

List Of Experiments Along with Codes and Outputs

1. Write a program to calculate the factorial of an integer.

Source Code:

```
PGM No.1 - Factorial of an Integer.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.1 - Factorial of an Integer.py (3.8.3)
File Edit Format Run Options Window Help
# Finding Factorial of a Number
print("Factorial of a Number")
print("*****")
n = int(input("Enter a Number to find the Factorial of it : "))
if n < 0 :
    print("Factorial for a Negative Number is Not Possible !! ")
else :
    p = 1
    for i in range(n,0,-1):
        p *= i
    print(n, " ! = ",p)
```

Input/Output:

```
Python 3.8.3 Shell
File Edit Shell Debug Options Window Help
Type help , copyright , credits or license() for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.1 - Factorial of an Integer.py
Factorial of a Number
*****
Enter a Number to find the Factorial of it : 5
5 ! = 120
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.1 - Factorial of an Integer.py
Factorial of a Number
*****
Enter a Number to find the Factorial of it : -1
Factorial for a Negative Number is Not Possible !!
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.1 - Factorial of an Integer.py
Factorial of a Number
*****
Enter a Number to find the Factorial of it : 0
0 ! = 1
>>>
```

2. Write a program to print Fibonacci series.

Source Code:

```
PGM No.2 - Fibonacci Series.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.2 - Fibonacci Series.py (3.8.3)
File Edit Format Run Options Window Help
# Fibonacci Series for N numbers
print("Fibonacci Series")
print("*****")
n = int(input("Enter N to Print Fibonacci Series : "))
if n > 0 :
    count = 0
    a = 0
    b = 1
    print(0,1,end = " ")
    n -= 2
    while count < n :
        c = a + b
        print(c,end = " ")
        a = b
        b = c
        count += 1
else :
    print("Enter a +ve Value for N !!")
```

Input/Output:

```
Python 3.8.3 Shell
File Edit Shell Debug Options Window Help
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM NO.2 - Fibonacci Series.py
Fibonacci Series
*****
Enter N to Print Fibonacci Series : 5
0 1 1 2 3
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.2 - Fibonacci Series.py
Fibonacci Series
*****
Enter N to Print Fibonacci Series : 8
0 1 1 2 3 5 8 13
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.2 - Fibonacci Series.py
Fibonacci Series
*****
Enter N to Print Fibonacci Series : 15
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.2 - Fibonacci Series.py
Fibonacci Series
*****
Enter N to Print Fibonacci Series : 10
0 1 1 2 3 5 8 13 21 34
```

3. Write a python program to sum the sequence given below.

Source Code:

```
PGM No.3 - Sum of Series.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.3 - Sum of Series.py (3.8.3)
File Edit Format Run Options Window Help
# Printing Sum of the Series
print("Sum of Series :")
print("1+1/1!+1/2!+1/3!+...+1/n!")
print("*****")
n = int(input("Enter the Value for N to Evaluate the Sum of Series : "))
s = 1
print(1,end = " ")
for i in range(1,n+1):
    p = 1
    for j in range(i,0,-1):
        p *= j
    a = 1/ p
    s += a
    print(" + ", "1 / ", i, "!", end = " ")
print("= ", s)
```

Input/Output:

```
Python 3.8.3 Shell
File Edit Shell Debug Options Window Help
Type 'help', 'copyright', 'credits' or 'license()' for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.3 - Sum of Series.py
Sum of Series :
1+1/1!+1/2!+1/3!+...+1/n!
*****
Enter the Value for N to Evaluate the Sum of Series : 5
1 + 1 / 1 ! + 1 / 2 ! + 1 / 3 ! + 1 / 4 ! + 1 / 5 ! = 2.7166666666666663
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.3 - Sum of Series.py
Sum of Series :
1+1/1!+1/2!+1/3!+...+1/n!
*****
Enter the Value for N to Evaluate the Sum of Series : 3
1 + 1 / 1 ! + 1 / 2 ! + 1 / 3 ! = 2.6666666666666665
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.3 - Sum of Series.py
Sum of Series :
1+1/1!+1/2!+1/3!+...+1/n!
*****
Enter the Value for N to Evaluate the Sum of Series : 2
1 + 1 / 1 ! + 1 / 2 ! = 2.5
>>> |
```

4. Write a program for Linear search.

Source Code:

```
PGM No.4 - Linear Search.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.4 - Linear Search.py (3.8.3)
File Edit Format Run Options Window Help
# Linear Search in a Sequence
print("Linear Search")
print("*****")
L = eval(input("Enter the List of Elements to be Searched : "))
el = eval(input("Enter the Element to be Searched : "))
for i in range(len(L)):
    if L[i] == el :
        print(el , "is Found at the Postion : ",i+1)
        print(el, "its Index No. is : ",i)
        break
    else :
        print(el , "is not Found in the Given List ")
```

Input/Output:

```
Python 3.8.3 Shell
File Edit Shell Debug Options Window Help
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.4 - Linear Search.py
Linear Search
*****
Enter the List of Elements to be Searched : [1,2,3,4,5]
Enter the Element to be Searched : 3
3 is Found at the Position : 3
3 its Index No. is : 2
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.4 - Linear Search.py
Linear Search
*****
Enter the List of Elements to be Searched : [10,20,30,40,50]
Enter the Element to be Searched : 70
70 is not Found in the Given List
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.4 - Linear Search.py
Linear Search
*****
Enter the List of Elements to be Searched : [3,4,5]
Enter the Element to be Searched : 5
5 is Found at the Position : 3
5 its Index No. is : 2
>>> |
```

