



# Brain International School

Vikas Puri, New Delhi

## ASSIGNMENT NO. 3

**SUBJECT: INFORMATICS PRACTICES**

**CLASS-XI**

**JULY,2025**

### Chapter 4: Data Handling

1. What are data types in Python? List the common data types with examples.
2. Explain the difference between mutable and immutable types in Python. Provide examples for each.
3. What are operators in Python? Classify them into different types and explain each with examples.
4. Define an expression in Python. Write a program that evaluates an expression using arithmetic operators.
5. What is debugging? Why is it an essential part of programming? Describe different types of errors that can occur during debugging.
6. Write a Python program that demonstrates the use of a logical operator (and, or, not).
7. What is the significance of using parentheses in complex expressions? Write an example program to show the order of operations in an expression.

### Chapter 5: Flow of Control

1. Write a Python program to check whether a number is positive, negative, or zero.
2. Explain the use of if, elif, and else in decision-making with an example.
3. Rewrite the following code using a loop:  

```
print("Hello")  
print("Hello")  
print("Hello")
```
4. Write a Python program to find the sum of all numbers from 1 to 100 using a loop.
5. Differentiate between for and while loop with one example each.
6. Predict the output:  

```
for i in range(3):  
    print(i, end=" ")
```
7. Write a Python program to print the multiplication table of a number entered by the user.

## Chapter 6: List Manipulation

1. Define a list. How is it different from a string?
2. Write Python code to:
  - Create a list of 5 integers
  - Replace the third element with a new value
  - Display the length of the list
3. Explain any three list methods with suitable examples.
4. What is list slicing? Predict the output:  

```
L = [10, 20, 30, 40, 50]  
print(L[1:4])  
print(L[:3])  
print(L[-2:])
```
5. Write a program to count how many times the number 3 occurs in a list.
6. How is the in operator used with lists? Give two examples.
7. Write a program to accept 5 numbers from the user and store them in a list, then display the largest number.