Assignment 1: Statements

Part 1: Input/Output

Task 1

Write a Python program that asks the user for their name and age, and then prints a message using the input values.

```
name = input("Enter your name: ")
age = input("Enter your age: ")

print(f"Hello {name}, you are {age} years old!")
print("Hello", name, "you are", age, "years old!", sep="^-^", end="!!!")
```

Part 2: Variables and Naming Rules

Task 2

Identify the errors in the following variable assignments and correct them:

```
# Incorrect code:
1name = "Alice"
def = "Reserved"
user-name = "John"
```

Answer

Part 3: String Basics

Task 3

Write a Python program to demonstrate the use of quotation marks, string length, and concatenation.

```python
# Quotation marks:
single_quote = 'This is a string.'
double_quote = "This is also a string."

# String length:
message = "Hello, Python!"
print(len(message))

# String concatenation:
first_name = "Alice"
last_name = "Johnson"
full_name = first_name + " " + last_name
print(full_name)
```

Part 4: Number Basics

Task 4

Write a Python program to demonstrate data types, basic arithmetic operations, and order of precedence. Results of the program can be added in the provided box.

```python
# Data types:
integer_number = 10
float_number = 5.5
print(type(integer_number))
print(type(float_number))

# Basic arithmetic operations:
addition = 5 + 3
subtraction = 10 - 4
multiplication = 7 * 6
division = 15 / 3

print(addition, subtraction, multiplication, division)

# Order of precedence:
# Exponentiation -> Multiplication -> Addition -> Subtraction
result = 5 + 2 * 3 ** 2 - 1
print(result)
```

Answer

Part 5: Error Handling

Task 5

Explain what an error is, identify which line of code contains an error, and provide a solution.

Task 5.1: Syntax Error

```
# Incorrect code:
print("Hello World!"
```

Answer

Task 5.2: NameError

```
# Incorrect code:
print(variable)
variable = 5
```

Answer

Task 5.3: ZeroDivisionError

```
# Incorrect code:
result = 10 / 0
```

Answer

Task 5.4: TypeError

```
# input() always return a string
# int() is used to convert to 'int'
x = input("Please enter a number from 1-10: ")
print("Your input is ", x)

y = input("Please enter your second number from 1-10: ")
print("Your second number is ", y)
print()

print("The sum of two numbers is x" + y)
print("The product of two numbers is ", x * y)
```

Answer