**Tutorial 01 – 02 hours**

**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.

**Extra Tutorial 01 Task – 2 hours**

**Design using Pseudo Code or Flow Chart, Code using Python and Test**

**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.

**Quizzes:**

**Quiz 1: Basic Python Syntax and Operators**

1. What symbol is used for division in Python?
   * a) %
   * b) /
   * c) \
   * d) |
2. What will be the output of **print(8 % 3)** in Python?
   * a) 2.67
   * b) 5
   * c) 2
   * d) None of the above
3. Which of the following is the correct way to comment in Python?
   * a) // This is a comment
   * b) <!-- This is a comment -->
   * c) # This is a comment
   * d) /\* This is a comment \*/

**Quiz 2: Data Types and Variables**

1. What data type is the result of: **3.0 + 1**?
   * a) int
   * b) float
   * c) string
   * d) bool
2. Which line of code will correctly assign a string to a variable?
   * a) var = "Hello, World!'
   * b) var = 'Hello, World!'
   * c) var = Hello, World!
   * d) var = "Hello, World!
3. Which of the following is NOT a valid variable name in Python?
   * a) my\_variable
   * b) 2ndVariable
   * c) variable\_name
   * d) \_variable

**Quiz 3: IDLE Shell Practice**

1. What will be the output of **print("Python" + "Rocks!")** in the IDLE shell?
   * a) PythonRocks!
   * b) Python Rocks!
   * c) SyntaxError
   * d) TypeError
2. If you assign **x = 5** and then **y = x + 3**, what is the value of **y**?
   * a) 5
   * b) 8
   * c) 15
   * d) None of the above
3. What will be the output of **print("Hello"[1])**?
   * a) H
   * b) e
   * c) l
   * d) Hello