5. Write a program to check a number whether it is palindrome or not.

Source Code:

```
#Palindrome Check for an Integer
print("Palindrome Check for an Integer")
print("*****")
n = int(input("Enter the No. to be Checked : "))
if n < 0 :
    print("Palindrome Cannot be Checked for a Negative Number ")
elif n > 0 and n < 10 :
    print("Palindrome Cannot be Checked for a Single Digit Number ")
else :
    t = n
    s = 0
    while t!= 0 :
        a = t % 10
        s = s * 10
        s = s + a
        t = t // 10
    if n == s :
        print(n , "Is a Palindrome ! ")
    else :
        print(n, "Is not a Palindrome ! ")
```

Input/Output:

```
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.5 - Palindrome Check f
or a Integer.py
Palindrome Check for an Integer
*****
Enter the No. to be Checked : 12321
12321 Is a Palindrome !
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.5 - Palindrome Check f
or a Integer.py
Palindrome Check for an Integer
*****
Enter the No. to be Checked : 12345
12345 Is not a Palindrome !
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.5 - Palindrome Check f
or a Integer.py
Palindrome Check for an Integer
*****
Enter the No. to be Checked : -131
Palindrome Cannot be Checked for a Negative Number
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.5 - Palindrome Check f
or a Integer.py
Palindrome Check for an Integer
*****
Enter the No. to be Checked : 5
Palindrome Cannot be Checked for a Single Digit Number
>>> |
```

6. Write a program to read a text file line by line and display each word separated by '#'.

Source Code:

The screenshot shows a Windows desktop environment. In the center, there is a Notepad window titled "Practice - Notepad" containing the source code for a Python program. Below the Notepad is a terminal window titled "Python 3.8.3 Shell" showing the execution and output of the program. The desktop taskbar is visible at the bottom, and the system tray shows the date and time.

```
# Read and Separate Words by '#'
print("Reading A File and Separating Words by '#'")
print("*****")
f = open("E:\Class 12\Computer Science\Practice.txt", "r")
re = f.readlines()
for line in re :
    L = line.split()
    for i in L :
        print(i + "#", end = "")
    print()
```

Notepad Content:

```
Hello Everyone.
Ronaldo Is Back Home #GGMU. After 12 Years It had Happened.
Python is a Fun & Important Language To learn.

Computer Science Is Easy To Learn and Practice.
Electricity and Magnetism are Interrelated.
Python Uses an Interpreter.
This is a Program to Separate Words by '#'
```

Terminal Output:

```
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.6 - File Handling Words Separated by #.py
Reading A File and Separating Words by '#'
*****
Hello#Everyone.#
Ronaldo#Is#Back#Home##GGMU.#After#12#Years#It#had#Happened.#
Python#is#a#Fun##Important#Language#To#learn.#
Computer#Science#Is#Easy#To#Learn#and#Practice.#
Electricity#and#Magnetism#are#Interrelated.#
Python#Uses#an#Interpreter.#
This#is#a#Program#to#Separate#Words#by#'.'#
>>>
```

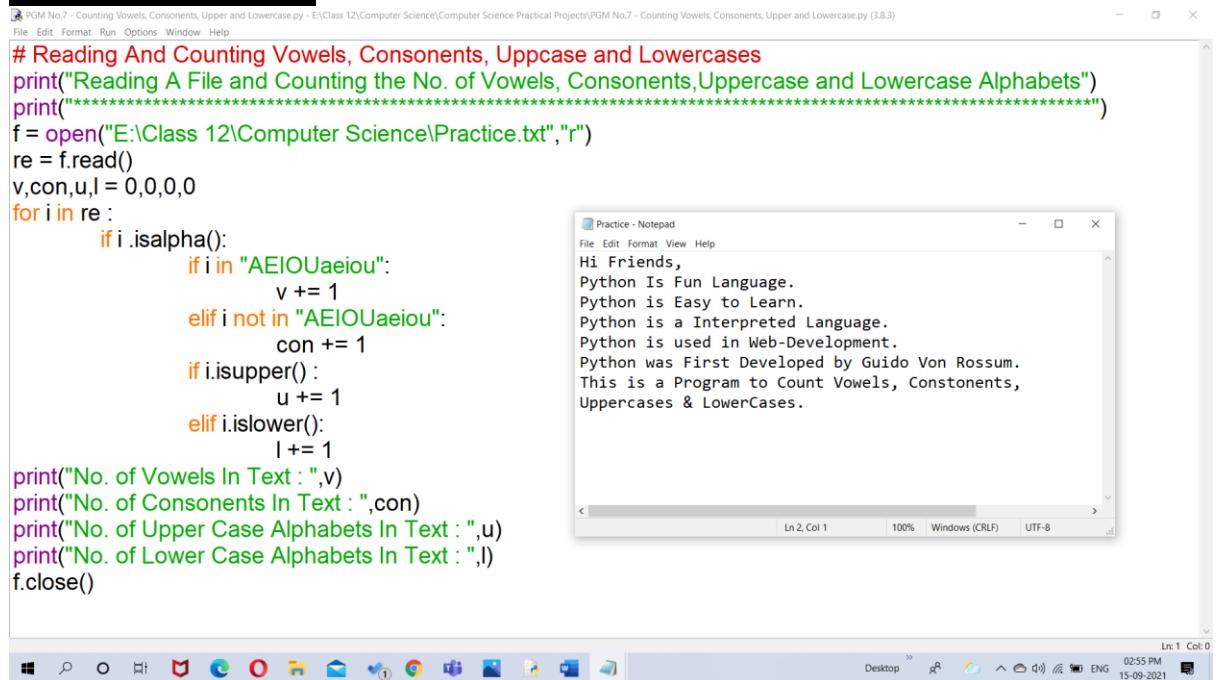
Input/Output :

