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

Ans-

n=input("enter the number to be checked")

sum=0

for i in range(0,len(n)):

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

if sum==int(n):

print("yessss")

else:

print("noooooooooo")

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

Ans-

for j in range(1 , 101):

sum=0

for i in range(0,len(str(j))):

k=str(j)[i]

sum+=int(k)\*\*(i+1)

if sum==j:

print(j)

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

Ans-

def happy\_number(num):

sum = 0

while(num > 0):

rem = num%10;

sum = sum + (rem\*rem);

num = num//10

return sum

num = int(input("Enter a number: "))

result = num

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

result = happy\_number(result)

if(result == 1):

print(str(num) + " is a happy number")

elif(result == 4):

print(str(num) + " is not a happy number")

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

Ans-

def happy\_number\_interval(num):

sum = 0

while(num > 0):

rem = num%10

sum = sum + (rem\*rem)

num = num//10

return sum

for i in range(1,101):

result = i

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

result = happy\_number\_interval(result)

if(result == 1):

print(i)

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

Ans-

n=input("enter number to be checked")

sum=0

for i in n:

sum+=int(i)

if int(n)%sum==0:

print(f"{n} is a harshad number")

else:

print(f"{n} is not a harshad number")

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

Ans-

print("below are the pronic numbers between 1,100")

for i in range (1,101):

n=i\*(i+1)

if n<=100:

print(n)

else:

break