# This program prints Hello, world!

print('Hello, world!')

# This program adds two numbers provided by the user

# Store input numbers

num1 = input('Enter first number: ')

num2 = input('Enter second number: ')

# Add two numbers

sum = float(num1) + float(num2)

# Display the sum

print('The sum of {0} and {1} is {2}'.format(num1, num2, sum))

# Python program to swap two variables provided by the user

x = input('Enter value of x: ')

y = input('Enter value of y: ')

# create a temporary variable and swap the values

temp = x

x = y

y = temp

print('The value of x after swapping: {}'.format(x))

print('The value of y after swapping: {}'.format(y))

# Solve the quadratic equation ax\*\*2 + bx + c = 0

# Coeffients a, b and c are provided by the user

# import complex math module

import cmath

a = float(input('Enter a: '))

b = float(input('Enter b: '))

c = float(input('Enter c: '))

# calculate the discriminant

d = (b\*\*2) - (4\*a\*c)

# find two solutions

sol1 = (-b-cmath.sqrt(d))/(2\*a)

sol2 = (-b+cmath.sqrt(d))/(2\*a)

print('The solution are {0} and {1}'.format(sol1,sol2))

# Python program to check if the input number is odd or even.

# A number is even if division by 2 give a remainder of 0.

# If remainder is 1, it is odd number.

num = int(input("Enter a number: "))

if (num % 2) == 0:

print("{0} is Even".format(num))

else:

print("{0} is Odd".format(num))