The screenshot shows a Python 3.8.3 shell window. The user has run the program, which reads from a file named "Practice.txt" and prints each word separated by a '#' character. The output is displayed in the shell window.

```
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.6 - File Handling Words Separated by #.py
Reading A File and Separating Words by '#'
*****
Hello#Everyone.#
Ronaldo#Is#Back#Home##GGMU.#After#12#Years#It#had#Happened.#
Python#is#a#Fun##Important#Language#To#learn.#
Computer#Science#Is#Easy#To#Learn#and#Practice.#
Electricity#and#Magnetism#are#Interrelated.#
Python#Uses#an#Interpreter.#
This#is#a#Program#to#Separate#Words#by#'.'#
>>>
```

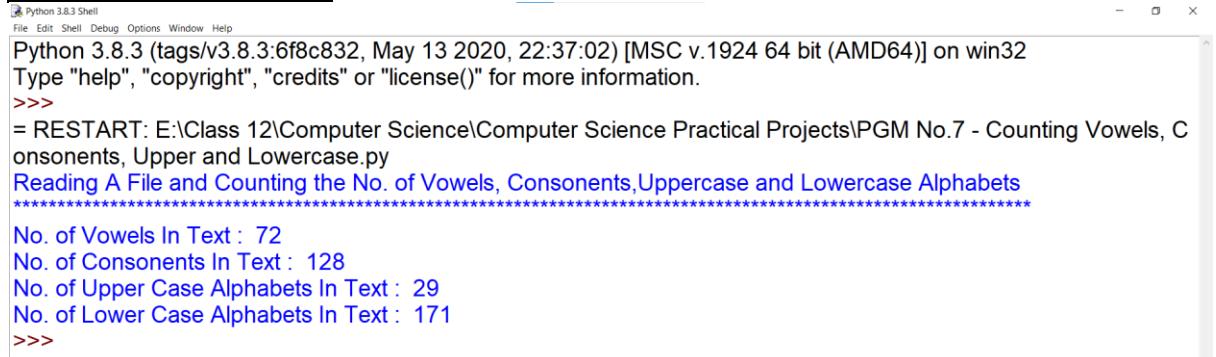
7. Write a program to count the number of vowels /consonants/uppercase \lowercase characters present in a text file.

Source Code:



```
# Reading And Counting Vowels, Consonents, Uppcase and Lowercases
print("Reading A File and Counting the No. of Vowels, Consonents,Uppercase and Lowercase Alphabets")
print("*****")
f = open("E:\Class 12\Computer Science\Practice.txt", "r")
re = f.read()
v,con,u,l = 0,0,0,0
for i in re :
    if i.isalpha():
        if i in "AEIOUaeiou":
            v += 1
        elif i not in "AEIOUaeiou":
            con += 1
        if i.isupper():
            u += 1
        elif i.islower():
            l += 1
print("No. of Vowels In Text : ",v)
print("No. of Consonents In Text : ",con)
print("No. of Upper Case Alphabets In Text : ",u)
print("No. of Lower Case Alphabets In Text : ",l)
f.close()
```

Input/Output:



```
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.7 - Counting Vowels, C
onsonents, Upper and Lowercase.py
Reading A File and Counting the No. of Vowels, Consonents,Uppercase and Lowercase Alphabets
*****
No. of Vowels In Text : 72
No. of Consonents In Text : 128
No. of Upper Case Alphabets In Text : 29
No. of Lower Case Alphabets In Text : 171
>>>
```

8. Write a program to count the number of times the occurrence of 'is' and 'was' word in a text file.

Source Code:

```

PGM No.8 - Counting No. of Is and Was in a Text.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.8 - Counting No. of Is and Was in a Text.py (3.8.3)
File Edit Format Run Options Window Help
# Read and Count Occurrence of 'is' and 'was'
print("Reading a File and Counting No. of Occurrence of 'is' and 'was' ")
print("*****")
print()
f = open("E:\Class 12\Computer Science\Practice.txt", "r")
re = f.read()
cis ,cwas = 0,0
L = re.split()
for i in L :
    i = i.lower()
    if i == "is" :
        cis += 1
    elif i == "was" :
        cwas += 1
print("No. of Occurrence of Word 'is' : ",cis)
print("No. of Occurrence of Word 'was' : ",cwas)

```

Input/Output:

```

Python 3.8.3 Shell
File Edit Shell Debug Options Window Help
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.8 - Counting No. of Is and Was in a Text.py
Reading a File and Counting No. of Occurrence of 'is' and 'was'
*****
No. of Occurrence of Word 'is' : 8
No. of Occurrence of Word 'was' : 5
>>> |

```

Computer Science **is** a Fun Subject
 Python **was** developed by Guido Von Rossum
 Bvm Global **is** a good learning platform
 I **was** a student of BVM. It **is** one the best Centres.
 Ronaldo **was** better than Messi
 It **is** his period during that time of his Era

Congrats to Neeraj Chopra for Gold Medal in Olympics
 It **is** His Hard work that brought him there
 It **is** a Wonderful day and **was** a rainy day
 This **is** the Program to Count **is** and **was**

