
Oliver House
```

RESULT: The program was executed successfully and output obtained.

LABCYCLE 5 QUESTION 5

AIM: Write a Python program to write a Python dictionary to a csv file. After writing the CSV file read the CSV file and display the content.

PROGRAM CODE:

Out5p5.py

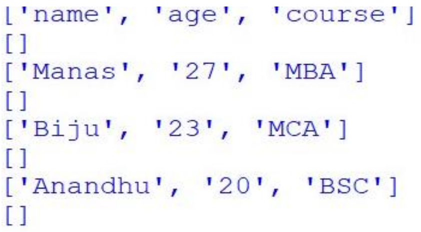
```
#dictionary to csv
import csv
dict_value = [
{"name":"Manas","age":27,"course":"MBA"},
{"name":"Biju","age":23,"course":"MCA"},
{"name":"Anandhu","age":20,"course":"BSC"}
]

fields = ["name","age","course"]

with open('dictconverted.csv','w') as csvfile:
    writer = csv.DictWriter(csvfile,fieldnames=fields)
    writer.writeheader()
    writer.writerows(dict_value)
    csvfile.close()

with open('dictconverted.csv','r') as csvfiles:
    readerobj = csv.reader(csvfiles)
    for rows in readerobj:
        print(rows)
```

OUTPUT:



```
['name', 'age', 'course']
[]
['Manas', '27', 'MBA']
[]
['Biju', '23', 'MCA']
[]
['Anandhu', '20', 'BSC']
[]
```

RESULT: The program was executed successfully and output obtained.