Shopping Assistant Report

# Project Directory Structure  
  
```*plaintext*├── README.md # Project overview and instructions.  
├── assistants # Core logic for handling assistant functionalities.  
│ ├── \_\_init\_\_.py # Module initialization file.  
│ ├── expert\_assistant.py # Implements task delegation and advanced assistant logic.  
│ └── logs # Assistant-related log files.  
│ ├── application.log # General assistant operation logs.  
│ └── audit.log # Audit logs for sensitive assistant actions.  
├── data # Directory for storing project data.  
│ ├── \_\_init\_\_.py # Module initialization file.  
│ └── ecommerce.db # SQLite database containing project data (e.g., carts, orders).  
├── dev\_tools # Tools for development and debugging.  
│ ├── \_\_init\_\_.py # Module initialization file.  
│ ├── logs # Logs generated during tool usage.  
│ │ ├── application.log # Logs tool activities.  
│ │ └── audit.log # Logs sensitive tool operations.  
│ └── visualize\_state\_graph\_in\_notebook.ipynb # Jupyter notebook for state graph visualization.  
├── main.py # Main entry point for the project.  
├── scripts # Scripts for setting up and processing data.  
│ ├── \_\_init\_\_.py # Module initialization file.  
│ ├── initialize\_data.py # Populates the database with initial data.  
│ ├── initialize\_db.py # Sets up database schemas.  
│ ├── initialze\_data\_from\_csv.py # Imports data from CSV files.  
│ └── main.py # Entry point for running all scripts.  
├── state # Manages state and workflow of the application.  
│ ├── \_\_init\_\_.py # Module initialization file.  
│ ├── graph.py # Contains logic for state and workflow graphs.  
│ └── state.py # Implements state persistence and updates.  
├── tests # Contains unit tests and integration tests.  
│ ├── \_\_init\_\_.py # Module initialization file.  
│ ├── logs # Logs generated during test execution.  
│ │ ├── application.log # General test activity logs.  
│ │ └── audit.log # Audit logs generated during tests.  
│ ├── test\_assistant.py # Tests for assistant functionality.  
│ └── test\_database.py # Tests for database operations.  
├── tools # Provides modular utilities for specific tasks.  
│ ├── \_\_init\_\_.py # Module initialization file.  
│ ├── cart\_tools.py # Tools for managing shopping cart operations.  
│ ├── logs # Logs for tools usage.  
│ │ ├── application.log # Logs general tool activities.  
│ │ └── audit.log # Logs sensitive tool actions.  
│ ├── order\_tools.py # Tools for managing orders.  
│ ├── policy\_tools.py # Tools for querying policies or rules.  
│ └── product\_tools.py # Tools for product searches and recommendations.  
└── utils # General-purpose utilities for the project.  
 ├── \_\_init\_\_.py # Module initialization file.  
 ├── complete\_or\_escalate.py # Logic for escalating or completing tasks.  
 ├── logger.py # Provides logging capabilities.  
 └── utilities.py # Miscellaneous utility functions.

Graph

A diagram of a website

Description automatically generated

Test chat log:

shopping\_assistant/chat.log

Test question list

tutorial\_questions = [  
 "Hello, what categories of products can I choose from?",  
 "I like electronic products.",  
 "I want to see the latest smartphone products.",  
 "Add the most expensive and in stock one to my cart",  
 "What's the weather like today?",  
 "I also want to buy clothes. Recommend some T-shirts for me.",  
 "Alright, add the cheapest and in stock one to my cart.",  
 "What's in my shopping cart now?",  
 "Double the items in my shopping cart.",  
 "Remove the T-shirt products. I don't want them anymore.",  
 "Alright, I'm ready to place the order. Use PayPal as the payment method.",  
 "Can I check my order information?",  
 "How long will it take to deliver?",  
 "Check my shopping cart.",  
 "Remove the mobile phone-related products from my cart.",  
 "I want to update the shipping address to 169 Rue Galipeau, Thurso, QC J0X 3B0.",  
 "Can I cancel my order?",  
 "I changed my mind. Help me cancel the order.",  
 "View my orders.",  
 "Add the LV bag product to my cart."  
]

**Endge case:**

1. **What's the weather like today?**
2. **Remove the mobile phone-related products from my cart. （no product）**
3. **Add the LV bag product to my cart. (zero stock)**

**Supported Functionalities in the System**

1. **Cart Management:**
   * Add products to the cart.
   * Remove products from the cart.
   * View cart contents.
2. **Product Management:**
   * Search for products.
   * Recommend products to users.
3. **Policy and Information Queries:**
   * Query privacy policy.
   * Query shipping and return policies.
   * Query payment methods.
4. **Order Management:**
   * Place orders.
   * View order history.
   * Cancel orders.
   * Modify shipping addresses.
5. **Payment Management:**
   * Specify payment methods for orders.

A screen shot of a computer screen

Description automatically generated

A screen shot of a computer

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