**Concept Note**

**Project Title:** Inbound Banking Support Agent

**Team Name:** Wisdom Loop

**Team Members:**

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**Date:** 30.09.2025

**1. Introduction**

In today’s fast-paced world, banking customers expect instant and accurate support for queries like account balances, transaction history, card management, and dispute resolution. Traditional customer support often involves waiting in queues or navigating complex IVR systems.

To address this, we developed an **AI Banking Assistant**—an intelligent, conversational chatbot that provides instant support, automates common banking tasks, and escalates complex issues to human agents when required.

**2. Objective**

The main objectives of this project are:

1. Provide **quick, accurate, and context-aware responses** to common banking queries.
2. Automate routine banking tasks such as:
   * Checking account balance
   * Viewing recent transactions
   * Blocking cards
   * Raising disputes and checking complaint status
3. Handle **edge cases and ambiguous inputs** effectively.
4. Offer a **seamless escalation mechanism** for critical issues.

**3. Key Features**

* **Account Management:** Check balance, transaction history, KYC status, and loan status.
* **Card Management:** Block card, check card issues.
* **Complaint Handling:** Raise disputes, check complaint status, and clarify missing information.
* **Branch & ATM Locator:** Find nearest branches or ATMs using city or pincode.
* **Multilingual Support:** Support for Hindi and English.
* **Escalation:** Transfers critical or abusive queries to human agents.
* **Robust Handling of Edge Cases:** API timeouts, ambiguous requests, missing fields.

**4. Tools & Technologies**

* **Backend:** Java / Python (for processing intents and API calls)
* **Frontend:** Web-based chat interface (HTML/CSS/JS)
* **Mock APIs:** Beeceptor / custom JSON endpoints for testing banking operations
* **Testing & QA:** 20+ test scripts covering happy paths and edge cases
* **Version Control:** GitHub repository for source code and documentation

**5. Methodology**

1. **Intent & Entity Recognition:** Using predefined intents and required entities.
2. **Mock API Integration:** Each intent calls a mock API endpoint that returns expected responses.
3. **Dialog Management:** Bot handles user requests step-by-step, asking for missing information if necessary.
4. **Escalation Logic:** Certain queries trigger escalation to a human agent.
5. **Testing:** All scenarios (happy paths and edge cases) are tested using a structured test script table.

**6. Expected Outcome**

* Instant response to common banking queries.
* Reduced load on human agents.
* Improved customer experience and satisfaction.
* Complete, reproducible demo that can be presented for evaluation.

**7. Future Scope**

* Integration with **real banking APIs** for live data.
* **Voice-based support** for accessibility.
* **Advanced NLP** to handle more complex and natural conversations.
* **Analytics dashboard** for tracking bot performance and common queries.

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