Lesson Reflection

Lesson Summary

This lesson covered core concepts like Python functions including:

- Function definitions syntax using def
- Calling and executing functions
- Function parameters as inputs
- Return statements to output values
- Default parameter values
- Passing arguments by position and by name
- Function code blocks
- Decorators

Top 3 Key Points

- Functions encapsulate reusable logic into named blocks
- Parameters enable passing data into functions
- Return statements allow returning outputs

Reflection Questions

1. What is the syntax for defining a function in Python?
2. How do parameters allow passing data into functions?
3. Why are return statements important for getting output from functions?
4. What are some examples of functions you could define and use in your programs?
5. How could functions help improve your code reuse and organization?

Challenge Exercises

1. Define a function that calculates simple interest
2. Create a function to test if a word is a palindrome
3. Write a function that finds the maximum of three numbers
4. Develop a function to format a date string into a readable format
5. Define a function to generate a random password

```python
# Function to calculate simple interest
def simple_interest(principal, rate, time):

    # Calculate simple interest
    interest = principal * rate * time

    # Return interest
    return interest

principal = 5000
rate = 0.1
time = 5

interest = simple_interest(principal, rate, time)
print(interest) # 2500.0
```

```
2500.0
```