FIRST SEMESTER MCA (2020 SCHEME)

PRACTICAL EXAMINATION JUNE-JULY 2021

20MCA131 PROGRAMMING LAB

Regno: ICE20MCA-2040

Date: 02 July 2021

Time: 1 pm - 4.30pm

SET A

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

~~PSEO~~.

Algorithm

Step 1: Start

Step 2: initialise an array list 1 with values

Step 3: print the array as "original list"

Step 4: Declare a variable res for result and provide a loop to print ordinal value of each word.

Step 5: print the result

Step 6: Stop.

Program

```
list = ['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, 106, 97, 118, 97, 108, 105, 110, 117, 120]

~~Real 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]~~

Real output

The original list :

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

The ASCII list is :

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

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 respected figures in each module. Write program that find area and 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
```

Graphics -> rectfunction.py

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

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

Graphics → Dgraphics → circlefunction.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
```

Graphics → Dgraphics → 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 *
```

```
length = float(input("Enter the length :"))
width = float(input("Enter 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))
radius = float
print("cuboidPerimeter =", cuboidPerimeter
                                   (length, width, height))
radius = float(input("Enter the radius"))
print("Sphere Area =", Sphere area(radius))
```

print("Sphere Perimeter =", Sphere perimeter(radius))

Expected output

Enter the length : 5
Enter the width : 2
Rectangle Area = 10.0
Rectangle perimeter = 14.0
Enter the radius : 6
circle Area = 113.039999
circle Perimeter = 37.68
Enter the length : 10
Enter the width : 4
Enter the height : 8
Cuboid Area = 304.0
Cuboid perimeter = 88.0
Enter the radius : 12
Sphere Area = 1808.63999
Sphere perimeter = 75.36

Real output

enter radius : 3

area of circle = 28.2743

perimeter of circle = 18.8495

enter length : 2

enter width : 3

Rectangle Area = 6

Rectangle perimeter = 10

Enter length : 4

Enter the width : 5

Enter the height : 6

cuboid area : 148

cuboid perimeter : 480

Enter the radius : 4

Sphere Area = 201.0619