1. Write a Python program to check if the given number is a Disarium Number?  
   import math

def check(n):

length=0

while(n!=0):

length=length+1

n=n//10

return length

num=175

rem=summ=0

length=check(num)

n=num

while(num>0):

rem=num%10

summ=summ+int(rem\*\*length)

num=num//10

length=length-1

if(summ==n):

print("No is Disarium Number")

else:

print("No is not Disarium Number")

1. Write a Python program to print all disarium numbers between 1 to 100?  
   import math

def check(n):

length=0

while(n!=0):

length=length+1

n=n//10

return length

def digit\_sum(num):

rem=summ=0

length=check(num)

n=num

while(num>0):

rem=num%10

summ=summ+int(rem\*\*length)

num=num//10

length=length-1

return summ

result=0

print("The disarium numbers b/w 1 to 100 are: ")

for i in range(1,101):

result=digit\_sum(i)

if(result==i):

print(i)

1. Write a Python program to check if the given number is Happy Number?  
   def ishappynumber(num):

rem=summ=0

while(num>0):

rem=num%10

summ=summ+(rem\*rem)

num=num//10

return summ

num=35

result=num

while(result!=1 and result!=4):

result=ishappynumber(result)

if(result==1):

print(" No is happy number")

else:

print("No is not happy number")

1. Write a Python program to print all happy numbers between 1 and 100?  
   def ishappynumber(num):

rem=summ=0

while(num>0):

rem=num%10

summ=summ+(rem\*rem)

num=num//10

return summ

print("The list of happy numbers b/w 1 to 100:")

for i in range(1,101):

result=i

while(result!=1 and result!=4):

result=ishappynumber(result)

if(result==1):

print(i)

1. Write a Python program to determine whether the given number is a Harshad Number?  
   num=int(input("Enter the no"))

i=num

summ=0

while(num):

summ=summ+num%10

num//=10

if(i%summ=0):

print("NO is Harsad copy")

else:

print("No is not Harsad copy")

1. Write a Python program to print all pronic numbers between 1 and 100?  
   def ispronic(num):

flag=False

for i in range(1,num+1):

if((i\*(i+1))==num):

flag=True

break

return flag

print("pronic No b/w 1 to 100")

for i in range(1,101):

if(ispronic(i)):

print(i)

print(' ')