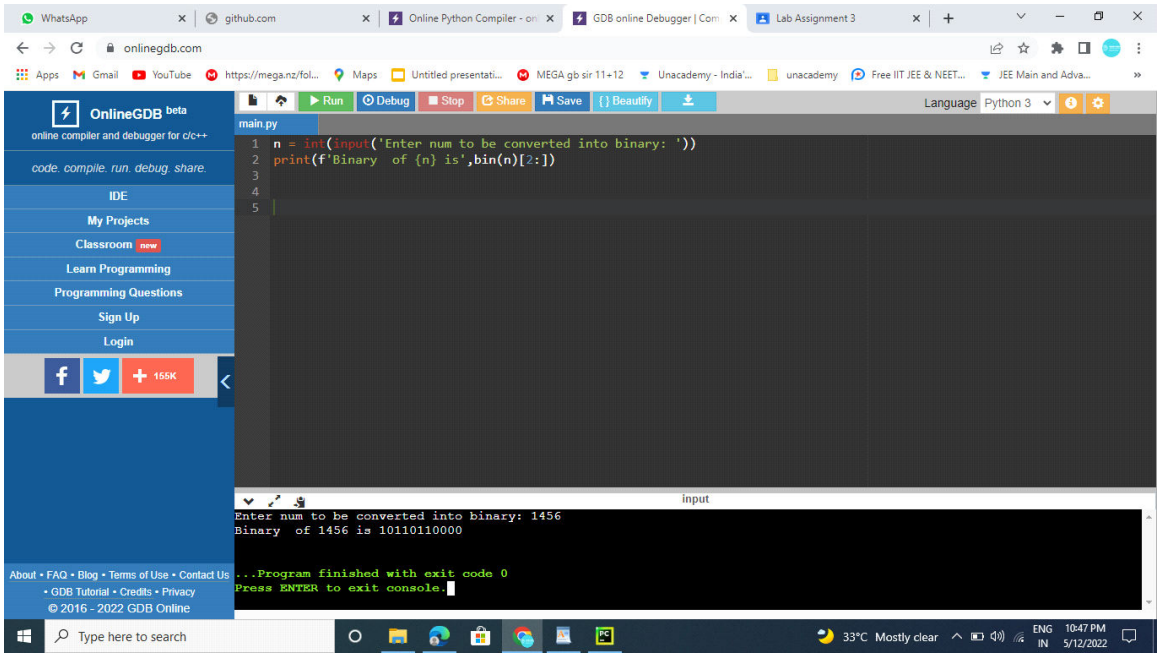
question 1

Write a program to take a number as input and convert it into its binary equivalent.

Answer

```
n = int(input('Enter num to be converted into binary: '))
print(f'Binary  of {n} is',bin(n)[2:])
```



Question 2

Write an interactive Python calculator program. The program should allow the user

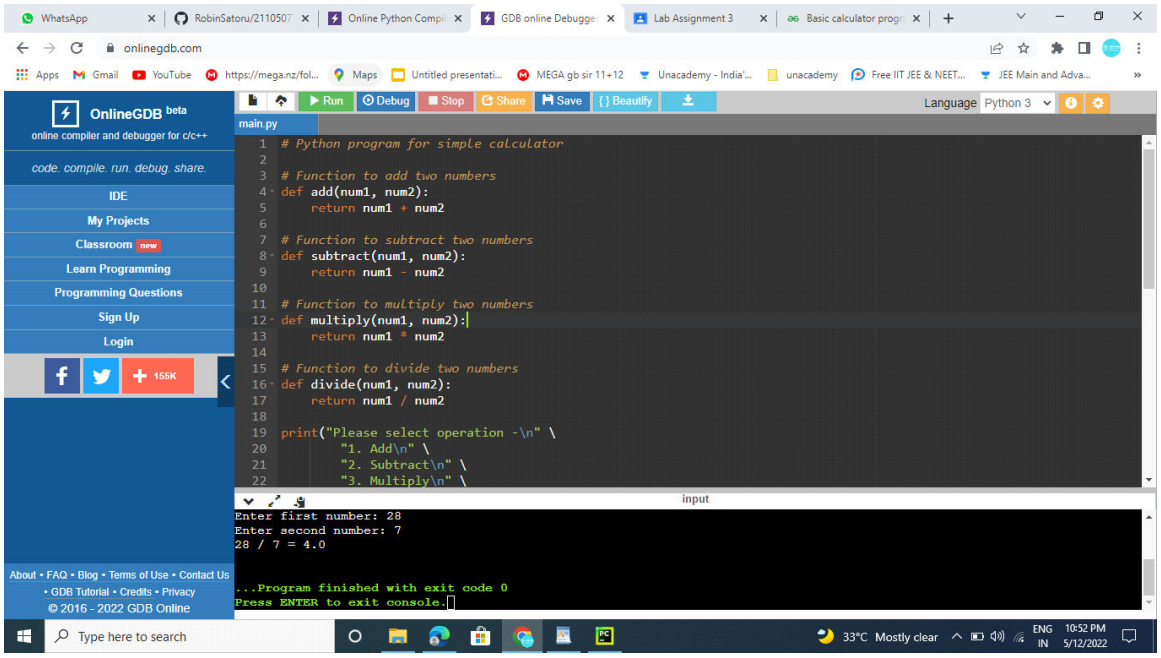
to type a mathematical expression, and then print the value of the expression.

