20MCA131 PROGRAMMING LAB

UNIVERSITY PRACTICAL EXAMINATION

BATCH - A

Date: 2-7-2021

Time: 1pm to 4:30pm

Reg no: ICE20MCA-2042

1) List ordinal value of each elements of word.

Program

```
list1 = ['Python', 'Java', 'Linux']
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))
```

expected output

The original list:

['Python', 'Java', 'Linux']

The Ascii list is

[112, 121, 116, 104, 111, 110 .....]

output

The original list:

['python', 'java', 'linux']

The ASCII list is:

[112, 121, 116, 104, 111, 110, 106, 97, 118, 97, 108, 105, 110, 117, 120]

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

Program

Graphics → circlefunction.py

```
def circlearea(r):
    area = 3.14 * r * r
    return area

def circleperimeter(r):
    perimeter = 2 * 3.14 * r
    return perimeter
```

Graphic -> rectfunction.py

```
def rectarea(l,w):
    area = l*w
    return area

def rectperimeter(l,w):
    perimeter = 2*(l+w)
    return perimeter
```

Graphic -> 3dgraphics -> cirlefunction.py

```
def cuboidarea(l,w,h):
area = 2*(l*w+w*h+h*l)
return area
def cuboidperimeter(l,w,h):
perimeter = 4*(l+w+h)
return perimeter.
```

Graphic -> 3dgraphics -> circlefunction.py

```
def spherearea(r):
    area= 4*3.14*r*r
    return area
```

areaperimeter.py

```
def sphereperimeter(r);
perimeter = 2*3.14*r
return perimeter
```

```
from Graphics.rectfunction import *
from Graphics.circlefunction import *
from Graphics.Dgraphics.cuboidfunction import *
from Graphics.Dgraphics.spherefunction import *

    lenght = float(input("enter the length:"))
    width = float(input("enter the width:"))
    print("Rectangle Area=", rectarea(length, width))
    print("Rectangle perimeter=", rectperimeter(length,
                                                width))

radius = float(input("enter the Radius:"))
print("circle Area=", circlearea(radius))
print("circle perimeter=", circleperimeter(radius))

    length = float(input("enter the length:"))
    width = float(input("enter the width:"))

height = float(input("enter the height:"))
print("cuboid Area=", cuboidarea(length, width, height))
print("cuboid perimeter=", cuboidperimeter(length, width, height))

    radius = float(input("enter the Radius:"))
    print("Sphere Area=", spherearea(radius))
    print("sphere perimeter=", sphereperimeter(radius))
```

Expected output

Enter the length : 6
Enter the width = 2
Rectangle Area = 12.0
Rectangle perimeter = 16.0

Enter the radius : 5
circle Area : 78.5
circle perimeter : 31.4

Enter the length : 8
Enter the width : 4
Enter the height = 6
Cuboid Area = : 208
cuboid perimeter : 36

Enter the Radius : 9
Sphere Area : 1017.36
Sphere perimeter : 56.52

output

Enter the length: 7

Enter the width: 2

Rectangle Area = 14

Rectangle perimeter = 18

Enter the Radius: 6

Circle Area = 113.039999

Circle perimeter = 37.68

Enter the length: 5

Enter the breadth: 8

Enter the edge: 2

Enter the height: 1

Cuboid Area = 304.0

Cuboid perimeter = 88.0

Enter the Radius: 9

Sphere Area = 1017.36

Sphere perimeter = 3052.08