



# **SREE NARAYANA GURU COLLEGE**

An Autonomous College, Affiliated to Bharathiar University  
Accredited with "A" grade by NAAC (3rd cycle) & an ISO 9001 : 2015 Certified Institution  
Approved by Govt. of Tamil Nadu, & Recognized by UGC  
A Premier Post Graduate and Research Co- Educational Institution  
**K.G. Chavadi, Coimbatore - 641105**



## I M.Sc. Computer Science

### **Practical II: PYTHON PROGRAMMING LAB (13Q)**



PRACTICAL RECORD

**2025-2026**

**DEPARTMENT OF COMPUTER SCIENCE  
SREE NARAYANA GURU COLLEGE  
K.G. CHAVADI, COIMBATORE – 641 105**

**SREE NARAYANA GURU COLLEGE**

**K.G. CHAVADI, COIMBATORE – 641 105**

**CERTIFICATE**

**REGISTER NUMBER**

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This is to certify that the bonafide record work done by \_\_\_\_\_ of I M.Sc. Computer Science in the Computer Lab of the College during the year 2025-2026.



**Staff In-charge**

**Head of the Department**

Submitted for the End Semester Examination held on .....at Sree Narayana Guru College, Coimbatore – 641105.

**Internal Examiner**

**External Examiner**

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# PYTHON PROGRAMMING LAB



ProgramNo:1

Date:

**ELEMENTARY DATA ITEMS**



**SOURCE CODE:**

```
print('student details')
studlist=['animasiya','arthi','athira','bojaraj','fathima']
print(len(studlist))
n=('lokeswari','manjusha')
studlist.append(n)
staff={'python':'priya','ADA':'Abdul','dip':'ramesh','c++':'Priyadarsini'} print(studlist)
print(staff)
```



## OUTPUT:

```
Python 3.7.5 Shell Debug Console Window Help
Python 3.7.5 [64-bit] (tags/v3.7.5:8282e52e, Mar 29 2019, 21:26:53) [AMD64] on win32
Type "help()", "copyright()", "credits()" or "license()" for more
>>>
== RESTART: C:/Users/Anup/AppData/Local/Programs/Python/Python37-0/Python.exe ==
student details
n
[('anushka', '9876', 'ankita', 'bajaj', 'fashion', ('lakhmeera', 'meharshi'))]
[('yashu', '9876', 'ank', 'dub', 'meharshi', 'oo', 'anushka', 'ai', 'anushka')]
>>>
```



ProgramNo:2

Date:

## CONDITIONAL BRANCHES



### SOURCE CODE:

```
print("StudentGradingSystem")
name=input("Studentname:")
id=int(input("Studentid:"))
print("enterthemarks:")
cc=int(input("entermarkofcc:"))
dip=int(input("entermarkofdip:"))
py=int(input("entermarkofpython:"))
bi=int(input("entermarkofbi:"))
nsc=int(input("entermarkofnsc:"))
total=cc+dip+py+bi+nsc
avg=total/5
print(name)
print(id)
print(total)
print(avg)
if(avg>=90):
    print("Agrade")
elif(avg>=80andavg<90):
    print("Bgrade:")
elif(avg>=70andavg<80):
    print("Cgrade")
elif(avg>=60andavg<=70):
    print("Dgrade")
else:
    print("fail")
```



## OUTPUT:

```
Python 3.7.0 Shell Debug Options: Window Help
Python 3.7.0 (tags/v3.7.0:efce66312, Mar 25 2019, 21:26:53) [AMD64 v.1916 32 bit (Intel)] on win32
Type "help", "copyright()", "credits()" or "quit()" for more information.
>>>
== RESTART: C:/Users/ajay/AppData/Local/Programs/Python/Python37-32/pyp.py ==
Student Grading System
Student name:shiva
Student ID:1
enter the marks:
enter mark of o:10
enter mark of a:85
enter mark of p:100:100
enter mark of b:100
enter mark of c:100:100
Teacher (mark) enter roll name:
File "C:/Users/ajay/AppData/Local/Programs/Python/Python37-32/pyp.py", line 11, in <module>
    marks[a]=5
NameError: name 'a' is not defined
>>>
== RESTART: C:/Users/ajay/AppData/Local/Programs/Python/Python37-32/pyp.py ==
Student Grading System
Student name:shiva
Student ID:1
enter the marks:
enter mark of o:10
enter mark of a:87
enter mark of p:100:100
enter mark of b:100
enter mark of c:100:100
shiva
1
431
04.2
B grade:
>>>
```



ProgramNo:3

Date:

## LOOPS

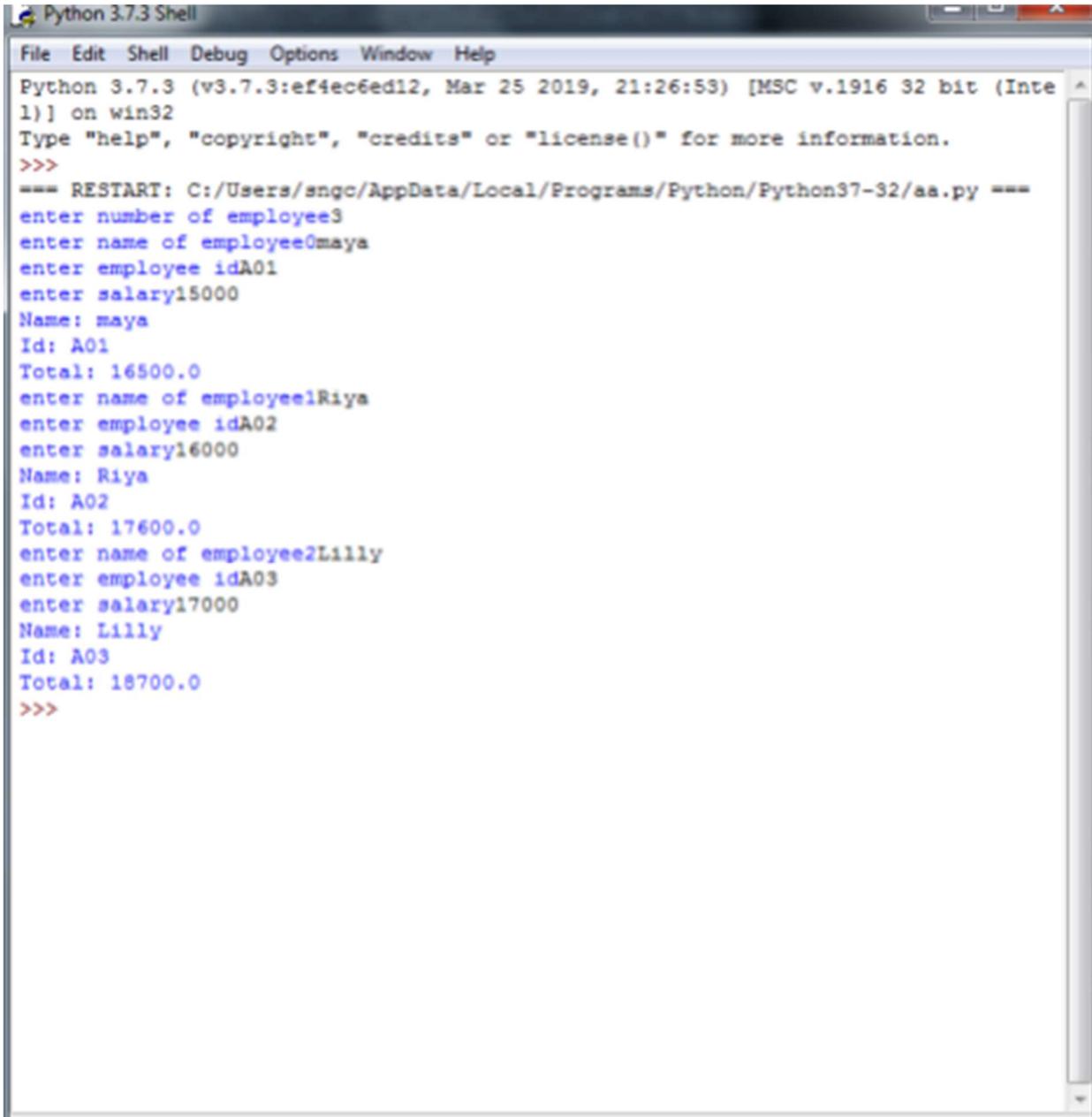


### **SOURCE CODE:**

```
no_of_emp=int(input("enternumberofemployee"))
for i in range(0,no_of_emp):
    Name=input("enternameofemployee"+str(i))
    Id=input("enteremployeeid")
    salary=int(input("entersalary"))
    incentive=salary*10/100
    Total=salary+incentive
    print("Name:",Name)
    print("Id:",Id)
    print("Total:",Total)
```



## OUTPUT:



```
Python 3.7.3 Shell
File Edit Shell Debug Options Window Help
Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 21:26:53) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:/Users/sngc/AppData/Local/Programs/Python/Python37-32/aa.py ===
enter number of employee3
enter name of employee0maya
enter employee idA01
enter salary15000
Name: maya
Id: A01
Total: 16500.0
enter name of employee1Riya
enter employee idA02
enter salary16000
Name: Riya
Id: A02
Total: 17600.0
enter name of employee2Lilly
enter employee idA03
enter salary17000
Name: Lilly
Id: A03
Total: 18700.0
>>>
```

ProgramNo:4

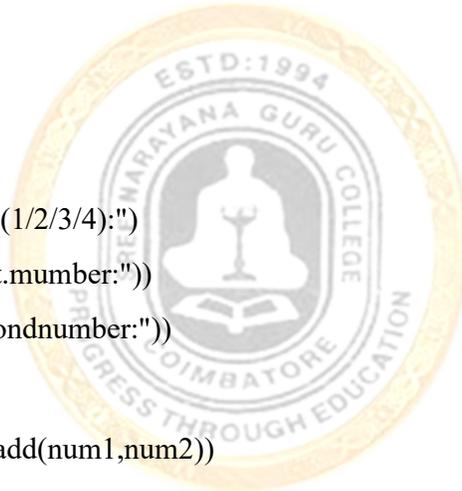
Date:

## FUNCTION



## SOURCE CODE:

```
defadd(x,y):
    returnx+y
defsubtract(x,y):
    returnx-y
defmultiply(x,y):
    returnx*y
defdivide(x,y):
    returnx/y
print("selectoperation.")
print("1.add")
print("2.subtract")
print("3.multiply")
print("4.divide")
choice=input("enterthechoice(1/2/3/4):")
num1=int(input("enterthefirst.number:"))
num2=int(input("enterthesecondnumber:"))
ifchoice=='1':
    print(num1,"+",num2,"=",add(num1,num2))
elifchoice=='2':
    print(num1,"-",num2,"=",subtract(num1,num2))
elifchoice=='3':
    print(num1,"*",num2,"=",multiply(num1,num2))
elifchoice=='4':
    print(num1,"/",num2,"=",divide(num1,num2)) else
print("invalideinput")
```



## OUTPUT:

```
Python 3.7.5 Shell: C:\Users\user\AppData\Local\Microsoft\Windows\Apps\python.exe
Python 3.7.5 (tags/3.7.5:fe80322, Mar 29 2019, 01:26:53) [AMD64] on win32
Type "help()", "copyright()", "credits()" or "license()" for more information.
>>>
===== RESTART: C:\Users\user\AppData\Local\Microsoft\Windows\Apps\python.exe =====
select operation...
1.add
2.subtract
3.multiply
4.divide
enter the choice(1/2/3/4):2
enter the first number:5
enter the second number:4
5 - 4 = 1
>>>
===== RESTART: C:\Users\user\AppData\Local\Microsoft\Windows\Apps\python.exe =====
select operation...
1.add
2.subtract
3.multiply
4.divide
enter the choice(1/2/3/4):3
enter the first number:2
enter the second number:4
2 * 4 = 8
>>>
===== RESTART: C:\Users\user\AppData\Local\Microsoft\Windows\Apps\python.exe =====
select operation...
1.add
2.subtract
3.multiply
4.divide
enter the choice(1/2/3/4):4
enter the first number:2
enter the second number:8
2 / 8 = 0.25
>>>
```



ProgramNo:5

Date:

## **EXCEPTION HANDLING**



## **SOURCE CODE:**

try:

```
f=open('new.txt','w')
```

```
print("entstdstls")
```

```
i=input("id:")
```

```
n=input("name:")
```

```
f.write(i)
```

```
f.write(n)
```

```
print("inputdataintothefileissuccess")
```

exceptIOError:

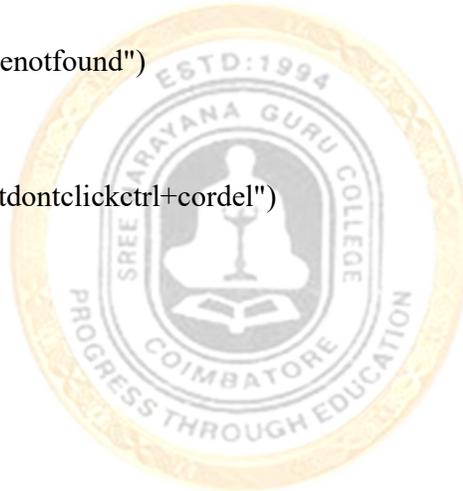
```
print("IOErroroccuredfilenotfound")
```

exceptKeyboardInterrupt:

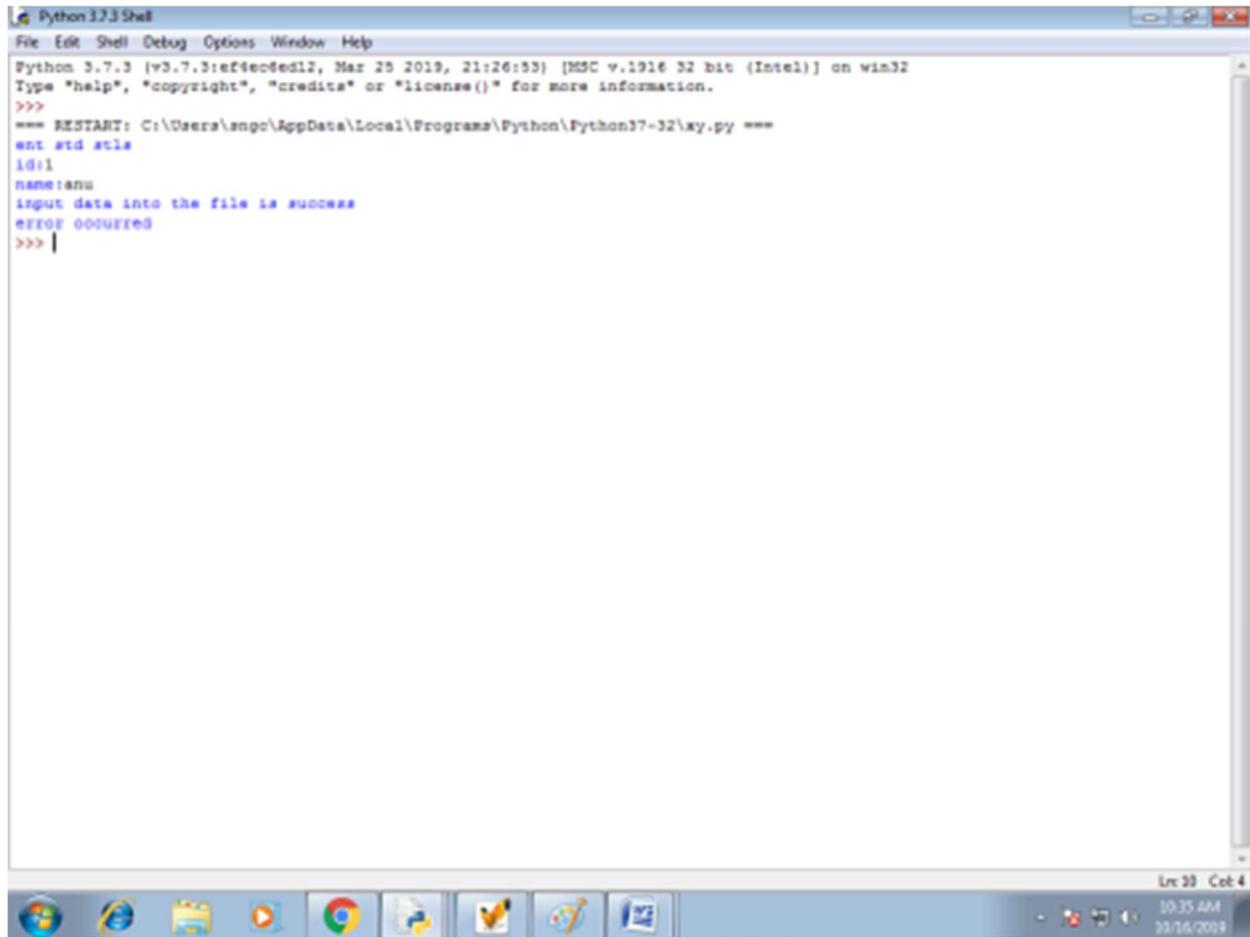
```
print("KeyboardInterruptdontclickctrl+cordel")
```

finally:

```
print("erroroccurred")
```



## OUTPUT:



```
Python 3.7.3 Shell
File Edit Shell Debug Options Window Help
Python 3.7.3 [v3.7.3:ef4e0ed12, Mar 25 2019, 21:26:53] [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:\Users\anp\AppData\Local\Programs\Python\Python37-32\xy.py ===
ent atd atle
id:1
name:anu
input data into the file is success
ERROR OCCURED
>>> |
```

The screenshot shows a Windows taskbar at the bottom with icons for Internet Explorer, File Explorer, Google Chrome, and other applications. The system tray on the right shows the time as 10:35 AM and the date as 10/16/2018. A watermark for 'UNIVERSITY OF CALICUT' is visible at the bottom center of the page.

ProgramNo:6

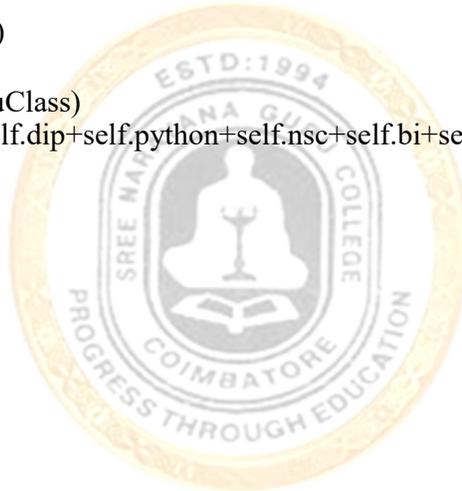
Date:

## INHERITANCE



## SOURCE CODE:

```
class person:
    def __init__(self):
        self.name=input("Name:")
        self.age=input("Age:")
        self.gender=input("gender:")
    def display(self):
        print("\n\nName:",self.name)
        print("Age:",self.age)
        print("Gender:",self.gender)
class marks:
    def __init__(self):
        self.stuClass=input("Class:")
        print("enter the mark of the respective subject:")
        self.dip=int(input("DIP:"))
        self.python=int(input("PYTHON:"))
        self.nsc=int(input("NSC:"))
        self.bi=int(input("BI:"))
        self.cc=int(input("CC:"))
    def display(self):
        print("study in",self.stuClass)
        print("Total marks:",self.dip+self.python+self.nsc+self.bi+self.cc)
class student(person,marks):
    def __init__(self):
        person.__init__(self)
        marks.__init__(self)
    def result(self):
        person.display(self)
        marks.display(self)
stu1=student()
stu1.result()
```



## OUTPUT:

```
Python 3.7.3 Shell
File Edit Shell Debug Options Window Help
Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 21:26:53) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/sngc/AppData/Local/Programs/Python/Python37-32/inher.py =
Name:BOJARAJ
Age:22
gender:M
Class:II MSC
enter the mark of the respective subject:
DIP:74
PYTHON:75
NSC:73
BI:72
CC:71

Name: BOJARAJ
Age: 22
Gender: M
study in II MSC
Total marks: 365
>>> |
```



ProgramNo:7

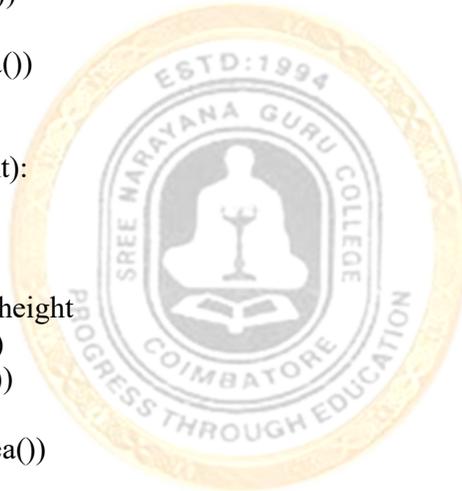
Date:

## POLYMORPHISM

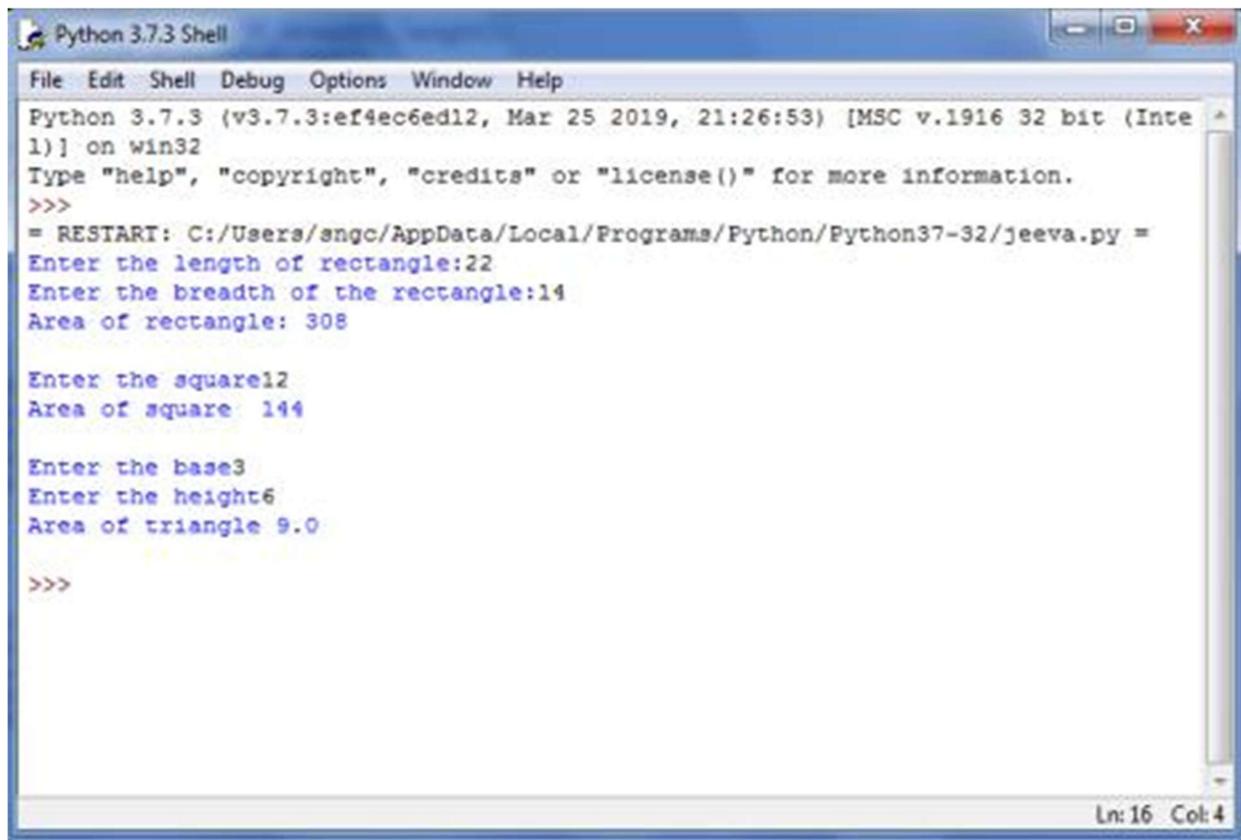


## SOURCE CODE:

```
classrectangle():
    def __init__(self,breadth,length):
        self.breadth=breadth
        self.length=length
    defarea(self):
        returnself.length*self.breadth
a=int(input("Enterthelengthofrectangle:"))
b=int(input("Enterthebreadthoftherectangle:"))
obj=rectangle(a,b)
print("Areaofrectangle:",obj.area())
print()
classsquare():
    def __init__(self,side):
        self.side=side
    defarea(self):
        returnself.side*self.side
n=int(input("Enterthesquare"))
obj=square(n)
print("Areaofsquare",obj.area())
print()
classtriangle():
    def __init__(self,base,height):
        self.base=base
        self.height=height
    defarea(self):
        return0.5*self.base*self.height
ba=int(input("Enterthebase"))
h=int(input("Entertheheight"))
obj=triangle(ba,h)
print("Areaoftriangle",obj.area())
print()
```



## OUTPUT:



```
Python 3.7.3 Shell
File Edit Shell Debug Options Window Help
Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 21:26:53) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/sngc/AppData/Local/Programs/Python/Python37-32/jeeva.py =
Enter the length of rectangle:22
Enter the breadth of the rectangle:14
Area of rectangle: 308

Enter the square12
Area of square 144

Enter the base3
Enter the height6
Area of triangle 9.0

>>>
```

Ln: 16 Col: 4



ProgramNo:8

Date:

## FILE OPERATION



## **SOURCE CODE:**

```
print("fileoperation")
n=int(input("enterthenumberofemployees:"))
foriinrange(n):
    eno=input("Employeeno:")
    ename=input("Employeename:")
    add=input("Employeeaddress:")
    dep=input("employeedepartment:")
    sal=input("Employeesalary:")
    f=open('file.txt','w')
    f.write(eno)
    f.write("\n")
    f.write(ename)
    f.write("\n")
    f.write(dep)
    f.write("\n")
    f.write(add)
    f.write("\n")
    f.write(sal)
    print("contentsenteredintofilesuccessfully!!!")
    f.close()
print("readingcontentfromfile")
f1=open('file.txt','r')
forxinfl:
    print(x)
```



## OUTPUT:

```
Python 3.7.3 Shell
File Edit Shell Debug Options Window Help
Python 3.7.3 (tags/v3.7.3:ff995f2, Mar 25 2019, 21:26:53) [AMD64] on win32
Type "help()", "copyright()", "credits()" or "license()" for more information.
>>>
-- SCRIPTING: C:\Users\anup\AppData\Local\Programs\Python\Python37-32\Python.exe --
file operation
enter the number of employees:2
Employee 001
Employee name:abhishek
Employee address:1234567890
Employee department:sales
Employee salary:20000
message entered into file successfully!!!
Employee 002
Employee name:mina
Employee address:1234567890
Employee department:parking
Employee salary:21000
message entered into file successfully!!!
reading content from file
}

Mini
parking
001
21000
>>> |
```



ProgramNo:9

Date:

## MODULE



## **SOURCE CODE:**

### **OPERATION.PY**

```
defadd(x,y):  
    returnx+y  
defsub(x,y):  
    returnx-y  
defmul(x,y):  
    returnx*y  
defdiv(x,y):  
    returnx/y  
defmodulo(x,y):  
    returnx%y
```

### **MODULEEX.PY**

```
fromoperationimport*  
print("Selectoperation.")  
print("1.Add")  
print("2.Subtract")  
print("3.Multiply")  
print("4.Divide")  
print("5.modulo")  
choice=input("Enterchoice(1/2/3/4/5):")  
num1=int(input("Enterfirstnumber:"))  
num2=int(input("Entersecondnumber:"))  
ifchoice=='1':  
    print(num1,"+",num2,"=",add(num1,num2))  
elifchoice=='2':  
    print(num1,"-",num2,"=",sub(num1,num2))
```



```
elifchoice=='3':  
    print(num1,"*",num2,"=",mul(num1,num2))  
elifchoice=='4':  
    print(num1,"/",num2,"=",div(num1,num2))  
elifchoice=='5':  
    print(num1,"%",num2,"=",modulo(num1,num2)) else:  
    print("Invalidinput")
```



## OUTPUT:

```
Python373Shell
File Edit Shell Debug Options Window Help
Python 3.7.5 (tags/b3e7f6e2, Mar 25 2019, 21:26:53) [AMD64] on win32
Type "help()", "copyright()", "credits()" or "quit()" for more information.
>>>
RESTART: C:\Users\sgu\AppData\Local\Programs\Python\Python37-32\moduler.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
5.Modulo
Enter choice(1/2/3/4/5):1
Enter first number: 2
Enter second number: 3
2 + 3 = 5
>>>
RESTART: C:\Users\sgu\AppData\Local\Programs\Python\Python37-32\moduler.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
5.Modulo
Enter choice(1/2/3/4/5):2
Enter first number: 3
Enter second number: 4
3 - 4 = -1
>>>
RESTART: C:\Users\sgu\AppData\Local\Programs\Python\Python37-32\moduler.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
5.Modulo
Enter choice(1/2/3/4/5):3
Enter first number: 4
Enter second number: 3
4 * 3 = 12
>>> |
```

[https://youtu.be/HK7T2Z-F\\_vY](https://youtu.be/HK7T2Z-F_vY)



ProgramNo:10

Date:

**INTERACTIVE WEB PAGE**



## **SOURCE CODE:**

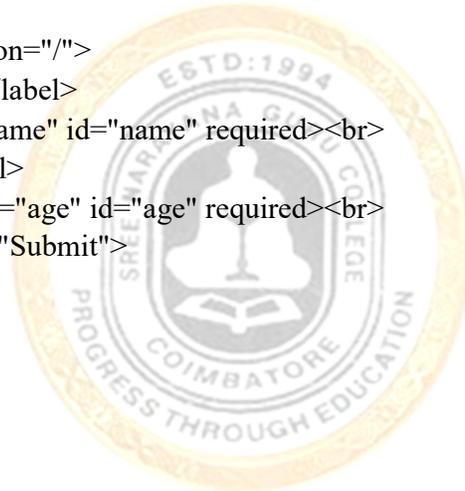
```
import webbrowser

# Replace 'html_file_path' with the full path to your HTML
file html_file_path = r'C:\path\to\your\file.html'

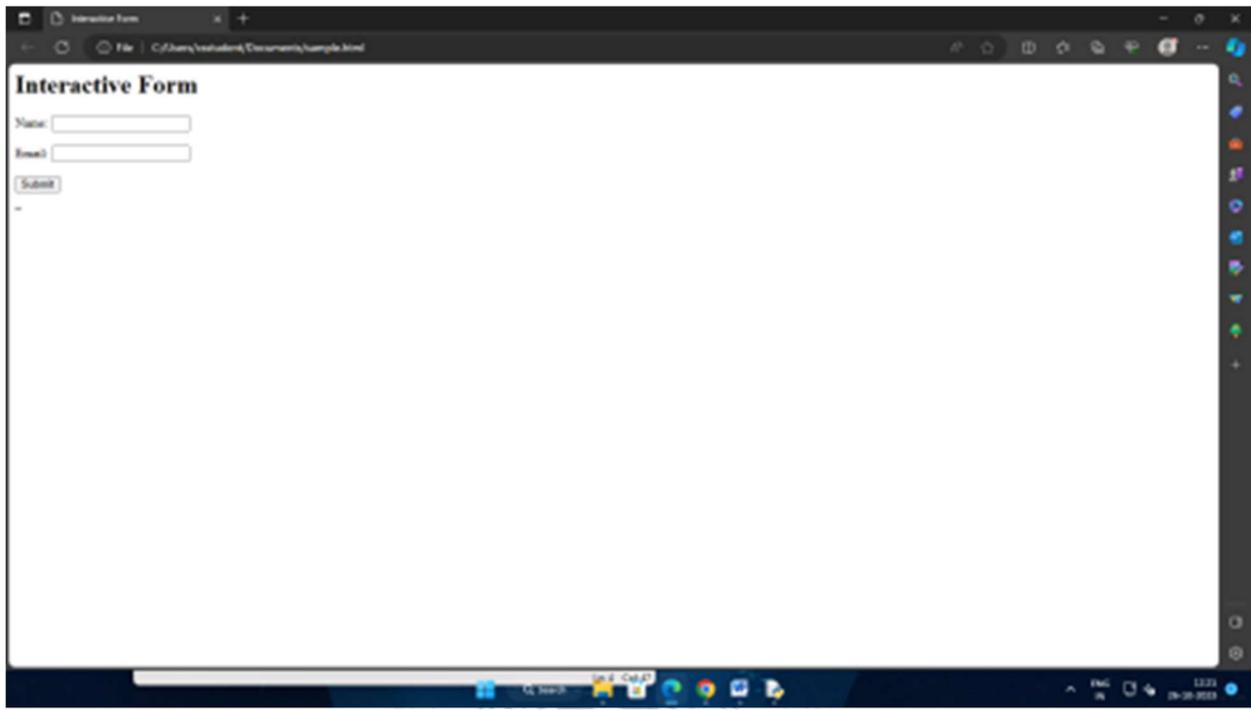
webbrowser.open('file://' + html_file_path)
```

## **HTML:**

```
<html>
<head>
  <title>Interactive Web Page</title>
</head>
<body>
  <h1>Interactive Web Page with Form</h1>
  <p>{{ message }}</p>
  <form method="POST" action="/">
    <label for="name">Name:</label>
    <input type="text" name="name" id="name" required><br>
    <label for="age">Age:</label>
    <input type="number" name="age" id="age" required><br>
    <input type="submit" value="Submit">
  </form>
</body>
</html>
```



## OUTPUT:



The screenshot shows a web browser window with the title "Interactive Form". The address bar displays the file path "C:\Users\student\Desktop\sample.html". The form content includes:

**Interactive Form**

Name:

Email:

Below the form fields, there is a large, empty white rectangular area.

