14th of December

Python Data Types Practice Exercise

Work with different data types in Python.

Starting Code

```python
# Part 1: Numbers
books_owned = 5                  # Integer
book_price = 24.99         # Float
total_pages = 1250         # Integer

# Part 2: Strings
book_name = "Alice in Wonderland"
author_name = "Lewis Carroll"

# Part 3: Collections
my_books = ["Harry Potter", "Percy Jackson", "Charlotte's Web"]
book_categories = ("Fantasy", "Adventure", "Mystery")
favorite_book = {
    "title": "Harry Potter",
    "pages": 223,
    "price": 19.99,
    "is_hardcover": True
}
```

Your Tasks:

Working with Numbers

1. Calculate the total cost of all books

2. Calculate the average pages per book

3. If each book takes 3 days to read, calculate how many days to read all books

Working with Strings

1. Create a full_title by combining book_name and author_name with " - " between them

2. Convert book_name to all uppercase letters

3. Count how many letters 'a' appear in book_name

4. Convert author_name to all lowercase letters

Working with Collections

1. Add "The Hobbit" to the my_books list

2. Print the second category from book_categories

3. Add a new "year" key to favorite_book with the value 1997

4. Print the first book and last book from my_books

5. Create a new list called book_prices with these prices: [19.99, 24.99, 12.50, 34.99, 9.99]

6. Calculate the average price if all books in book_prices had a 20% discount