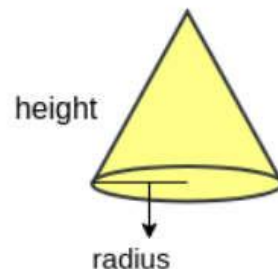


# ASSESSMENT-4 (ACTIVITY 1.17)

1. Write a Python Code to find the Volume of a cone. Refer the problem definition given below.



Input:

```
Radius = 38, Height = 35, Pie = 3.14
```

Output:

```
Volume = pie * radius * radius * height/3;  
         = 3.14 * 38 * 38 * 35/3  
         = 48766.666667
```

Code:

```
print("<<< Hey Programmers !!! Welcome to python programming >>>")  
print("<<< This python program is for calculating Volume of Cone >>>")  
print("-----")  
r=float(input("Enter the value of radius: "))  
h=float(input("Enter the value of height: "))  
pie=float(input("Enter the value of pie: "))  
Vol=pie*r*r*h/3  
print("-----")  
print("The volume of cone= ", Vol)  
print("\n<<< Thank You for using my Program !!! >>>")
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/1.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This python program is for calculating Volume of Cone >>>
```

```
-----
```

```
Enter the value of radius: 25
Enter the value of height: 10
Enter the value of pie: 3.14
```

```
-----
```

```
The volume of cone= 6541.666666666667
```

```
<<< Thank You for using my Program !!! >>>
```

```
-----
```

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/1.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This python program is for calculating Volume of Cone >>>
```

```
-----
```

```
Enter the value of radius: 3
Enter the value of height: 10
Enter the value of pie: 3.14
```

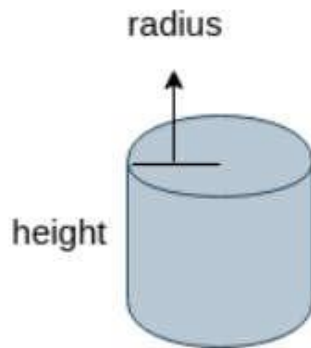
```
-----
```

```
The volume of cone= 94.19999999999999
```

```
<<< Thank You for using my Program !!! >>>
```

```
-----
```

2. Write a python program to find the Volume of a Cylinder. Refer the problem definition given below.



Input:

```
radius (r) = 38 , height (h) = 35
```

Output:

```
Volume of the cylinder = pie * radius2 * height  
                        = 3.14 * 38* 38 * 35  
                        = 146300.000000
```

Code:

```
print("<<< Hey Programmers !!! Welcome to python programming >>>")  
print("<<< This python program is for calculating Volume of Cylinder >>>")  
print("-----")  
r=float(input("Enter the value of radius: "))  
h=float(input("Enter the value of height: "))  
pie=float(input("Enter the value of pie: "))  
Vol=pie*r*r*h  
print("-----")  
print("The volume of cylinder= ", Vol)  
print("\n<<< Thank You for using my Program !!! >>>")
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/2.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This python program is for calculating Volume of Cylinder >>>
-----
```

```
Enter the value of radius: 25
```

```
Enter the value of height: 10
```

```
Enter the value of pie: 3.14
-----
```

```
The volume of cylinder= 19625.0
```

```
<<< Thank You for using my Program !!! >>>
-----
```

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/2.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This python program is for calculating Volume of Cylinder >>>
-----
```

```
Enter the value of radius: 3
```

```
Enter the value of height: 20
```

```
Enter the value of pie: 3.14
-----
```

```
The volume of cylinder= 565.1999999999999
```

```
<<< Thank You for using my Program !!! >>>
-----
```

3. Write a Python Program to convert Celsius into Fahrenheit. Refer the problem definition given below.

Temperature in Fahrenheit =  $((\text{celsius} * 9) / 5) + 32$

**Input:**

```
celsius= 12
```

**Output:**

```
Temperature in Fahrenheit = 53.6
```

**Code:**

```
print("<<< Hey Programmers !!! Welcome to python programming >>>")
print("This python program is for converting celsius into fahrenheit.")
print("-----")
cel=float(input("Enter the value of celsius temperature: "))
fah=((cel*9)/5)+32
print("The Temperature in Fahrenheit=",fah)
print("-----")
print("\n<<< Thank You for using my Program !!! >>>")
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/3.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
This python program is for converting celsius into fahrenheit.
```

```
-----
Enter the value of celsius temperature: 32
The Temperature in Fahrenheit= 89.6
-----
```

```
<<< Thank You for using my Program !!! >>>
```

```
-----
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/3.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
This python program is for converting celsius into fahrenheit.
```

```
-----
Enter the value of celsius temperature: 28
The Temperature in Fahrenheit= 82.4
-----
```

```
<<< Thank You for using my Program !!! >>>
```

