**Problem Solving**

**# intro loops and conditional statements**

**# 1. elif program**

n=int(input("Enter A number"))

# n=10

if n>10:

    print(n," is greater than 10")

elif n<10:

    print(n," is less than 10")

else:

    print("Not A Number")

**# 2. even or odd**

n=15

if n%2==0:

    print(n, "is even")

else:

    print(n,"is even")

# 3. prime numbers

n=11

c=0

for x in range(2,n-1,1):

    if n%x==0:

        c+=1

if c==0:

    print(n,"is a prime")

else:

    print("not a prime")

**# 4. sum of individual numbers**

n="1234"

sum=0

for i in n:

    sum+=int(i)

print(sum)

**# 5. sum of odd individual numbers present in given number**

n="237"

sum=0

for i in n:

    if int(i)%2 !=0:

        sum+=int(i)

print(sum)

**# 6. difference b/w even and odd**

n="2376"

esum=0

osum=0

for i in n:

    if int(i)%2 ==0:

        esum+=int(i)

    else:

        osum+=int(i)

if esum >osum:

    print(esum-osum)

else:

    print(osum-esum)

**# 7. which is largest sum even or odd**

n="2376"

esum=0

osum=0

for i in n:

    if int(i)%2 ==0:

        esum+=int(i)

    else:

        osum+=int(i)

if esum >osum:

    print(esum,"even sum is greater")

else:

    print(osum,"odd sum is greater")

**# for loop(practice)**

**# 1. practice**

for i in "banana":

    print(i)

**# 2. practice**

for i in range(1,25,2):

    print(i)

**# 3. practice**

x= int(input())

for i in range(1,x,1):

    print(i)

**prime numbers,not prime, maximum and minimum**

**# 1. Sum of prime numbers in a given number**

n="123456789"

sum=0

nsum=0

for i in n:

    x=int(i)

    # prime number

    c=0

    for i in range(2,x-1,1):

        if x%i==0:

            c+=1

    if c==0:

        sum+=x

    if c!=0:

        nsum+=x

print(sum, "is sum of prime numbers")

print(nsum, "is sum of non prime numbers")

**# 2 largest prime in given number**

n="46537129"

y=0

for i in n:

    x=int(i)

    # prime

    c=0

    for j in range(2,x-1,1):

        if x%j==0:

            c+=1

    if c==0:

        if x>y:

            y=x

print(y)

**# 3. two largest prime numbers**

n="46537129"

y=0

z=0

for i in n:

    x=int(i)

    # prime

    c=0

    for j in range(2,x-1,1):

        if x%j==0:

            c+=1

    if c==0:

        if x>y:

            z=y

            y=x

print(y)

print(z)

**# 4. minimum prime number in given number**

n="4653729"

max=0

for i in n:

    x=int(i)

    # prime

    c=0

    for j in range(2,x-1,1):

        if x%j==0:

            c+=1

    if c==0:

        if x>max:

            max=x

        # min

        min=max

        if min>x:

            min=x

print(max)

print(min)

**# 5. sum of largest and smallest prime number in given digits**

n="4653729"

max=0

sum=0

for i in n:

    x=int(i)

    # prime

    c=0

    for j in range(2,x-1,1):

        if x%j==0:

            c+=1

    if c==0:

        if x>max:

            max=x

        # min

        min=max

        if min>x:

            min=x

print(max)

print(min)

sum=max+min

print(sum, "is sum of largest and smallest prime num")

**# 6.  largest non prime in given number**

n="46537129"

y=0

for i in n:

    x=int(i)

    # prime

    c=0

    for j in range(2,x-1,1):

        if x%j==0:

            c+=1

    if c!=0:

        if x>y:

            y=x

print(y)