



Data Seekho Fellowship Exercises on Python Basics

Submission Instructions:

- Complete each exercise and submit your code.
- Make sure to include comments explaining your thought process and any changes you made.
- Be prepared to discuss the types of errors you encountered and how you fixed them during our next class.

These exercises will help reinforce the foundational concepts while encouraging students to think critically about their code and debugging processes.

Exercise 1: Comments

1. Write a program that prints your name and includes both single-line and multi-line comments explaining what each part of your code does.

Exercise 2: Error Identification

Below is a piece of code with some intentional errors. Identify and correct the errors. Explain the type of error for each correction made.

```
print("Welcome to Python!")
result = 10 / 0
my_list = [1, 2, 3]
print(my_list[3])
```

Exercise 3: Variable Assignment

3. Create a program that:
 - Assign your name (string), age (integer), height (float), and whether you are a student (boolean) to variables.
 - Prints each variable with an appropriate message.



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Exercise 4: Descriptive Variable Names

Rewrite the following code using descriptive variable names:

```
a = 5
b = 10
c = a * b
print(c)
```

Exercise 5: Numeric Types and Operations

5. Perform the following operations and print the results:
 - Add two integers
 - Subtract a float from an integer
 - Multiply a float by a complex number
 - Divide an integer by zero (observe and write down the error)

Exercise 6: Built-in Functions

6. Write a program that:
 - Takes a list of numbers as input from the user.
 - Uses the `abs()`, `max()`, and `min()` functions to find the absolute values, maximum, and minimum of the numbers.
 - Prints the results with appropriate messages.

Example input: `[-5, 3.2, -1, 0, 12]`

Exercise 7: Arithmetic Operations

7. Create a simple calculator program that:
 - Prompts the user to enter two numbers.
 - Asks the user to select an operation: addition, subtraction, multiplication, or division.
 - Performs the selected operation and prints the result. Handle division by zero gracefully.



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