**4. Write a Python Program to Find the Simple Interest.**

$$\text{Simple Interest} = (P \times R \times T) / 100$$

**Input:**

```
P = 34000, R = 30, T = 5
where P = Principal Amount, R = Rate per Annum, T = Time (years)
```

**Output:**

```
Simple Interest = 51000.000
```

**Code:**

```
print("<<< Hey Programmers !!! Welcome to python programming >>>")
print("<<< This python program is for calculating simple interest >>>")
print("-----")
p=float(input("Enter the value of Principal Amount: "))
r=float(input("Enter the value of Rate per Annum: "))
t=float(input("Enter the value of time: "))
si=(p*r*t)/100
print("The Value of Simple Interest is ",si)
print("-----")
print("\n<<< Thank You for using my Program !!! >>>")
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/4.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This python program is for calculating simple interest >>>
```

```
-----
```

```
Enter the value of Principal Amount: 1000
```

```
Enter the value of Rate per Annum: 7
```

```
Enter the value of time: 2
```

```
The Value of Simple Interest is 140.0
```

```
-----
```

```
<<< Thank You for using my Program !!! >>>
```

```
-----
```

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/4.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
```

```
<<< This python program is for calculating simple interest >>>
```

```
-----
```

```
Enter the value of Principal Amount: 5000
```

```
Enter the value of Rate per Annum: 11
```

```
Enter the value of time: 5
```

```
The Value of Simple Interest is 2750.0
```

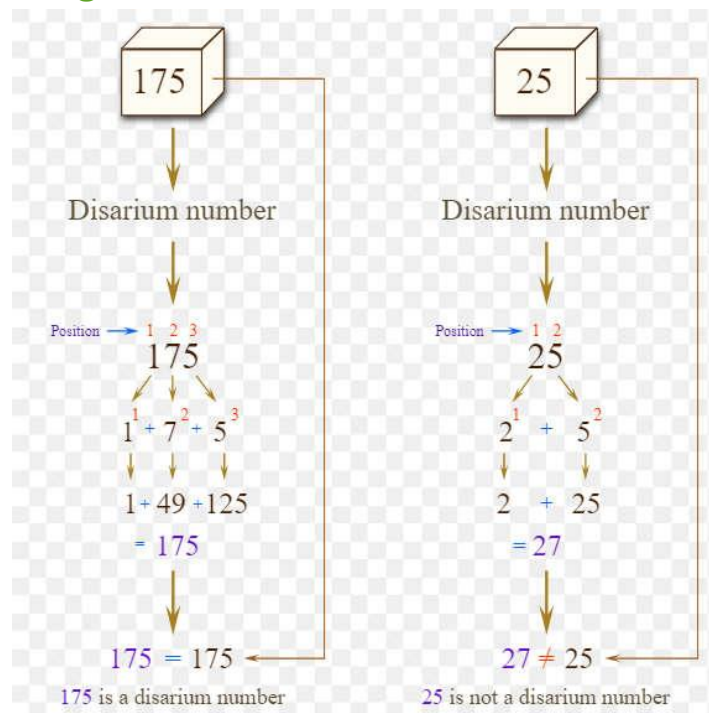
```
-----
```

```
<<< Thank You for using my Program !!! >>>
```

```
-----
```



## 5. Write a Python Program to check a Disarium Number.



## Code:

```
#python program to check Disarium number
print("<<< Hey Programmers !!! Welcome to python programming >>>")
print("<<< This code is for Checking whether the inputed number is Disarium or not !!! >>>")
element=input("Enter a Number to check it is Disarium or not : ")
check=int(element)
list=[]
for i in element:
    i=int(i)
    list.append(i)
d=0
c=1
for j in list:
    d+=j**c
    c+=1
if d==check:
    print("<<< This is a Disarium Number >>>")
else:
    print("<<< This is not a Disarium Number >>>")
print("\n<<< Thank You for using my Program !!! >>>")
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/5.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Checking whether the inputed number is Disarium or not
!!! >>>
Enter a Number to check it is Disarium or not : 518
<<< This is a Disarium Number >>>
```

```
<<< Thank You for using my Program !!! >>>
```

```
-----
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/5.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Checking whether the inputed number is Disarium or not
!!! >>>
Enter a Number to check it is Disarium or not : 45
<<< This is not a Disarium Number >>>
```

```
<<< Thank You for using my Program !!! >>>
```

```
-----
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/5.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Checking whether the inputed number is Disarium or not
!!! >>>
Enter a Number to check it is Disarium or not : 175
<<< This is a Disarium Number >>>
```

```
<<< Thank You for using my Program !!! >>>
```

6. Write a Python Program to print all the Disarium Number between given range.

Input:

```
range(1, 101)
```

Output:

```
Disarium numbers between 1 and 100 are: 1 2 3 4 5 6 7 8 9 89
```

Code:

```
#python program to print all Disarium numbers between given range
print("\n<<< Hey Programmers !!! Welcome to python programming >>>")
print("<<< This code is for Printing Disarium numbers between the range as
per user choice !!! >>>")
start=int(input("<<< Enter the Starting Number >>> : "))
ending=int(input("<<< Enter the Ending Number >>> : "))
for a in range(start, ending+1):
    string=str(a)
    check=a
    list=[]
    for i in string:
        i=int(i)
        list.append(i)
    m=0
    n=1
    for j in list:
        m+=j**n
        n+=1
    if m==check:
        print(a, end=" ")
print("\n<<< Thank You for using my Program !!! >>>")
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/6.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Printing Disarium numbers between the range as per
user choice !!! >>>
<<< Enter the Starting Number >>> : 1
<<< Enter the Ending Number >>> : 100
1 2 3 4 5 6 7 8 9 89
<<< Thank You for using my Program !!! >>>
```

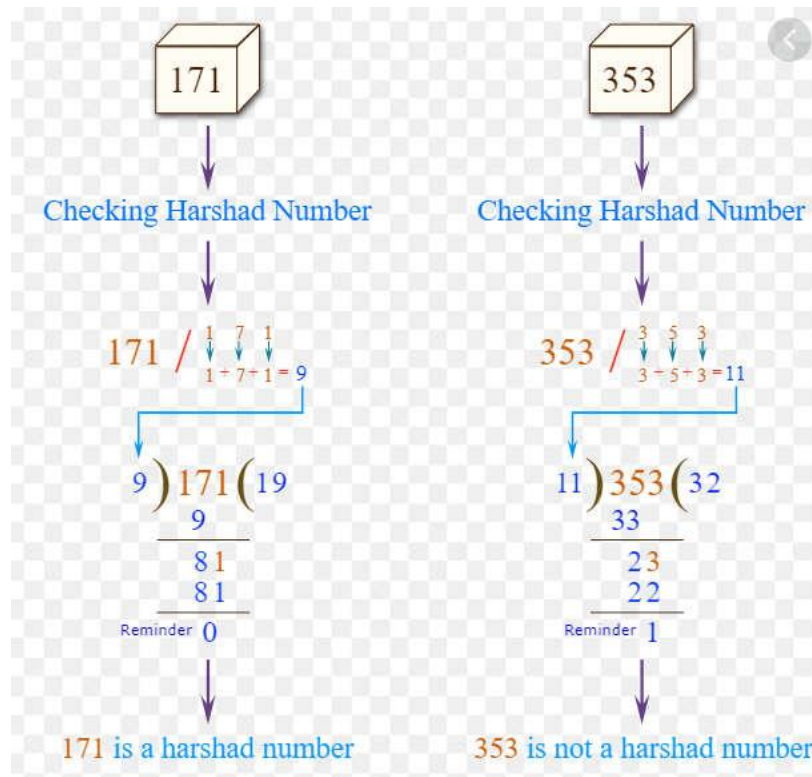
```
-----
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/6.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Printing Disarium numbers between the range as per
user choice !!! >>>
<<< Enter the Starting Number >>> : 100
<<< Enter the Ending Number >>> : 200
135 175
<<< Thank You for using my Program !!! >>>
```

