In [8]:
```
# 1.Write a program for all arithmetic operations using eval function.
# Ex. 5+3, 10-2, 6*4, 8/2..

expression = input("Enter an arithmetic expression:")

try:
    result = eval(expression)
    print("The result is:", result)
except Exception as e:
    print("Invalid expression:", e)
```

```
Enter an arithmetic expression:5+4
The result is: 9
```

In [7]:
```
# 2.Generate random numbers from 1 to 100 with a step of 10.

import random

# Generate a random number from 1 to 100 with a step of 10
random_number = random.randrange(1, 101, 10)

print("Random number with a step of 10:", random_number)
```

```
Random number with a step of 10: 71
```

In [23]:
```
# 3. Generates a random arithmetic problem.

import random

# Generate two random integers between 1 and 10
n1 = random.randint(1, 10)
n2 = random.randint(1, 10)

# Randomly choose an operator
operator = random.choice(['+', '-', '*', '/'])


# Display the random problem and its result
print(f"Random Arithmetic Problem: {n1} {operator} {n2}")
print("Result:", result)
```

```
Random Arithmetic Problem: 8 + 3
Result: 9
```

In [27]:
```
# 4.How to round to two decimal places for a floating value.
# Using round() function:

value = 3.14159
rounded_value = round(value, 2)
print(rounded_value)
```

```
3.14
```

In [31]:
```
# 5.Explain type casting with fundamental datatypes with example.

# Integer to Float
x = 10
y = float(x)
print(y)
```

```python
# Float to Integer
x = 20.5
y = int(x)
print(y)

# String to Integer
x = "30"
y = int(x)
print(y)

# Integer to String
x = 40
y = str(x)
print(y)

# Boolean to Integer
x = True
y = int(x)
print(y)

# Integer to Boolean
x = 1
y = bool(x)
print(y)

x = 0
y = bool(x)
print(y)
```

```
10.0
20
30
40
1
True
False
```