9. Write a program to write those lines which starts with character 'p' or 'P' from one text file to another text file.

Source Code:

```

PGM No.9 - Read and Writing those lines with P or p.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.9 - Read and Writing those lines with P or p.py (3.8.3)
File Edit Format Run Options Window Help
# Reading and Writing Those lines Starting with 'P'
print("Reading a File and Writing those Lines that Starts with Letter 'P' in Another File")
print("*****")
fin = open("E:\Class 12\Computer Science\Practice.txt", "r")
fout = open("E:\Class 12\Computer Science\Write.txt", "w+")
while True:
    try:
        line = fin.readline()
        if line[0] == 'p' or line[0] == 'P':
            fout.write(line)
    except IndexError:
        break
print('Successfully Copied the lines starting with P character')
n = input("Do You Want View the Contents Inside the File (Y\N) : ")
if n == "y" or n == "Y":
    fout.seek(0)
    print(fout.read())
else:
    print("Thank You")
fin.close()
fout.close()

```

Input/Output:

```

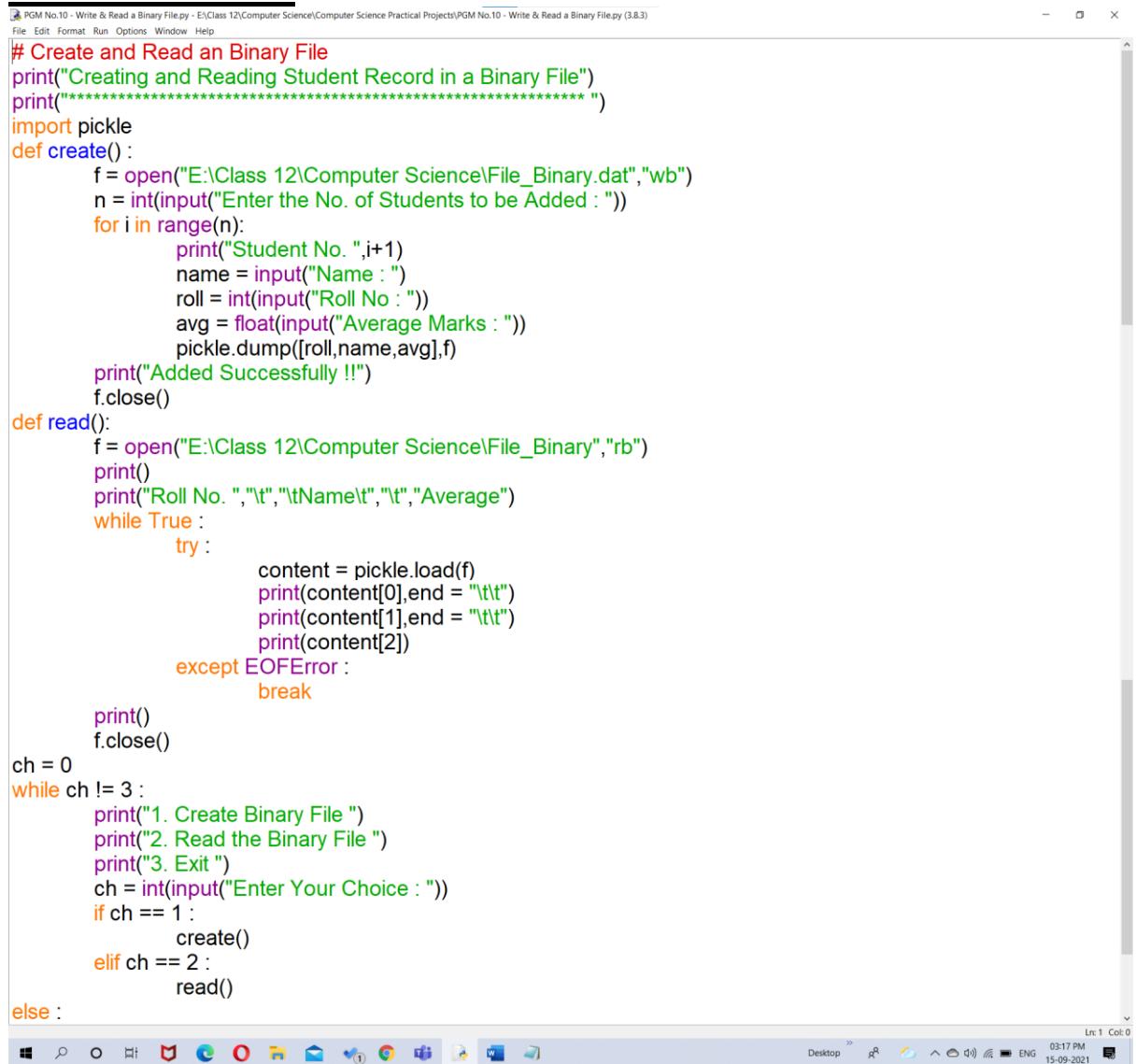
Python 3.8.5 (tags/v3.8.5:185dbd7, May 13 2020, 22.37.02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.9 - Read and Writing those lines with P or p.py
Reading a File and Writing those Lines that Starts with Letter 'P' in Another File
*****
Successfully Copied the lines starting with P character
Do You Want View the Contents Inside the File (Y\N) : Y
Police & Theif
Purple is my Favorite Colour
Pravin and Prasanna Are Twin Brothers
Phosphorus Is a Group 15 Element

>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.9 - Read and Writing those lines with P or p.py
Reading a File and Writing those Lines that Starts with Letter 'P' in Another File
*****
Successfully Copied the lines starting with P character
Do You Want View the Contents Inside the File (Y\N) : N
Thank You
>>>

