Exercise 1.7: Finalizing Your Python Program

Reflection Questions

1. What is an Object Relational Mapper and what are the advantages of using one?
   It is a tool that allows me to interact with a database using the object-oriented paradigm, which is often more intuitive than writing raw SQL queries. ORM simplified database interaction, which can make my code more readable and easier to maintain. ORM allows me to switch between different types of databases with minimal changes to my code, making the application more flexible.

2. By this point, you've finished creating your Recipe app. How did it go? What's something in the app that you did well with? If you were to start over, what's something about your app that you would change or improve?
   I like creating the Recipe app. One thing I am proud of is how I was able to effectively implement the logic for calculating the difficulty of a recipe based on its cooking time and ingredients. It felt satisfying to see that function work correctly across different scenarios. If I were to start over, I would probably focus more on optimizing the user experience, especially in the search and update functionalities. I might also consider adding more robust error handling and validation to ensure that the app is more user-friendly and less prone to issues when users enter unexpected input.

3. Imagine you're at a job interview. You're asked what experience you have creating an app using Python. Taking your work for this Achievement as an example, draft how you would respond to this question.
   In a recent project, I developed a Recipe management app using Python. The app allows users to create, search, update, and delete recipes. I utilized SQLAlchemy as an ORM to manage interactions with a MySQL database, which streamlined the database operations and allowed me to focus on the business logic of the app. One of the features I implemented was a dynamic difficulty calculator, which adjusts based on the cooking time and number of ingredients, adding an extra layer of functionality to the app. Through this project, I enhanced my understanding of Python's capabilities and strengthened my skills in database management and backend development.

4. You've finished Achievement 1! Before moving on to Achievement 2, take a moment to reflect on your learning in the course so far:
   a. What went well during this Achievement?
      I feel that my understanding of ORMs and database management has deepened significantly. I was able to apply concepts like class definitions and relationships in SQLAlchemy effectively, which really boosted my confidence.
   b. What's something you're proud of?
      I'm proud of successfully building a functioning app from scratch, particularly how I implemented and refined the difficulty calculation feature in my Recipe app.

c. What was the most challenging aspect of this Achievement?
   The most challenging part was troubleshooting and resolving errors related to database connectivity and environment setup. It required a lot of patience and persistence, but I learned a lot in the process.
d. Did this Achievement meet your expectations? Did it give you the confidence to start working with your new Python skills?
   Yes, this Achievement met my expectations and more. It definitely gave me the confidence to take on more complex projects in Python.
e. What's something you want to keep in mind to help you do your best in Achievement 2?
   I want to continue focusing on clear code structure and efficient problem-solving. Additionally, I plan to be more proactive in testing and debugging as I go, to catch issues earlier and make the development process smoother.