**FUNCTIONS**

**Defination:-** A function is a block of reusable code that performs a specific task.

Helps to avoid repetition and makes the code organized.

Syntax:-

def function\_name(parameters):

# code block

return value

**Example-1: Function without parameters**

def greet():

print("Hello, Welcome to Python!")

greet() # Function call

**Example-2:- Function with parameters**

def greet(name):

print("Hello,", name)

greet("Akshitha")

greet("John")

**Example-3:- Function with return value**

def add(a, b):

return a + b

result = add(5, 3)

print("Sum:", result)

**Example-4:- Function with default parameter**

def greet(name="Guest"):

print("Hello,", name)

greet() # Uses default

greet("Akshitha") # Uses given value

**Example-5:- Function returning multiple values**

def calculate(a, b):

return a + b, a - b

sum\_result, diff\_result = calculate(10, 5)

print("Sum:", sum\_result)

print("Difference:", diff\_result)

**Example-6:- Function with \*args (Variable Arguments)**

def add\_numbers(\*numbers):

return sum(numbers)

print(add\_numbers(1, 2, 3))

print(add\_numbers(4, 5, 6, 7))

**Example-7:- Lambda Function (Anonymous Function)**

square = lambda x: x\*x

print(square(5))