

LAB-2

Steps for Agile Implementation:

1. Form Scrum Teams

- **Product Owner:** Defines the project vision and backlog (e.g., you or a designated team member).
- **Scrum Master:** Ensures smooth workflow and resolves blockers.
- **Development Team:** Handles frontend, backend, ML models, and database integration.

2. Create a Product Backlog

The Product Owner collaborates with stakeholders to define backlog items as user stories.

Example User Stories:

- "As a user, I want to input stock symbols to get trend predictions."
- "As a user, I want to view past stock trends on a dashboard."
- "As a user, I want real-time stock sentiment analysis from news."
- "As a user, I want to compare different prediction models (ML, DL, QML, QNN)."

3. Sprint Planning

- Select high-priority backlog items for Sprint 1.
- Define Sprint Goal: **"Develop the backend API and integrate stock data retrieval."**

Sprint 1 Backlog Items:

- ✓ Fetch stock data using Yahoo Finance API.
- ✓ Implement database to store stock prices and user history.
- ✓ Create Flask backend for API endpoints.

4. Daily Scrum (Daily Standups)

Each day, team members answer:

1. **What did I do yesterday?** (E.g., Implemented API for fetching stock data).
2. **What will I do today?** (E.g., Work on integrating ML model with API).
3. **Are there any blockers?** (E.g., Model prediction taking too long).

5. Sprint Execution

- The development team codes and tests selected backlog items.
- The Scrum Master resolves issues (e.g., API rate limits, database errors).

6. Sprint Review

At the end of the Sprint, the team demonstrates progress:

- Working backend API fetching stock data.
- Initial model predictions displayed.
- Stakeholders provide feedback (e.g., improve response time).

7. Sprint Retrospective

Discuss:

What went well? (API integrated successfully).

What didn't go well? (Some stock data missing).

What can be improved? (Optimize ML model processing time).

8. Repeat the Process

- Begin **Sprint 2** with a new goal: **"Implement frontend with stock trend visualization."**
- Follow the same Agile cycle for continuous development.

