MOUNT ZION COLLEGE OF ENGINEERING

Kadammanitta – Pathanamthitta Kerala 689649

(Affiliated to APJ Abdul Kalam Technological University)

20MCA131 PYTHON PROGRAMMING LAB

LABORATORY RECORD

FIRST-YEAR

Submitted by

JOMY JOHNSON (MZC21MCA-2015)

Submitted in partial fulfillment of the requirement for

the Award of the Degree of

MASTER OF COMPUTER APPLICATIONS

(2021-2023)

Department of Computer Applications

MOUNT ZION COLLEGE OF ENGINEERING, KADAMMANITTA

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Kadammanitta – Pathanamthitta Kerala 689649

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CERTIFICATE

Certified that this is a bonafide record of practical work done in Python Programming Lab (20MCA131) Laboratory by JOMY JOHNSON Reg No: MZC21MCA-2015 of Mount Zion College of Engineering, Kadammanitta – Pathanamthitta during the academic year 2021-2023

Head of the department **Staff member in-charge**

Submitted to the University Examination held on

External Examiner

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REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No :15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title:

Objectives: Count the Occurrances of each word in the text.

Input:

```
str1 = input("Enter a string: ")
counts = dict()
words = str1.split()
for word in words:
    if word in counts:
        counts[word] += 1
    else:
        counts[word] = 1
for k,v in counts.items():
    print(k,v)
```

Output:

```
Enter a string: Python is popular programming language
Python 1
is 1
popular 1
programming 1
language 1
>>>
```

Result/Observations:

Successfully complete the Python program and output is obtained

Assessor :

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : Get a string from an input string where all occurrences of first character replaces with '$',except first character.

Input:

```
print("Leap year between two given years")
startYear=int(input("Enter  start year: "))
endYear=int(input("Enter last year: "))
print("list of leap years: ")
for year in range (startYear,endYear):
    if(0==year%4)and(0!=year%150)or(0==year%400):
        print(year)
```

Output :

```
Leap year between two given years
Enter  start year: 2000
Enter last year: 2022
list of leap years:
2000
2004
2008
2012
2016
2020
>>>
```

Result/Observations :

Successfully complete the Python program and result obtained

Assessor:

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab : Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title

Objectives : Accept the radius from user and find area of circle.

Input :

```
import math

r = float(input("Enter the radius: "))

area = math.pi*r*r

print("The area of cirlce:",area )
```

Output:

```
Enter the radius: 5
The area of cirlce: 78.53981633974483
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor :

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : Find biggest of 3 numbers entered.

Input:

```
x = int(input("Enter the 1st number: "))
y = int(input("Enter the 2nd number: "))
z = int(input("Enter the 3rd number: "))

d = max(x,y,z)
print("The Biggest number is:",d)
```

Output :

```
Enter the 1st number: 10
Enter the 2nd number: 5
Enter the 3rd number: 8
The Biggest number is: 10
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor :

REPORT ON LABORATORY WORK

Name : Jomy Johnson	**Roll No : 15**	**Name of Lab: Python Programming Lab**	**Period :**
Class : S1, MCA	**Date :**	**Nature of Lab Work: Practical**	**Batch:2021-2023**

Tittle :

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

Input :

```
x = input("Enter the filename: ")
y = x.split(".")
print(y[-1])
```

Output:

```
Enter the filename: Hello.py
py
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor :

REPORT ON LABORATORY WORK

Name : Jomy Johnson	**Roll No : 15**	**Name of Lab: Python Programming Lab**	**Period :**
Class : S1, MCA	**Date :**	**Nature of Lab Work : Practical**	**Batch :2021-2023**

Title :

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

Input :

```
list1 = input("Enter the colours: ")

c = list1.split(",")

print(c)

print(c[0])

print(c[-1])
```

Output:

```
Enter the colours: Green, Yellow, Red, Blue, Orange
['Green', ' Yellow', ' Red', ' Blue', ' Orange']
Green
 Orange
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor :

REPORT ON LABORATORY WORK

Name: Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

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

Input :

```
a = int(input("Enter an integer: "))

n1 = int("%s" %a)

n2 = int("%s%s" %(a,a))

n3 = int("%s%s%s" %(a,a,a))

print(n1 + n2 + n3)
```

Output

```
Enter an integer: 5
615
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : From a list of integers create a list removing even numbers

Input :

```
num1 = input("Enter an integer list(space separated: ")
num = list(map(int,num1.split()))
num = [x for x in num if x % 2 != 0]
print("list after removing even numbers",end="")
print(num)
```

Output:

```
Enter an integer list(space separated: 5 10 6 11 25 3 50
list after removing even numbers[5, 11, 25, 3]
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : Program to find the factorial of a numbers

Input :

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

Output:

```
Enter the number: 10
Factorial of 10 is 3628800
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor :

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives :.Find the sum of all items in a list

Input :

```
list = input("Enter a list: ")
list1 = map(int, list.split())
sum = 0
for i in list1: sum += i
print("The sum of all items in list",list,"is",sum)
```

Output:

```
Enter a list: 5 10 22 11 3 6
The sum of all items in list 5 10 22 11 3 6  is 57
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor :

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

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

Input :

```
import math
for i in range(1500,15000):
   num = int(math.sqrt(i))
   if(num * num == i):
      n = i
      while n!= 0:
         r = n % 15
         n = n//15
         if r % 2!= 0: break
      else: print(i)
```

Output:

```
4624
6084
6400
8464
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor :

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : Display the given pyramid with step number accepted from user.

Eg. N=4

1

2 4

3 6 9

4 8 15 16

Input :

```
n  = int(input("Enter the step size: "))
for i in range(1,n+1):
    k= i
    for j in range(1,i+1):
        print(k, end = ' ')
        k += i
    print()
```

Output:

```
Enter the step size: 5
1
2 4
3 6 9
4 8 12 16
5 10 15 20 25
>>>
```

Result/Observations :

Successfully complete the Python program and output is obtained

Assessor :

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

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

Input :

```
dict = {}
str1 = input("Enter a string: ")
for n in str1:
    keys = dict.keys()
    if n in keys:
        dict[n] += 1
    else:
        dict[n] = 1
print("Character frequency")
for k,v in dict.items():
    print(k,v)
```

Output

```
Enter a string: Python is powerful programming language
Character frequency
P 1
y 1
t 1
h 1
o 3
n 3
  4
i 2
s 1
p 2
w 1
e 2
r 3
f 1
u 2
l 2
g 4
a 3
m 2
>>>
```

Result/Observations:

Successfully complete the Python program and output is obtained

Assessor:

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

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

Input :

```
str1 = input("Enter a string: ")
length = len(str1)
if length > 2:
    if str1[-3:] == 'ing':
        str1 += 'ly'
    else:
        str1 += 'ing'
print("New string:",str1)
```

Output

```
Enter a string: python program
New string: python programing
>>>
```

Result/Observations:

Successfully complete the Python program and output is obtained

Assessor:

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : Accept a list of words and return length of longest word.

Input :

```
list = input("Enter a list with some strings(space separated): ")
words_list = list.split()
word_len = []
for n in words_list:
    word_len.append((len(n),n))
    print(word_len)
    word_len.sort()
    print(word_len)
print("Longest word:", word_len[-1][1])
```

Output

```
Enter a list with some strings(space separated): Python is powerful
[(6, 'Python')]
[(6, 'Python')]
[(6, 'Python'), (2, 'is')]
[(2, 'is'), (6, 'Python')]
[(2, 'is'), (6, 'Python'), (8, 'powerful')]
[(2, 'is'), (6, 'Python'), (8, 'powerful')]
Longest word: powerful
>>>
```

Result/Observations:

Successfully complete the Python program and output is obtained

Assessor:

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : Construct following pattern using nested loop

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

Input :

```
n = 5
for i in range(n):
    for j in range(i):
        print('*',end  = " ")
    print('')
for i in range(n,0,-1):
    for j in range(i):
        print('*', end = " ")
    print('')
```

Output

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
>>>
```

Result/Observations:

Successfully complete the Python program and output is obtained

Assessor:

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : Write a program to find area and perimeter of a rectangle using classes and objects.

Input :

```
class rectangle:
    def getData(self,length,breadth):
        self.length=length
        self.breadth=breadth
    def area(self):
        a=self.length*self.breadth
        print("area if rectangle withlength",self.length,"and breadth",self.breadth,"is",a)
    def perimeter(self):
        p=2*(self.length+self.breadth)
        print("perimeter of rectangle with length",self.length,"and breadth",self.breadth,"is",p)
ch=0
l=int(input("enter the length of rectangle:"))
b=int(input("enter the breadth of rectangle:"))
obj=rectangle()
obj.getData(l,b)
while ch!=3:
        print("1.area")
        print("2.perimeter")
        print("3.exit")
        ch=int(input("enter your choice:"))
```

```
        if ch==1:obj.area()
        if ch==2:obj.perimeter()
else: print("end of the program")
```

