lab 5

In [1]:

```
# problem no.1
from math import pi
r=int(input("Enter the"))
h=8
def area (pi,r,h):
    area=2*pi*r*h+2*pi*r**2
    return area
print(area(pi,r,h))

def voloum(pi,r,h):
    voloum=pi*r**2*h
    return voloum
print(voloum(pi,r,h))
```

```
Enter the3
207.34511513692635
226.1946710584651
```

In [2]:

```
#problem no.2
l=int(input("Enter the length:"))
b=int(input("Enter the breadth:"))
h=int(input("Enter the height:"))
def area(l,b):
    area=l*b
    return area
print(area(l,b))

def voloum (l,b,h):
    voloum=l*b*h
    return voloum
print(voloum(l,b,h))
```

```
Enter the length:3
Enter the breadth:4
Enter the height:8
12
96
```

In [3]:

```
#Program 3
def AP():
    a1=3
    d=6
    n=int(input("Number of terms:"))
    form=a1+(n-1)*d
    if n>0:
        print("the nth term of the sequence is:",form)
        while(n>0):
            ask=input("Do you want to continur? Yes or No?")
            if(ask=="Yes"):
                a1=3
                d=6
                n=int(input("Number of terms:"))
                form=a1+(n-1)*d
                print("the nth term of the sequence is:",form)
            else:
                print("You are done!")
                break
    elif n==0:
        print("the number of terms can never zero")
AP()
```

```
Number of terms:35
the nth term of the sequence is: 207
Do you want to continur? Yes or No?45
You are done!
```

In [4]:

```
# problem no.4
name=input("Enter a name:")
name1=name.casefold()
def palindrome(name1):
    reverse=name1[::-1]
    if name1==reverse:
        return 'Your string is palindrome'
    else:
        return 'Your string is not palindrome'
    print(palindrome(name1))
```

```
Enter a name:civic
```

In [5]:

```
#Program 5
def mark_sheet(name,f_name,a,b,c,d,e):

    a=66
    b=91
    c=76
    d=a+b+c
    e=(d/300)*100

    if percentage>=80:

        print("Grade A+")
    elif percentage>=70:
        print("Grade A")
    elif percentage>=60:
        print("Grade B")
    elif percentage>=50:
        print("Grade C")
    else:
        (percentage>=35)
        print("Fail")
print(mark_sheet(Fahad,Dilshad,english,math,physics,obt_marks,percentage))
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-5-caf5ee5698ac> in <module>
     20         (percentage>=35)
     21         print("Fail")
---> 22 print(mark_sheet(Fahad,Dilshad,english,math,physics,obt_marks,percen
tage))

NameError: name 'Fahad' is not defined
```

In [6]:

```
#Program 6
def first_equation(v,a,t):
    form=(v+a*t)
    return form,'meters'
first_equation(3,6,8)
```

Out[6]:

```
(51, 'meters')
```

In [7]:

```
#program 7
from math import sin
def projectile_motion(v,sinx,g):
    form= (v*sinx)**2/2*g
    return form
```

In [8]:

```
#problem no.8
name=input("Enter a name:")
def reverse(name):
    rev=name[::-1]
    return rev
print(reverse(name))
```

```
Enter a name:shaheerali
ilareehahs
```

In [ ]:

```

```

In [11]:

```
#problem no.10
from math import cos
from math import sin
from math import tan
def trigonometry(sin,cos,tan):
    for i in range(1,11):
        x=sin(i)
        y=cos(i)
        z=tan(i)
        print(str('sin='),x,"\t\t",str('cos='),y,"\t\t",str("tan="),z)
trigonometry(sin,cos,tan)
```

```
sin= 0.8414709848078965                 cos= 0.5403023058681398
tan= 1.5574077246549023
sin= 0.9092974268256817                 cos= -0.4161468365471424
tan= -2.185039863261519
sin= 0.1411200080598672                 cos= -0.9899924966004454
tan= -0.1425465430742778
sin= -0.7568024953079282                cos= -0.6536436208636119
tan= 1.1578212823495777
sin= -0.9589242746631385                cos= 0.28366218546322625
tan= -3.380515006246586
sin= -0.27941549819892586               cos= 0.960170286650366
tan= -0.29100619138474915
sin= 0.6569865987187891                 cos= 0.7539022543433046
tan= 0.8714479827243188
sin= 0.9893582466233818                 cos= -0.14550003380861354
tan= -6.799711455220379
sin= 0.4121184852417566                 cos= -0.9111302618846769
tan= -0.45231565944180985
sin= -0.5440211108893698                cos= -0.8390715290764524
tan= 0.6483608274590866
```

In [12]:

```
#Program 6
def second_equation(u,a,t):
    form=(u*t+1/2*a*t**2)
    return form
second_equation(2,4,9)
```

Out[12]:

```
180.0
```

In [9]:

```
#Program 6
def third_equation(vi,vf,a):
    form=((vf**2-vi**2)/2*a)
    return form,'meters'
third_equation(3,9,10)
```

Out[9]:

```
(360.0, 'meters')
```

In [ ]:

```

```