```

10. Create a binary file with name and roll number of student and display the data by reading the file.

Source Code:



```
PGM No.10 - Write & Read a Binary File.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.10 - Write & Read a Binary File.py (3.8.3)
File Edit Format Run Options Window Help
# Create and Read an Binary File
print("Creating and Reading Student Record in a Binary File")
print("*****")
import pickle
def create():
    f = open("E:\Class 12\Computer Science\File_Binary.dat","wb")
    n = int(input("Enter the No. of Students to be Added : "))
    for i in range(n):
        print("Student No. ",i+1)
        name = input("Name : ")
        roll = int(input("Roll No : "))
        avg = float(input("Average Marks : "))
        pickle.dump([roll,name,avg],f)
    print("Added Successfully !!")
    f.close()
def read():
    f = open("E:\Class 12\Computer Science\File_Binary","rb")
    print()
    print("Roll No. \t\tName\t\tAverage")
    while True :
        try :
            content = pickle.load(f)
            print(content[0],end = "\t\t")
            print(content[1],end = "\t\t")
            print(content[2])
        except EOFError :
            break
    print()
    f.close()
ch = 0
while ch != 3 :
    print("1. Create Binary File ")
    print("2. Read the Binary File ")
    print("3. Exit ")
    ch = int(input("Enter Your Choice : "))
    if ch == 1 :
        create()
    elif ch == 2 :
        read()
else :
```

Input/Output:

```
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.10 - Write & Read a Binary File.py
Creating and Reading Student Record in a Binary File
*****
1. Create Binary File
2. Read the Binary File
3. Exit
Enter Your Choice : 1
Enter the No. of Students to be Added : 5
Student No. 1
Name : Ashik
Roll No : 1001
Average Marks : 58.5
Student No. 2
Name : Bala
Roll No : 1003
Average Marks : 39.3
Student No. 3
Name : Ciril
Roll No : 1010
Average Marks : 98.7
Student No. 4
Name : Dev
Roll No : 1015
Average Marks : 76.6
Student No. 5
Name : Elango
Roll No : 1017
Average Marks : 89.9
Added Successfully !!
1. Create Binary File
2. Read the Binary File
3. Exit
Enter Your Choice : 2

Roll No.          Name           Average
3                Ashik          78.5
7                Bala           56.4
10               Ciril          98.5
14               Dev            92.8
19               Elango         56.3

1. Create Binary File
2. Read the Binary File
3. Exit
Enter Your Choice : 3
Thank You
>>> |
```

Ln: 50 Col: 4
Desktop >> R ENG 03:21 PM 15-09-2021

11. Write a program to search a record using its roll number and display the name of student. If record not found then display appropriate message.

Source Code:

```
PGM No.11 - Read & Search Binary File.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.11 - Read & Search Binary File.py (3.8.3)
File Edit Format Run Options Window Help
# Creating and Searching an Binary File
print("Creating & Searching a Record in a Binary File")
print("*****")
import pickle
def create():
    f = open("E:\Class 12\Computer Science\File_Binary.dat", "ab")
    n = int(input("Enter the No. of Students to be Added : "))
    for i in range(n):
        print("Student No. ",i+1)
        name = input("Name : ")
        roll = int(input("Roll No : "))
        avg = float(input("Average Marks : "))
        pickle.dump([roll,name,avg],f)
    print("Added Successfully !!")
    f.close()
def search():
    f = open("E:\Class 12\Computer Science\File_Binary.dat", "rb")
    search = int(input("Enter the Roll No. of to be Searched : "))
    while True :
        try :
            content = pickle.load(f)
            if content[0] == search :
                print("Roll No : ",content[0])
                print("Name : ",content[1])
                print("Average : ",content[2])
                break
        except EOFError :
            print("Roll No. Not Found in File !!! ")
            break
    f.close()
ch = 0
while ch != 3 :
    print("1. Create Binary File ")
    print("2. Search Binary File ")
    print("3. Exit ")
    ch = int(input("Enter Your Choice : "))
    if ch == 1 :
        create()
    elif ch == 2 :
        search()
else :
    print("Thank You")
```

Input/Output:

```
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.11 - Read & Search Binary File.py
Creating & Searching a Record in a Binary File
*****
1. Create Binary File
2. Search Binary File
3. Exit
Enter Your Choice : 1
Enter the No. of Students to be Added : 1
Student No. 1
Name : Govind
Roll No : 1025
Average Marks : 95.4
Added Successfully !!
1. Create Binary File
2. Search Binary File
3. Exit
Enter Your Choice : 2
Enter the Roll No. of to be Searched : 1025
*****
Roll No.: 1025
Name : Govind
Average : 95.4
1. Create Binary File
2. Search Binary File
3. Exit
Enter Your Choice : 2
Enter the Roll No. of to be Searched : 17878766
Roll No. Not Found in File !!!
1. Create Binary File
2. Search Binary File
3. Exit
Enter Your Choice : 2
Enter the Roll No. of to be Searched : 1001
Roll No.: 1001
Name : Ashik
Average : 58.5
1. Create Binary File
2. Search Binary File
3. Exit
Enter Your Choice : 3
Thank You
```

12. Write a program to update the name of student by using its roll number in a binary file.

Source Code:

```
PGM No.12 - Write, Read & Update Binary File.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.12 - Write, Read & Update Binary File.py (3.8.3)
File Edit Format Run Options Window Help
# Create, Read and Update an Binary File
print("Updating a Record in a Binary File")
print("*****")
import pickle
def create():
    f = open("E:\Class 12\Computer Science\File_Binary.dat","wb")
    n = int(input("Enter the No. of Students to be Added : "))
    for i in range(n):
        print("Student No. ",i+1)
        name = input("Name : ")
        roll = int(input("Roll No. : "))
        avg = float(input("Average Marks : "))
        pickle.dump([roll,name,avg],f)
    print("Added Successfully !!")
    f.close()
def read():
    f = open("E:\Class 12\Computer Science\File_Binary","rb")
    print()
    print("Roll No. \t Name \t Average")
    while True :
        try :
            content = pickle.load(f)
            print(content[0],end = "\t\t")
            print(content[1],end = "\t\t")
            print(content[2])
        except EOFError :
            break
    print()
    f.close()
def Update():
    f = open("E:\Class 12\Computer Science\File_Binary","rb+")
    update = int(input("Enter the Roll No. to be Updated : "))
    while True :
        try :
            pos = f.tell()
            content = pickle.load(f)
            if update == content[0]:
                update_avg = float(input("Enter the Average To be Updated : "))
                content[2] = update_avg
                f.seek(pos)
                pickle.dump(content,f)
                print("Successfully Updated !!")
                print("Roll No : ",content[0])
                print("Name : ",content[1])
        except EOFError :
            break
```

```

                print("Average : ",content[2])
                break
            except EOFError :
                print("Roll No not found in File !!")
                break
        f.close()
ch = 0
while ch != 4 :
    print("1. Create Binary File ")
    print("2. Read Binary File ")
    print("3. Update Binary File ")
    print("4. Exit ")
    ch = int(input("Enter Your Choice : "))
    if ch == 1 :
        create()
    elif ch == 2 :
        read()
    elif ch == 3 :
        Update()
else :
    print("Thank You")

```



Desktop >> ENG 09:31 PM 15-09-2021

Input/Output:

```

Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.12 - Write, Read & Upd
ate Binary File.py
Updating a Record in a Binary File
*****
1. Create Binary File
2. Read Binary File
3. Update Binary File
4. Exit
Enter Your Choice : 2

      Roll No.          Name      Average
3              Ashik       78.5
7              Bala        56.4
10             Ciril       98.5
14              Dev         92.8
19             Elango      56.3

1. Create Binary File
2. Read Binary File

```

```

3. Update Binary File
4. Exit
Enter Your Choice : 3
Enter the Roll No. to be Updated : 7
Enter the Average To be Updated : 68.9
Successfully Updated !!
Roll No : 7
Name : Bala
Average : 68.9
1. Create Binary File
2. Read Binary File
3. Update Binary File
4. Exit
Enter Your Choice : 2



| Roll No. | Name   | Average |
|----------|--------|---------|
| 3        | Ashik  | 78.5    |
| 7        | Bala   | 68.9    |
| 10       | Ciril  | 98.5    |
| 14       | Dev    | 92.8    |
| 19       | Elango | 56.3    |



1. Create Binary File
2. Read Binary File
3. Update Binary File
4. Exit
Enter Your Choice : 4
Thank You
>>> |

```

Ln: 50 Col: 4
Desktop >> ENG 03:36 PM 15-09-2021

13. To write a Python program Create a CSV file to store Empno, Name, Salary and search any Empno and display Name, Salary and if not found display appropriate message.

Source Code:

```

PGM No.13 - Write & Search in CSV Files.py - E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.13 - Write & Search in CSV Files.py (3.8.3)
File Edit Format Run Options Window Help
# Create and Read a CSV File
print("Creating & Searching an Employee Record in a CSV File ")
print("*****")
import csv
def Create():
    f = open("E:\Class 12\Computer Science\Employee_Details.csv", "w", newline= "")
    file_writer = csv.writer(f)
    n = int(input("Enter the No. of Employees to be Added : "))
    for i in range(n):
        print("Employee No. ",i+1)
        print()
        Emp_No = int(input("Employee ID : "))
        Name = input("Name : ")
        sal = float(input("Salary : "))
        print()
        file_writer.writerow([Emp_No,Name,sal])
    print("Added Successfully !! ")
    f.close()
def Search():
    f = open("E:\Class 12\Computer Science\Employee_Details.csv", "r")
    search = input("Enter the Employee ID to be Searched : ")
    reader = csv.reader(f)

```

```

reader = csv.reader(f)
print()
for i in reader :
    if i[0] == search :
        print("Employee ID : ",i[0])
        print("Name : ",i[1])
        print("Salary : ",i[2])
        print()
        break
    else :
        print("Employee ID Not Found !!!")
f.close()

ch = 0
while ch != 3 :
    print("1.Add Employee Details ")
    print("2. Search An Employee ")
    print("3. To Exit ")
    ch = int(input("Enter the Your Choice : "))
    if ch == 1 :
        Create()
    elif ch == 2 :
        Search()
else :
    print("Thank You")

```



Input/Output:

```

Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.13 - Write & Search in
CSV Files.py
Creating & Searching an Employee Record in a CSV File
*****
1.Add Employee Details
2. Search An Employee
3. To Exit
Enter the Your Choice : 1
Enter the No. of Employees to be Added : 5
Employee No. 1

Employee ID : 1001
Name : Abishek
Salary : 25000

Employee No. 2

Employee ID : 1002
Name : Andavar Balu

```

```

Salary : 50000
Employee No. 3
Employee ID : 1003
Name : Prithiv
Salary : 48500

Employee No. 4
Employee ID : 1004
Name : Kedar Jadhav
Salary : 95000

Employee No. 5
Employee ID : 1005
Name : Zlatan
Salary : 1000000

Added Successfully !!
1.Add Employee Details
2. Search An Employee
3. To Exit
Enter the Your Choice : 2
Enter the Employee ID to be Searched : 1005

Employee ID : 1005
Name : Zlatan
Salary : 1000000.0

1.Add Employee Details
2. Search An Employee
3. To Exit
Enter the Your Choice : 2
Enter the Employee ID to be Searched : 12345

Employee ID Not Found !!!
1.Add Employee Details
2. Search An Employee
3. To Exit
Enter the Your Choice : 3
Thank You
>>>

