

Tutorial 01

Guided Practice Tasks

Task to be done in IDLE Shell:

Task 1: Basic Arithmetic Operations

1. Open IDLE and select the Python Shell.
2. Type and execute basic arithmetic operations, like `3 + 4`, `5 * 6`, and `10 / 2`.
3. Observe and note the results displayed in the shell.

Task 2: Variable Assignments

1. Assign a number to a variable: `x = 5`.
2. Assign a string to another variable: `name = "Alice"`.
3. Print these variables: `print(x)`, `print(name)`.

Task 3: Simple Input and Output

1. Ask for user input: `age = input("Enter your age: ")`.
2. Convert this input to an integer: `age = int(age)`.
3. Print a message with this age: `print("You are", age, "years old.")`.

Task 4: String Concatenation

1. Create two string variables: `first_name = "John"` and `last_name = "Doe"`.
2. Concatenate them: `full_name = first_name + " " + last_name`.
3. Print the full name: `print(full_name)`.

Task 5: Basic Error Handling

1. Deliberately make a syntax error: `print("Hello.`
2. Run the code to see the error message.
3. Correct the error and re-run: `print("Hello")`.

Programming exercises

Task 6 :Basic Arithmetic Calculator:

Create a simple calculator that performs addition, subtraction, multiplication, and division based on user inputs.

Task 7: Personal Information Script:

Write a program that asks for the user's name, age, and favorite color, and then prints a personalized greeting.

Task 8: Unit Conversion Program:

Implement a program that converts a given number of days into hours, minutes, and seconds.

Task 9: Simple Interest Calculator:

Develop a script to calculate simple interest based on user input for principal, rate of interest, and time.

Unguided Practice Tasks [To be done at home and submitted to BB]

Task 10: Temperature Conversion:

Create a program to convert a temperature from Celsius to Fahrenheit and vice versa.

Task 11: Grocery Bill Estimator:

Write a script that takes the price of three items and calculates the total cost.

Task 12: Distance Converter:

Develop a program that converts distance from meters to kilometers and miles.

Task 13: BMI Calculator:

Implement a Body Mass Index (BMI) calculator that takes weight and height as inputs and calculates BMI.