FIRST SEMESTER MCA (2020 SCHEME)

PRACTICAL EXAMINATION JUNE-JULY 2021

20MCAI31 PROGRAMMING LAB

Regno: ICE20MCA-2024

Date: 02 July 2021

Time: 9:30 1:00-4.00.

1. List ordinal value of each element of a word.

Algorithm

Step1: Start

Step2: Initialize the list of words.

Step3: print the original list.

Step4: obtain the ordinal value of the list.

Step 5: print the ascii list.

Step 6: STOP.

PROGRAM

```
list1 = ['shee', 'lee', 'reshi']
print ("The original 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 original list :
['shee', 'lee', 'reshi']
The ascii list is :
[115, 104, 101, 101, 108, 101, 101, 114, 101, 115, 104, 105].
```

4

2) Create a package graphics with modules rectangle, circle, and subpackage 3D Graphics with modules cuboid and sphere. Include methods to find area and perimeter of respective figures in each module. write a programs that finds area and perimeter of figures by different importing statements.

Algorithm

Step 1: Start.

Step 2: Import the Functions From the package Graphics.

Step 3: Input the lengths, breadths for the rectangle area and radius for the cuboid, circle, and sphere. areas.

Step 4: Call the Function Rectarea() and print the area and perimeter of the rectangle.

Step 5: Call the function circlearea() and print the area of the circle.

Step 6: Call the Function cubicarea() and print the areas of the cuboid.

Step 7: Now call the Function Spherearea() and print the area of the sphere.

Step 8: Stop.

PROGRAM

Area.py

```
From Graphics.Rectfunctions import *
From Graphics.Cirfunctions import *
From Graphics.DGraphics.Sphere functions import *
From Graphics.DGraphics.Cuboid functions import *

l = int (input ("enter l"))
b = int ( input ("enter b"))
Print ("area =", RectArea (l, b))
PrintF("perimeter =", Rectperimeter (l, b))
 r = int (input ("enter the radius of circle "))
 print ("circle area =", cirArea(r))
  print ("circle perimeter =", cirPerimeter(r)]
r = int (input ("enter radius of sphere "))
print ("circle area =", spArea (r))
 print ("circle perimeter =", Sp Perimeter(r))
```

Package - Graphics

CisFunctions.py

```
From math import pi
 def CirArea(r):
      return (pi*r*r)
 def cisperimeter(r):
     return (2* pi * r)
```

Rect Functions.py

```
def Rect Area (l, b):
    return (l*b)
def Rect perimeter (l, b):
    return (2*(l+b))
```

Sub-package - 3D Graphics

cuboid Functions.py

```
# Area of cuboid
    def cub Area (a):
        result = 6*a*A
        return result.
    # perimeter of cuboid.
    def cubperimeter (l, b, h):
        result = 4*(l+b+h)
        return result.
```

Sphere Functions.py

```
# Area of sphere.
def Sph Area (a):
    result = 4*3.14*r*r.
    return result.
```

perimeter of sphere.

```
def sphperimeter (r):
    result = (4/3)* 3.14* r * r
    return result.
```

Expected Output

enter length of rectangle 5

enter breadth of a rectangle 2

area = 10

Perimeter = 14.

enter the radius of a circle 6

circle area = 113.03999 9999999999

circle perimeter = 37.68.

enter radius of sphere 7

area of sphere = 615.44.

perimeter of sphere = 1436.026666666666.

enter the edge of cuboid .9

enter the length of cuboid 9.

enter the breadth of cuboid 6

Enter the height of cuboid 6

enter the height of cuboid 4

area of cuboid 486

Perimeter of cuboid 76.