answer

```
# Python program for simple calculator

# Function to add two numbers
def add(num1, num2):
    return num1 + num2

# Function to subtract two numbers
def subtract(num1, num2):
    return num1 - num2

# Function to multiply two numbers
def multiply(num1, num2):
    return num1 * num2

# Function to divide two numbers
def divide(num1, num2):
    return num1 / num2

print("Please select operation -\n" \
        "1. Add\n" \
        "2. Subtract\n" \
        "3. Multiply\n" \
```

```
                "4. Divide\n")


# Take input from the user
select = int(input("Select operations form 1, 2, 3, 4 :"))

number_1 = int(input("Enter first number: "))
number_2 = int(input("Enter second number: "))

if select == 1:
        print(number_1, "+", number_2, "=",
                                add(number_1, number_2))

elif select == 2:
        print(number_1, "-", number_2, "=",
                                subtract(number_1, number_2))

elif select == 3:
        print(number_1, "*", number_2, "=",
                                multiply(number_1, number_2))

elif select == 4:
```

```
        print(number_1, "/", number_2, "=",
                                    divide(number_1, number_2))
else:
        print("Invalid input")
```

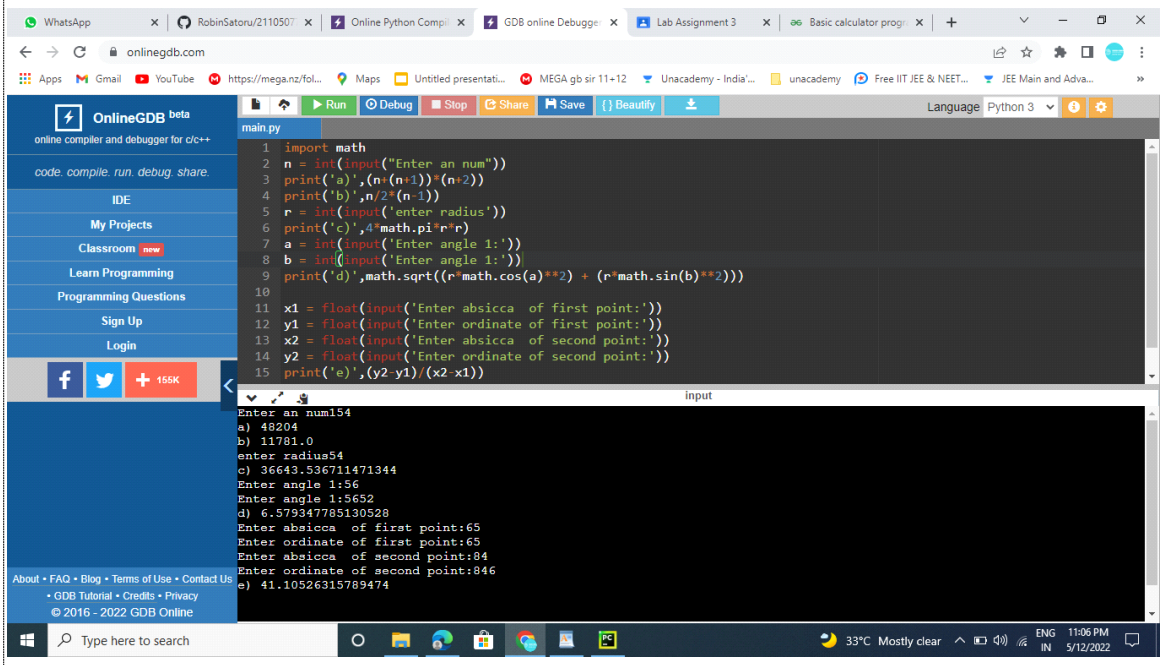


Question 03

Answer

```
import math
n = int(input("Enter an num"))
print('a)',(n+(n+1))*(n+2))
print('b)',n/2*(n-1))
r = int(input('enter radius'))
print('c)',4*math.pi*r*r)
a = int(input('Enter angle 1:'))
```

```
b = int(input('Enter angle 1:'))
print('d)',math.sqrt((r*math.cos(a)**2) + (r*math.sin(b)**2)))


x1 = float(input('Enter absicca    of first point:'))
y1 = float(input('Enter ordinate of first point:'))
x2 = float(input('Enter absicca    of second point:'))
y2 = float(input('Enter ordinate of second point:'))
print('e)',(y2-y1)/(x2-x1))
```



Question 4

Show the sequence of numbers that would be generated by each of the following

range expressions.

a) range (5)

b) range (3, 10)

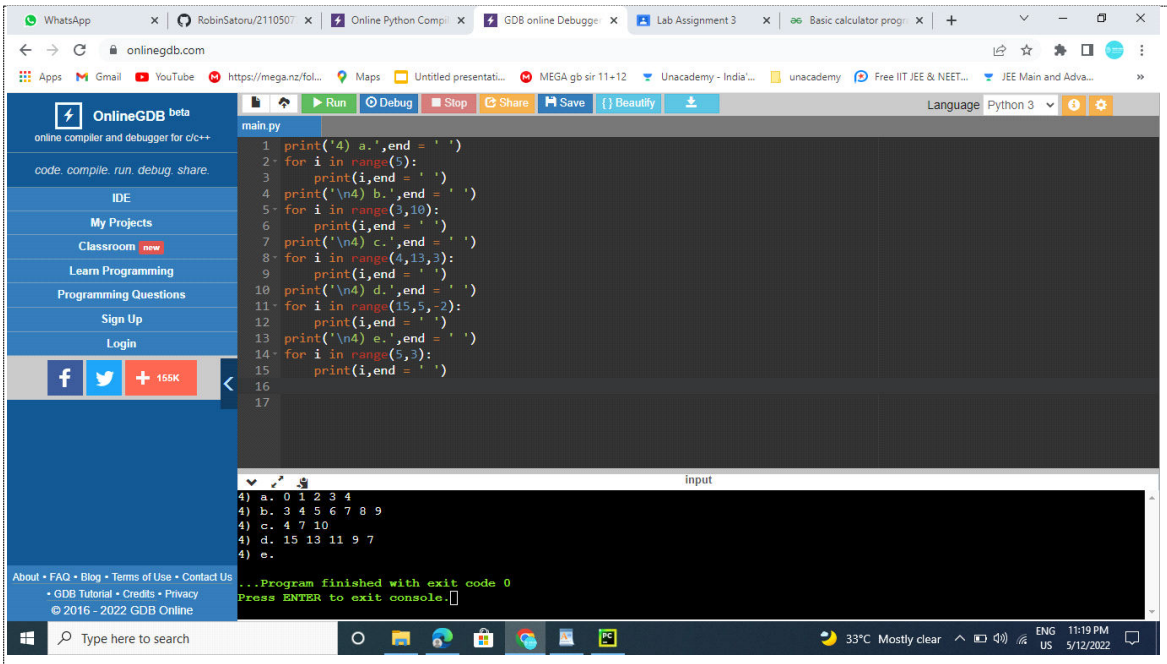
c) range (4, 13, 3)

d) range (15, 5, -2)

e) range (5, 3)

