In [ ]:
```python
# Q1. Program that takes your name as input and prints welcome mes
name = input("Enter your name: ")
print(f"Welcome, {name}!")
```

```
Welcome, KUNAL!
```

In [2]:
```python
# Q2. Program to input two numbers and print sum, difference, and 
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
print("Sum:", a + b)
print("Difference:", a - b)
print("Product:", a * b)
```

```
Sum: 17
Difference: 1
Product: 72
```

In [3]:
```python
# Q3. Program to calculate square and cube of a number
num = int(input("Enter a number: "))
print("Square:", num ** 2)
print("Cube:", num ** 3)
```

```
Square: 81
Cube: 729
```

In [4]:
```python
# Q4. Program to find average of three numbers
x = float(input("Enter first number: "))
y = float(input("Enter second number: "))
z = float(input("Enter third number: "))
print("Average:", (x + y + z) / 3)
```

```
Average: 6.0
```

In [5]:
```python
# Q5. Program to convert Celsius to Fahrenheit
celsius = float(input("Enter temperature in Celsius: "))
fahrenheit = (celsius * 9/5) + 32
print("Temperature in Fahrenheit:", fahrenheit)
```

```
Temperature in Fahrenheit: 91.4
```

In [6]:
```python
# Q1. Demonstrate all arithmetic operations
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))

print("Addition:", a + b)
print("Subtraction:", a - b)
print("Multiplication:", a * b)
print("Division:", a / b)
print("Modulus:", a % b)
print("Exponent:", a ** b)
print("Floor Division:", a // b)
```

```
Addition: 17
Subtraction: -1
Multiplication: 72
Division: 0.8888888888888888
Modulus: 8
Exponent: 134217728
Floor Division: 0
```

In [7]:
```python
# Q2. Check divisibility by both 3 and 5 using logical operators
num = int(input("Enter a number: "))
if num % 3 == 0 and num % 5 == 0:
    print("Number is divisible by both 3 and 5")
else:
    print("Number is not divisible by both 3 and 5")
```

```
Number is divisible by both 3 and 5
```

In [8]:
```python
# Q3. Compare a number with 100
n = int(input("Enter an integer: "))
if n > 100:
    print("Greater than 100")
elif n < 100:
    print("Less than 100")
else:
    print("Equal to 100")
```

```
Less than 100
```

In [10]:
```python
# Q4. Demonstrating logical operators with boolean values
a = bool(int(input("Enter first boolean (0 or 1): ")))
b = bool(int(input("Enter second boolean (0 or 1): ")))
c = bool(int(input("Enter third boolean (0 or 1): ")))

print("AND:", a and b and c)
print("OR:", a or b or c)
print("NOT a:", not a)
```

```
AND: False
OR: True
NOT a: True
```

In [11]:
```python
# Q5. Evaluate expression
a = int(input("Enter value of a: "))
b = int(input("Enter value of b: "))
result = (a**2 + b**2) / (a + b)
print("Result of expression:", result)
```

```
Result of expression: 754.8
```