```

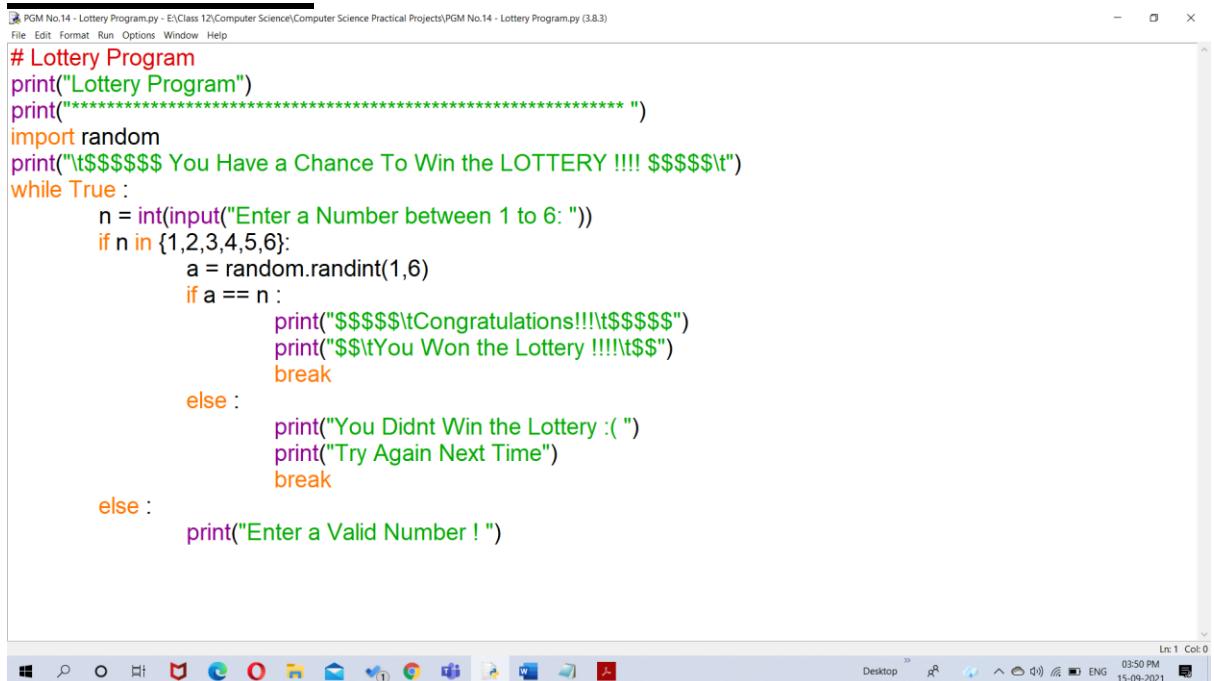
15-09-2021 03:44 PM Microsoft Excel Co... 1 KB

	A	B	C
1	1001	Abishek	25000
2	1002	Andavar Balu	50000
3	1003	Prithiv	48500
4	1004	Kedar Jadhav	95000
5	1005	Zlatan	1000000
6			

Ln: 65 Col: 4
Desktop 03:46 PM ENG 15-09-2021

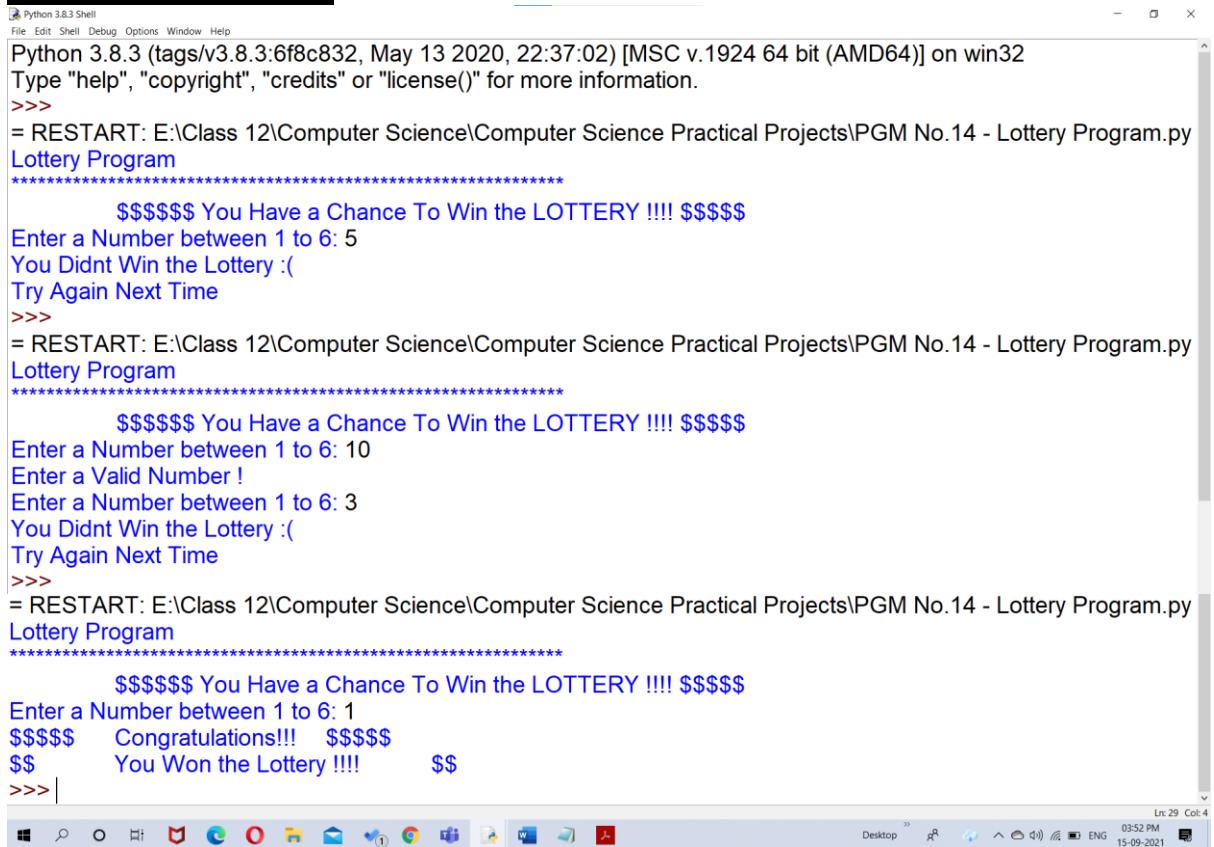
14. Write a program to generate random numbers between 1 to 6 and check whether a user won a lottery or not.

