In [1]:

```
# Print “hello world”
print("Hello world")
```

```
Hello world
```

In [2]:

```
# Add two numbers
x=10
y=20
print(x+y)
```

```
30
```

In [3]:

```
#Find the square root of given number
import math
x=36
print(math.sqrt(x))
```

```
6.0
```

In [5]:

```
# Calculate area of triangle
x=int(input("Enter the height:"))
y=int(input("Enter the base:"))
area=0.5*x*y
print(area)
```

```
Enter the height:6
Enter the base:3
9.0
```

In [7]:

```
#Solve quadratic equation
import math
def equationroots( a, b, c):
    dis = b * b - 4 * a * c
    sqrt_val = math.sqrt(abs(dis))
    if dis > 0:
        print(" real and different roots ")
        print((-b + sqrt_val)/(2 * a))
        print((-b - sqrt_val)/(2 * a))
    elif dis == 0:
        print(" real and same roots")
        print(-b / (2 * a))
    else:
        print("Complex Roots")
        print(- b / (2 * a), " + i", sqrt_val)
        print(- b / (2 * a), " - i", sqrt_val)
a = 0
b = 10
c = -24
if a == 0:
    print("Input correct quadratic equation")
else:
    equationroots(a, b, c)
```

```
Input correct quadratic equation
```

In [9]:

```
#Swap two variables
def swap(x,y):
    swap=y
    y=x
    x=swap
    print("X value is:",x)
    print("Y value is:",y)

x=10
y=20
print("X value is:",x)
print("Y value is:",y)
swap(x,y)
```

```
X value is: 10
Y value is: 20
X value is: 20
Y value is: 10
```

In [10]:

```
#Generate a random number
import random
n=random.random()
print(n)
```

```
0.6005038349532442
```

In [13]:

```
#Convert kilometer to miles
kilometers = 5.5
conv = 0.621371
miles = kilometers * conv
print(kilometers,"is equal to",miles)
```

```
5.5 is equal to 3.4175405
```

In [14]:

```
#Convert Celsius to Fahrenheit

celsius = 36.2
fahrenheit = (celsius * 1.8) + 32
print(celsius,"is equal to ",fahrenheit)
```

```
36.2 is equal to  97.16000000000001
```

In [15]:

```
#.Check if a number is positive negative or zero
num=int(input("Enter the number:"))
if(num>0):
    print("Positive")
elif(num<0):
    print("Negative")
else:
    print("Zero")
```

```
Enter the number:-5
Negative
```

In [16]:

```
# Python Program to Check if a Number is Odd or Even
num=int(input("Enter the number:"))
if(num%2==0):
    print("Even")
else:
    print("Odd")
```

```
Enter the number:6
Even
```

In [17]:

```
# Python Program to Check Leap Year
year=int(input("Enter the year:"))
if(year%4==0):
    print("Leap year")
else:
    print("Not a leap year")
```

```
Enter the year:2003
Not a leap year
```

In [18]:

```
# Python Program to Find the Largest Among Three Numbers
x=int(input("Enter the number:"))
y=int(input("Enter the number:"))
z=int(input("Enter the number:"))
if(x>y and x>z):
    print("X is greater")
elif(y>x and y>z):
    print("Y  is greater")
else:
    print("Z is greater")
```

```
Enter the number:5
Enter the number:3
Enter the number:9
Z is greater
```

In [20]:

```
# Python Program to Check Prime Number
num = int(input("Enter the number:"))
flag = False
if num > 1:
    for i in range(2, num):
        if (num % i) == 0:
            flag = True
            break

if flag:
    print(num, "is not a prime number")
else:
    print(num, "is a prime number")
```

```
Enter the number:6
6 is not a prime number
```

In [22]:

```
#Python Program to Print all Prime Numbers in an Interval
lower = 50
upper = 100
print("Prime numbers between", lower, "and", upper, "are:")
for num in range(lower, upper + 1):
   if num > 1:
       for i in range(2, num):
           if (num % i) == 0:
               break
       else:
           print(num)
```

```
Prime numbers between 50 and 100 are:
53
59
61
67
71
73
79
83
89
97
```

In [23]:

```
#Python Program to Find the Factorial of a Number
def factorial(x):
    if x == 1:
        return 1
    else:
        return (x * factorial(x-1))
num = int(input("Enter a number: "))
result = factorial(num)
print("The factorial of", num, "is", result)
```

```
Enter a number: 6
The factorial of 6 is 720
```

In [25]:

```
#Python Program to Display the multiplication Table
num = int(input("Enter a number: "))
for i in range(1, 13):
   print(num, 'x', i, '=', num*i)
```

```
Enter a number: 6
6 x 1 = 6
6 x 2 = 12
6 x 3 = 18
6 x 4 = 24
6 x 5 = 30
6 x 6 = 36
6 x 7 = 42
6 x 8 = 48
6 x 9 = 54
6 x 10 = 60
6 x 11 = 66
6 x 12 = 72
```

In [26]:

```
#Python Program to Print the Fibonacci sequence
nterms = int(input("How many terms? "))
n1, n2 = 0, 1
count = 0
if nterms <= 0:
   print("Please enter a positive integer")
elif nterms == 1:
   print("Fibonacci sequence upto",nterms,":")
   print(n1)
else:
   print("Fibonacci sequence:")
   while count < nterms:
       print(n1)
       nth = n1 + n2
       n1 = n2
       n2 = nth
       count += 1
```

```
How many terms? 6
Fibonacci sequence:
0
1
1
2
3
5
```

In [27]:

```
# Program for performing arithmetic operation
x=int(input("Enter the number:"))
y=int(input("Enter the number:"))
print('x + y =',x+y)
print('x - y =',x-y)
print('x * y =',x*y)
print('x / y =',x/y)
print('x // y =',x//y)
print('x ** y =',x**y)
```

```
Enter the number:6
Enter the number:7
x + y = 13
x - y = -1
x * y = 42
x / y = 0.8571428571428571
x // y = 0
x ** y = 279936
```

In [28]:

```
#. Program for performing relational operation
a = int(input("Enter the number:"))
b = int(input("Enter the number:"))
print(a > b)
print(a < b)
print(a == b)
print(a != b)
print(a >= b)
print(a <= b)
```

```
Enter the number:7
Enter the number:9
False
True
False
True
False
True
```

In [29]:

```
# Program for performing logical operation
a =False
b = True
print(a and b)
print(a or b)
print(not a)
```

```
False
True
True
```

In [31]:

```
# Program for performing short hand assignment operation
x=int(input("Enter the number:"))
y=int(input("Enter the number:"))
x+=y
print(x)
```

```
Enter the number:6
Enter the number:7
13
```

In [32]:

```
#Program for equality and inequality checking
x=int(input("Enter the number:"))
y=int(input("Enter the number:"))
if(x==y):
    print("True")
else:
    print("False")
```

```
Enter the number:6
Enter the number:6
True
```

In [ ]:

```

```