**Lab Report 1: Basics of Python Programming**

**Objective**

1. Learn basic Python syntax and variable handling
2. Understand data types and operators
3. Practice printing instructions and expressions

**Description**

This lab introduces the fundamentals of Python programming, focusing on variables, data types, and operators. we practiced writing and executing simple Python code to understand syntax, expressions, and type handling. It builds a foundation for logical thinking and debugging through hands-on coding tasks.

**Questions & Programs**

**Q1: Display Python keywords**

import keyword

print(keyword.kwlist)

**Output:**

['False', 'None', 'True', 'and', 'as', 'assert', 'async', 'await',

'break', 'class', 'continue', 'def', 'del', 'elif', 'else', 'except',

'finally', 'for', 'from', 'global', 'if', 'import', 'in', 'is',

'lambda', 'nonlocal', 'not', 'or', 'pass', 'raise', 'return',

'try', 'while', 'with', 'yield']

**Q2: String quotation types**

single\_quote = 'Hello World'

double\_quote = "Hello Parrots"

triple\_quote = """Triple quotes for multiline strings"""

print(single\_quote)

print(double\_quote)

print(triple\_quote)

**Output:**

Hello World

Hello Parrots

Triple quotes for multiline strings

Q3: Check variable types

print(type(single\_quote)) # <class 'str'>

print(type(5)) # <class 'int'>

print(type(3.14)) # <class 'float'>

**Output:**

<class 'str'>

<class 'int'>

<class 'float'>

**Q4: Integer operations**

sc = 5

print(sc)

print(type(sc))

**Output:**

5

<class 'int'>

**Q5: Float operations**

y = 3.14

print(y)

print(type(y))

**Output:**

3.14

<class 'float'>

**Q6: Multiple assignments**

a, b, c = 1, 2, 3

print(a)

print(a, b, c)

**Output:**

1

1 2 3

**Q7: Arithmetic operations**

a, b = 50, 2

print(a + b)

print(a - b)

print(a \* b)

print(a / b)

print(a // b)

print(a % b)

print(a \*\* b)

**Output:**

52

48

100

25.0

25

0

2500

# Q8: Assignment operators

a = 1

a += 1

a \*= 2

a -= 1

print(a)

**Output:**

3

**Q9: Logical operations**

a, b, c = 5, 6, 7

d = (a + b > c) and (a \* b \* c == 210)

print(d)

**Output:**

False

**Q10: String variables**

name = "Raikantoperi"

address = "Bangkok"

phone = "1297-393401"

print(name)

print(address)

print(phone)

**Output:**

Raikantoperi

Bangkok

1297-393401

# Q11: Expression evaluation

x = 8

x = x \* (2 + 1) - 1

print(x)

**Output:**

23

**Q12: Complex expression**

result = ((5 + 3) \* (12 / 4)) - (10 % 3)

print(result)

**Output:**

23.0

**Q13: Variable interaction**

x, y, z = 5, 3, 2

a = ((x + y) \* z)

print(a)

**Output:**

16

**Conclusion**  
This lab covered fundamental Python concepts:

1. **Variables & Data Types**: Strings, integers, floats, and assignments.
2. **Operators**: Arithmetic (+, -, \*, /), logical (and, not), and assignment (+=, \*=).
3. **Syntax**: Proper use of quotes, parentheses, and print statements.
4. **Type Handling**: Verification using type().