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

**Ans:**

num = input("enter number to check:")

number=int(num)

sum=0

for i in range(len(num), 0, -1):

n=number%10

sum=sum+(n\*\*i)

number=number//10

if sum==int(num):

print("number is disarium")

else:

print("number is not disarium")

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

**Ans:**

for i in range(1, 101):

sum=0

number=i

for j in range(len(str(i)), 0, -1):

n=number%10

sum=sum+(n\*\*j)

number=number//10

if sum==int(i):

print(i)

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

**Ans:**

n = int(input("enter number to check:"))

while 1:

sum=0

while n>0:

rem=n%10

sum=sum+(rem\*\*2)

n=n//10

if sum ==1:

print("number is happy number")

break

elif sum==4:

print("number is not happy number")

break

n=sum

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

**Ans:**

for i in range(1, 101):

n=i

while 1:

sum=0

while n>0:

rem=n%10

sum=sum+(rem\*\*2)

n=n//10

if sum ==1:

print(i)

break

elif sum==4:

break

n=sum

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

**Ans:**

n=int(input("enter number to check:"))

number =n

sum=0

while n>0:

rem = n%10

sum=sum+rem

n=n//10

if number%sum==0:

print("number is harshad")

else:

print("number is not harshad")

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

**Ans:**

for i in range(1, 101):

for j in range(1, i):

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

print(i)

break