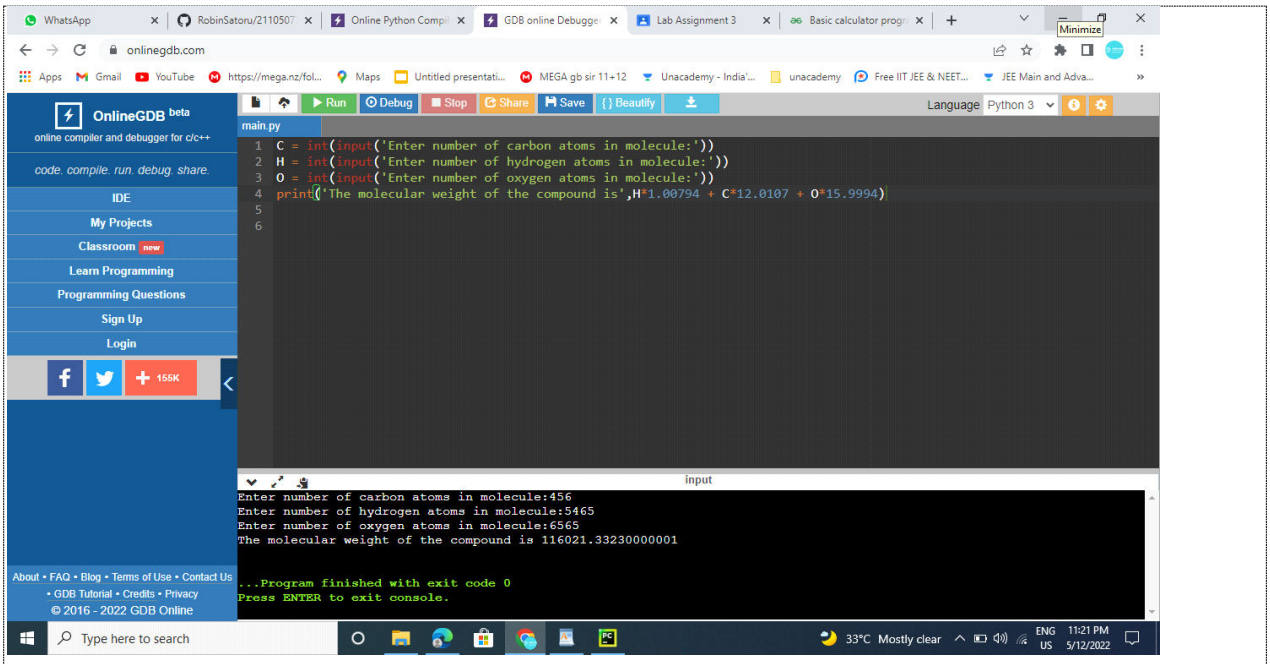
Answer

```
print('4) a.',end = ' ')
for i in range(5):
        print(i,end = ' ')
print('\n4) b.',end = ' ')
for i in range(3,10):
        print(i,end = ' ')
print('\n4) c.',end = ' ')
for i in range(4,13,3):
        print(i,end = ' ')
print('\n4) d.',end = ' ')
for i in range(15,5,-2):
        print(i,end = ' ')
print('\n4) e.',end = ' ')
for i in range(5,3):
        print(i,end = ' ')
```



Question 5

```
C = int(input('Enter number of carbon atoms in molecule:'))

H = int(input('Enter number of hydrogen atoms in molecule:'))

O = int(input('Enter number of oxygen atoms in molecule:'))

print('The molecular weight of the compound is',H*1.00794 +
C*12.0107 + O*15.9994)
```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Minimize
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Language
Python 3
main.py
1 C = int(input('Enter number of carbon atoms in molecule:'))
2 H = int(input('Enter number of hydrogen atoms in molecule:'))
3 O = int(input('Enter number of oxygen atoms in molecule:'))
4 print('The molecular weight of the compound is',H*1.00794 + C*12.0107 + O*15.9994)
5
6
input
Enter number of carbon atoms in molecule:456
Enter number of hydrogen atoms in molecule:5465
Enter number of oxygen atoms in molecule:6565
The molecular weight of the compound is 116021.33230000001
...Program finished with exit code 0
Press ENTER to exit console.
Type here to search
33°C Mostly clear
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5/12/2022