Source Code:



```
# Lottery Program
print("Lottery Program")
print("*****")
import random
print("\t$$$$$ You Have a Chance To Win the LOTTERY !!!! $$$$\t")
while True :
    n = int(input("Enter a Number between 1 to 6: "))
    if n in {1,2,3,4,5,6}:
        a = random.randint(1,6)
        if a == n :
            print("$$$$$\\tCongratulations!!!\\t$$$$$")
            print("$$\\tYou Won the Lottery !!!\\t$$")
            break
        else :
            print("You Didnt Win the Lottery :( ")
            print("Try Again Next Time")
            break
    else :
        print("Enter a Valid Number ! ")
```

Input/Output:



```
Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.14 - Lottery Program.py
Lottery Program
*****
$$$$$ You Have a Chance To Win the LOTTERY !!!! $$$$
Enter a Number between 1 to 6: 5
You Didnt Win the Lottery :(
Try Again Next Time
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.14 - Lottery Program.py
Lottery Program
*****
$$$$$ You Have a Chance To Win the LOTTERY !!!! $$$$
Enter a Number between 1 to 6: 10
Enter a Valid Number !
Enter a Number between 1 to 6: 3
You Didnt Win the Lottery :(
Try Again Next Time
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.14 - Lottery Program.py
Lottery Program
*****
$$$$$ You Have a Chance To Win the LOTTERY !!!! $$$$
Enter a Number between 1 to 6: 1
$$$$$  Congratulations!!!  $$$$
$$      You Won the Lottery !!!      $$
```

15. WAP creating a python program to make user define module and import same in another module or program to calculate area and perimeter of different shapes.

Source Code:

```

# Imported Module in Main Program
def Rectangle():
    l = int(input("Enter the Length (in cm) :"))
    b = int(input("Enter the Breadth (in cm) :"))
    area = l*b
    perimeter = 2 *(l+b)
    print("Area of Rectangle : ",area,"sq.cm")
    print("Perimeter of Rectangle : ",perimeter,"cm")
def Square():
    a = int(input("Enter the Length of Side of Square"))
    area = a*a
    perimeter = 4*a
    print("Area of Square : ",area,"sq.cm")
    print("Perimeter of Square : ",perimeter,"cm")
def Circle():
    r = int(input("Enter the Radius Of Circle (in cm) :"))
    area = 3.14 *r*r
    perimeter = 2*3.14*r
    print("Area of Circle : ",area,"sq.cm")
    print("Circumference of Circle : ",perimeter,"cm")

# Calculate Area and Perimeter of Different Shapes
print("Finding Area & Perimeter of Different Shapes")
print("*****")
import Area_Different_Shapes as a
ch = 0
while ch != 4 :
    print("1. Area & Perimeter of Rectangle ")
    print("2. Area & Perimeter of Square ")
    print("3. Area & Perimeter of Circle ")
    print("4. Exit")
    ch = int(input("Enter Your Choice : "))
    if ch == 1 :
        a.Rectangle()
    elif ch == 2 :
        a.Square()
    elif ch == 3 :
        a.Circle()
else :
    print("Thank You")

```

Input/Output:

```

Python 3.8.3 (tags/v3.8.3:6f8c832, May 13 2020, 22:37:02) [MSC v.1924 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: E:\Class 12\Computer Science\Computer Science Practical Projects\PGM No.15 - Area & Perimeter o
f Different Shapes.py
Finding Area & Perimeter of Different Shapes
*****
1. Area & Perimeter of Rectangle
2. Area & Perimeter of Square
3. Area & Perimeter of Circle
4. Exit
Enter Your Choice : 1
Enter the Length (in cm) :5
Enter the Breadth (in cm) :3
Area of Rectangle : 15 sq.cm
Perimeter of Rectangle : 16 cm

```

```
Area of Square : 25 sq.cm
Perimeter of Square : 20 cm
1. Area & Perimeter of Rectangle
2. Area & Perimeter of Square
3. Area & Perimeter of Circle
4. Exit
Enter Your Choice : 3
Enter the Radius Of Circle (in cm) : 7
Area of Circle : 153.86 sq.cm
Circumference of Circle : 43.96 cm
1. Area & Perimeter of Rectangle
2. Area & Perimeter of Square
3. Area & Perimeter of Circle
4. Exit
Enter Your Choice : 4
Thank You
```

>>> |