Output

```
enter the length of rectangle:10
enter the breadth of rectangle:5
1.area
2.perimeter
3.exit
enter your choice:1
area if rectangle withlength 10 and breadth 5 is 50
1.area
2.perimeter
3.exit
enter your choice:2
perimeter of rectangle with length 10 and breadth 5 is 30
1.area
2.perimeter
3.exit
enter your choice:3
end of the program
>>>
```

Result/Observations:

Successfully complete the Python program and output is obtained

Assessor:

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : Define a class to represent a bank account. Include the following details like name of the depositor, account number, type of account, balance amount in th account. Write methods to assign initial values, to deposit an amount, withdraw an amount after checking the balance, to display name, account number, account type and balance.

Input :

```
class customer:
        def getData(self,name,accno,acctype,balance):
            self.name=name
            self.accno=accno
            self.acctype=acctype
            self.balance=balance
        def displayCustomer(self):
            print("Customer Name:", self.name)
            print("Account Number:", self.accno)
            print("Account Type:", self.acctype)
            print("Balance amount:",self.balance)
        def deposit(self,amount):
            self.balance=self.balance+amount
        def withdrawal(self,amount):
            if self.balance-amount<0: print("Insufficient Funds")
            else:self.balance=self.balance-amount

    ch=0
```

```
while ch!=5:
    print("1.New Customer")
    print("2.Deposit")
    print("3.Withdrawal")
    print("4.Display")
    print("5.Exit")
    ch=int(input("Enter Your choice: "))
    if ch==1:
        obj=customer()
        n=input("Enter Name:")
        no=int(input("Enter Account Number: "))
        t=input("Enter Account Type(SB/C):")
        b=int(input("Enter the Amount: "))
        obj.getData(n,no,t,b)
    if ch==2:
        b=int(input("Enter the amount to be deposited: "))
        obj.deposit(b)
    if ch==3:
        b=int(input("Enter the amount to be withdrawn: "))
        obj.withdrawal(b)
    if ch==4:
        obj.displayCustomer()
    else:print("Program Terminated"
```

Output

```
1.New Customer
2.Deposit
3.Withdrawal
4.Display
5.Exit
Enter Your choice: 1
Enter Name:Jeffin
Enter Account Number: 8657338399202
Enter Account Type(SB/C):SB
Enter the Amount: 10000
Program Terminated
1.New Customer
2.Deposit
3.Withdrawal
4.Display
5.Exit
Enter Your choice: 4
Customer Name: Jeffin
Account Number: 8657338399202
Account Type: SB
Balance amount: 10000
1.New Customer
2.Deposit
3.Withdrawal
4.Display
5.Exit
Enter Your choice:
```

Result/Observations:

Successfully complete the Python program and output is obtained

Assessor:

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
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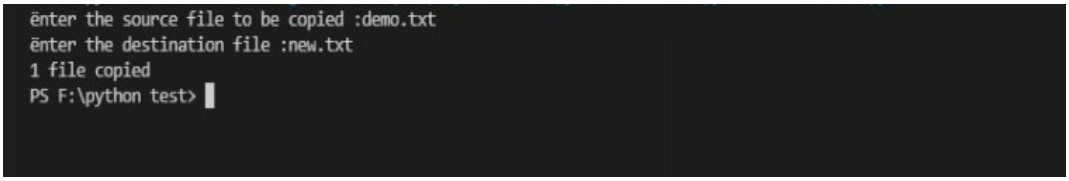
Title :

Objectives : Program to copy a text file to another.

Input :

```
file1=input("ënter the source file to be copied")
file2=input("ënter the destination file :")
fr=open(file1,"r")
fw=open(file2,"w")
for line in fr.readlines():
    fw.write(line)
fr.close()
fw.close()
print("1 file copied")
```

Output



Result/Observations:

Successfully complete the Python program and output is obtained

Assessor:

REPORT ON LABORATORY WORK

Name : Jomy Johnson	Roll No : 15	Name of Lab: Python Programming Lab	Period :
Class : S1, MCA	Date :	Nature of Lab Work : Practical	Batch :2021-2023

Title :

Objectives : Program to count number of lines in a file.

Input :

```
f = open("demo.txt", "r")
countlines=0
for line in f.readlines():
        countlines=countlines+1
print('number of lines:',countlines)
f.close(
```

Output

```
PS F:\python test> & "C:/Program Files (x86)/Python38-32/python.exe" "f:/python test/test.py"
number of lines: 5
PS F:\python test>
```

Result/Observations:

Successfully complete the Python program and output is obtained

Assessor: