ILAHIA COLLEGE OF ENGINEERING AND TECHNOLOGY

Department of MCA

First Semester MCA (2020 Scheme) Practical Examination June 2021

20MCA131 PROGRAMMING LAB

Date : 2-7-2021 Time : 1 pm – 4 pm

Submitted by

ICE20MCA2023

Batch : B , Set - A.

1) List Ordinal value of each element of a word ?

```
list1 = ['shee', 'lee', 'reshi']
Print("the orginal list: \n" + str(list1))
res = [ord(ele) for sub in list1 for ele in sub]
Print("the ascii list is: \n" + str(res))
```

Predicted output

the orginal list :

['shee', 'lee', 'reshi']

the ascii list is :

[115, 104, 101, 101, 108, 101, 101, 114, 101, 115, 104, 105]

output.

the orginal list:

['shee', 'lee', 'reshi']

the asci list is :

115, 104, 101, 101, 108, 101, 101, 114, 101, 115, 104, 105]

Algorithm

Step 1 : Start

Step 2 : list some words

Step 3 : Print the orginal list

Step 4 : Ordinal elements for such in list1 for elements in sub

Step 5 : Print the ascii list

Step 6 : Stop.

2) 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 find area and perimeter of figures by different importing statements ?

graphics

Circle AppFunction.Py

```
# Circle Area
def CArea(r):
    result = 3.14 * r * r
    return result

# Circle Perimeter
def cperimeter(r):
    result = 2 * 3.14 * r
    return result
```

rectangle AppFunction.Py

```
# area of rectangle
def RArea(w,l):
    result = w*l
    return result
# perimeter of rectangle
def Rperimeter(w,l):
    result = 2 * (l+w)
    return result
```

3D graphics

cuboid AppFunction.Py

```
# area of cuboid
def ACuboid(a):
```

```
    result = 6*a*a
    return result
# perimeter of cuboid
def Pcuboid (l, b, h):
    result = 4 * (l+b+h)
    return result
```

Sphere AppFunction . Py

```
# area and perimeter of sphere
def Asphere (r):
    result = 4*3.14 *r*r
    return result
# perimeter fun
def Psphere (r):
    result = (4/3) *3.14 * r*r*r*r
    return result
```

graphicsmain . Py

```
from graphics . rectangle AppFunction import *
from graphics . Circle App Function import *
from graphics . dgraphics . cuboid Appfunction import *
from graphics . dgraphics . SphereApp function import *
num1 = int (input ("enter length of rectangle"))
num2 = int (input ("enter breadth of rectangle"))
Print ("area =", RArea (num1, num2))
Print ("perimeter =", Rperimeter (num1, num2))
radius = int (input ("enter the radius of circle"))
Print ("Circle Area", CArea (radius))
Print ("Circle Perimeter", (perimeter (radius))
```

```
radius = int(input("enter the radius of sphere"))
Print("area of Sphere", Asphere(radius))
Print("perimeter of sphere", psphere(radius))

edge = int(input("enter the edge of cuboid"))
l = int(input("enter the length of cuboid"))
b = int(input("enter the ~~length~~ breadth of cuboid"))
h = int(input("enter the height of cuboid"))
Print("area of cuboid", Acuboid(radius))
Print("perimeter of cuboid", Pcuboid(l, b, h))
```

Predicted output

enter length of rectangle 2
enter breadth of rectangle 3
area = 6
Perimeter = 10
enter the radius of circle 3
Circle area 28.25999
Circle ~~Perimeter~~ 18.84
enter the radius of sphere 3
area of sphere 113.0399
Perimeter of sphere 113.0399
enter the edge of cuboid 4
enter the length of cuboid 5
enter the breadth of cuboid 6
enter the height of cuboid 8
area of cuboid 54
Perimeter of cuboid 76.

Output

enter length of rectangle 4
enter breadth of rectangle 6
area = 24
Perimeter = 20
enter the radius of circle 6
circle area 113.0394
circle perimeter 37.68
enter radius of sphere 4
area of spare 200.96
Perimeter of spare 267.9466
enter the edge of cuboid 7
enter length of cuboid 4
enter breadth of cuboid 9
enter the height of cuboid 7
area of cuboid 96
Perimeter of cuboid 80

Algorithm.

Step 1: Start
Step 2: Initialize the variables.
Step 3: Import all program function from Module graphics Package and its Sub Package 3D graphics.
Step 4: Read values from keyboard to display area and Perimeter of various shapes.
Step 5: Call functions to Main Program for calculation of area, Perimeter of various shapes.
Step 6: Stop.