```
-----
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/6.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Printing Disarium numbers between the range as per
user choice !!! >>>
<<< Enter the Starting Number >>> : 301
<<< Enter the Ending Number >>> : 1000
518 598
<<< Thank You for using my Program !!! >>>
-----
```

## 7. Write a Python program to check Harshad Number.



## Code:

```
#python program to check Harshad number
print("\n<<< Hey Programmers !!! Welcome to python programming >>>")
print("<<< This code is for Checking whether the input is Harshad Number or not !!! >>>")
element=input("<<< Enter a Number to check it is Harshad or not >>> : ")
check=int(element)
sum=0
for i in element:
    i=int(i)
    sum+=i
if check % sum == 0:
    print("<<< It is a Harshad Number >>>")
else:
    print("<<< It is not a Harshad Number !!! >>>")
print("\n<<< Thank You for using my Program !!! >>>")
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/7.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Checking whether the input is Harshad Number or not
!!! >>>
<<< Enter a Number to check it is Harshad or not >>> : 2020
<<< It is a Harshad Number >>>
```

```
<<< Thank You for using my Program !!! >>>
```

```
-----
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/7.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Checking whether the input is Harshad Number or not
!!! >>>
<<< Enter a Number to check it is Harshad or not >>> : 145
<<< It is not a Harshad Number !!! >>>
```

```
<<< Thank You for using my Program !!! >>>
```

```
-----
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/7.py
```

```
<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Checking whether the input is Harshad Number or not
!!! >>>
<<< Enter a Number to check it is Harshad or not >>> : 171
<<< It is a Harshad Number >>>
```

```
<<< Thank You for using my Program !!! >>>
-----
```

**8. Write a Program to check Pronic Numbers.**

*(A number is said to be pronic number if it is a product of two consecutive numbers)*

**Code:**

```
#python program to check Pronic number
print("\n<<< Hey Programmers !!! Welcome to python programming >>>")
print("<<< This code is for Checking whether the input is Pronic Number or not !!
! >>>")
element=int(input("<<< Enter a Number to check it is Pronic or not >>> : "))
if element!=0:
    for i in range(0,element+1):
        if i*(i+1)==element:
            print("<<< It is a Pronic Number >>>")
            break
    else:
        print("<<< It is not a Pronic Number >>>")
else:
    print("<<< It is not a Pronic Number >>>")
print("\n<<< Thank You for using my Program !!! >>>")
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/
Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/8.py

<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Checking whether the input is Pronic Number or not !!! >>>
<<< Enter a Number to check it is Pronic or not >>> : 56
<<< It is a Pronic Number >>>

<<< Thank You for using my Program !!! >>>
-----

C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/
Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/8.py

<<< Hey Programmers !!! Welcome to python programming >>>
<<< This code is for Checking whether the input is Pronic Number or not !!! >>>
<<< Enter a Number to check it is Pronic or not >>> : 10
<<< It is not a Pronic Number >>>

<<< Thank You for using my Program !!! >>>
```

**9. Program to Print the Following Pattern.**

```
5432*
543*1
54*21
5*321
*4321
```

**Code:**

```
b=1
for i in range(0,5):
    for j in range(5,0,-1):
        if j==b:
            print("*",end='')
            continue
        print(j,end='')
    print(end='\n')
    b+=1
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/9.PY
```

```
5432*
543*1
54*21
5*321
*4321
```



**10. Write a Python Program to print the following Pattern.**

```
1
2 4
3 6 9
4 8 12 16
5 10 15 20 25
6 12 18 24 30 36
7 14 21 28 35 42 49
8 16 24 32 40 48 56 64
9 18 27 36 45 54 63 72 81
10 20 30 40 50 60 70 80 90 100
```

**Code:**

```
for i in range(1,11):
    a=i
    for j in range(0,i):
        print(a,end=' ')
        a+=i
    print("")
```

**Output:**

```
C:\Users\user\Desktop\python\act1.17>C:/Users/user/AppData/Local/Programs/Python/Python38-32/python.exe c:/Users/user/Desktop/python/act1.17/10.py
```

```
1
2 4
3 6 9
4 8 12 16
5 10 15 20 25
6 12 18 24 30 36
7 14 21 28 35 42 49
8 16 24 32 40 48 56 64
9 18 27 36 45 54 63 72 81
10 20 30 40 50 60 70 80 90 100
```

*This Project is made under guidance of Mr. Shunmuga Perumal Sir! THE END*