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Assingment 3(module 2)

In [1]:
```
#1.python program to find area of circle using math function
import math
def area(r):
    a=math.pi*r*r
    print('area:',a)
area(int(input("radius:")))
```

```
radius:6
area: 113.09733552923255
```

In [5]:
```
#2.write a program to find Area of  regular polygon using math function
from math import tan, pi
n_sides = int(input("Input number of sides: "))
s_length = float(input("Input the length of a side: "))
p_area = n_sides * (s_length ** 2) / (4 * tan(pi / n_sides))
print("The area of the polygon is: ",p_area)
```

```
Input number of sides: 4
Input the length of a side: 20
The area of the polygon is:  400.00000000000006
```

In [2]:
```
#3.python program to find area of segment of a circle formula using mat
h function
import math
pi=3.1415
def area_of_segment(radius, angle):
```

```
    area_of_sector = pi * (radius * radius) * (angle / 360)
    area_of_triangle = 1 / 2 *(radius * radius) *math.sin((angle * pi)/
180)
    return area_of_sector-area_of_triangle;
radius = 10.0
angle=90.0
print("area of minor segment =", area_of_segment(radius , angle))
print("area of major segment =",area_of_segment(radius, (360-angle)))
```

```
area of minor segment = 28.537500053654306
area of major segment = 285.6124995171113
```

In [7]:
```
#4.python program to  shuffle list L1=[100,1,2,3,30,40,"hai","hello"]
import random
l1=[100,1,2,3,30,'hai','hello']
print("the given list:",l1)
random.shuffle(l1)
print("the shuffled list is:",(l1))
```

```
the given list: [100, 1, 2, 3, 30, 'hai', 'hello']
the shuffled list is: [30, 100, 2, 'hello', 'hai', 1, 3]
```

In [8]:
```
#5.python program to generate random numbers b/w 1,10000,and
#difference b/w each random number is 50
import random
print("random number of list is:")
print(random.choice(range(1,10000)))
print("random number from range is:")
print(random.randrange(1,10000,50))
```

```
random number of list is:
6607
random number from range is:
1451
```

In [9]:
```
#6.python program using math function
#sin60
#cos(pi)
#tan90
```

```
#angle of sin (0.8660254037844386)
#5^8
#square root of 400
#the value of 5^e
#the value of Log(1024).base 2
#the value of Log(1024).base 10
#the floor and ceiling value of 23.56
import math
print("sin60:",math.sin(60))
print("cos(pi):",math.pi)
print("tan90:",math.tan(90))
print("angle of 0.8660:",math.degrees(math.sin(0.8660254037844386)))
print("5^8:",math.pow(5,8))
print("square root if 400 is:",math.sqrt(400))
print("the value of 5^e:",math.pow(5,math.e))
print("the value of Log(1204).base 2:",math.log2(1024))
print("the value of Lof(1024).base 10:",math.log10(1024))
print("the floor value of 23.56:",math.floor(23.56))
print("the celing value of 23.56:",math.ceil(23.56))
```

```
sin60: -0.3048106211022167
cos(pi): 3.141592653589793
tan90: -1.995200412208242
angle of 0.8660: 43.64563193711739
5^8: 390625.0
square root if 400 is: 20.0
the value of 5^e: 79.43235916621322
the value of Log(1204).base 2: 10.0
the value of Lof(1024).base 10: 3.010299956639812
the floor value of 23.56: 23
the celing value of 23.56: 24
```

In [ ]: