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

n = input('Enter a number: ')

m=0

for i in range(len(n)):

m = m + int(n[i])\*\*(i+1)

if int(n) == m:

print(n, 'is a disarium number.')

else:

print(n, 'is not a disarium number.')

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

l=[]

for j in range(100):

o=str(j)

m=0

for i in range(len(o)):

m = m + int(o[i])\*\*(i+1)

if int(o)==m:

l.append(m)

print('Disarium numbers between 1 and 100 are:',l)

1. Write a Python program to check if the given number is Happy Number?

n = input('Enter a number: ')

print(n, happy\_num(n))

def happy\_num(n):

l=[]

m=str(n)

for i in range(len(m)):

o = int(m[i])\*\*2

l.append(o)

p=0

for j in l:

p = p + j

n=p

q=str(n)

if p==1:

return('is a Happy Number')

elif len(q)==1:

return('is not a Happy Number')

else:

return(happy\_num(n))

1. Write a Python program to print all happy numbers between 1 and 100?

def happy\_num(n):

l=[]

m=str(n)

for i in range(len(m)):

o = int(m[i])\*\*2

l.append(o)

p=0

for j in l:

p = p + j

n=p

q=str(n)

if p==1:

return(p)

elif len(q)==1:

return(p)

else:

return(happy\_num(n))

l=[]

for i in range(101):

if happy\_num(i) == 1:

l.append(i)

print('Happy Numbers in range of 1 and 100:',l)

1. Write a Python program to determine whether the given number is a Harshad Number?

n = input('Enter a number: ')

m=0

for i in n:

m = m + int(i)

if int(n) % m == 0:

print(n, 'is a Harshad number')

else:

print(n, 'is not a Harshad number')

1. Write a Python program to print all pronic numbers between 1 and 100?

l=[]

for j in range(10):

m = j\*(j+1)

l.append(m)

print('Pronic numbers between 1 and 100:',l)