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

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().