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2nd year 3rd sem

Assignment(1-2)

**Program 1**

a=int(input("Enter a number "))

b=int(input("Enter a number "))

*#Mathematical Operators*

pdt=a\*b

diff=a-b

sum=a+b

div=a/b

print("Sum is ",sum)

print("Difference is ",diff)

print("Product is ",pdt)

print("Quotient is ",div)

*#Logical Operators*

if a>0 and b>0:

    print("The numbers are greater than 0")

elif ((a>0 and b<0) or (a<0 and b>0)):

    print("Atleast one number is  greater than 0")

else:

    print("Neither of numbers is greater than zero")

*#Bitwise Operators*

print("Bitwise and of 2 numbers is ",a&b)

print("Bitwise or of 2 numbers is ",a|b)

print("Bitwise xor of 2 numbers is ",a^b)

**Output of Program 1**

Enter a number 10

Enter a number 5

Sum is 15

Difference is 5

Product is 50

Quotient is 2.0

The numbers are greater than 0

Bitwise and of 2 numbers is 0

Bitwise or of 2 numbers is 15

Bitwise xor of 2 numbers is 15

**Program 2**

import cmath

a=int(input("Enter a number "))

b=int(input("Enter a number "))

c=int(input("Enter a number "))

dis = (b\*\*2) - (4\*a\*c)

a1 = (-b-cmath.sqrt(dis))/(2 \* a)

a2 = (-b+cmath.sqrt(dis))/(2 \* a)

print('The roots are')

print(a1)

print(a2)

**Output of program 2**

Enter a number 1

Enter a number -2

Enter a number 1

The roots are

(1+0j)

(1+0j)

**Program 3**

x=int(input("Enter real part of 1st number "))

y=int(input("Enter imaginary part of 1st number "))

z=complex(x,y)

a=int(input("Enter real part of 2nd number "))

b=int(input("Enter imaginary part of 2nd number "))

c=complex(a,b)

print("The 2 numbers are")

print(z)

print(c)

d=z+c

e=z-c

f=z\*c

g=z/c

print("Sum is ",end="")

print(d)

print("Difference is ",end="")

print(e)

print("Product is ",end="")

print(f)

print("Division is ",end="")

print(g)

**Output of Program 3**

Enter real part of 1st number

5

Enter imaginary part of 1st number 10

Enter real part of 2nd number

2

Enter imaginary part of 2nd number 3

The 2 numbers are

(5+10j)

(2+3j)

Sum is (7+13j)

Difference is (3+7j)

Product is (-20+35j)

Division is (3.0769230769230766+0.3846153846153845j)