Task Overview:
Build a Flutter app that displays a product list. Users should be able to browse products, view details, and add items to a cart. This task assesses your Flutter skills, coding practices, and UI/UX abilities.

Features:

1. Product Listing:
   - Show a list with product name, image, and price.
   - Data can be hardcoded or from a JSON file.
   - Add a search bar to filter products by name.

2. Product Details:
   - On product tap, navigate to a detail view with name, image, description, and price.

3. Cart:
   - Add a cart icon showing item count.
   - Users can add products to the cart from the details page.
   - Provide a cart screen with items, quantities, and total price.
   - Allow item removal.

4. UI:
   - Design a clean, responsive, user-friendly interface.

Bonus (Optional):
- Use state management (e.g., Provider, Riverpod, Bloc).
- Add animations for better UX.
- Implement persistent storage (e.g., SharedPreferences, SQLite).
- Include basic unit/widget tests.

Submission:
- Share the source code via GitHub.
- Include a README with setup instructions.
- Ensure clean, well-organized, and commented code.

Evaluation:
- Code Quality: Cleanliness, organization, best practices.
- Functionality: Correct feature implementation.
- UI/UX: Design and usability.
- Problem-Solving: Handling challenges, optional features.