**Banking System - Agile Problem Statement (Java Full Stack & Azure Deployment)**

**Project Overview:**

A bank requires a **secure, scalable, and cloud-deployable Banking Management System** that allows users to manage their accounts online. The system should be developed using **Java Full Stack (Spring Boot + Angular/React)** and deployed on **Azure**.

**Agile Approach**

**Epic 1: User Management**

* **Story 1.1**: As a user, I want to register with my details so that I can create a new bank account.(Ragavendra)
* **Story 1.2**: As a user, I want to securely log in so that I can access my account.(Udit)
* **Story 1.3**: As a user, I want to update my profile so that I can keep my information up to date.(Arnab)
* **Story 1.4**: As a user, I want to reset my password so that I can regain access if I forget it.(Kundhan)

**Epic 2: Account & Transaction Management**

* **Story 2.1**: As a user, I want to deposit money into my account so that I can increase my balance.(Harsh)
* **Story 2.2**: As a user, I want to withdraw money from my account so that I can access my funds.(Deepak)
* **Story 2.3**: As a user, I want to transfer funds to another account so that I can send money securely.
* **Story 2.4**: As a user, I want to view my transaction history so that I can track my financial activities.

**Epic 3: Security & Authentication**

* **Story 3.1**: As a user, I want my data to be encrypted so that my account remains secure.
* **Story 3.2**: As an admin, I want to monitor transactions so that I can prevent fraud.
* **Story 3.3**: As a user, I want to receive OTP verification for fund transfers to ensure security.

**Epic 4: Cloud Deployment & CI/CD (Azure)**

* **Story 4.1**: As a DevOps engineer, I want to deploy the application on **Azure App Services** so that it is accessible globally.
* **Story 4.2**: As a developer, I want to set up **Azure DevOps CI/CD pipelines** so that deployments are automated.
* **Story 4.3**: As a system admin, I want to configure **Azure Key Vault** to store secrets securely.
* **Story 4.4**: As a user, I want the system to auto-scale on Azure so that it handles high traffic efficiently.

**Technology Stack**

**Frontend:**

* React.js / Angular
* TypeScript
* TailwindCSS / Bootstrap

**Backend:**

* Java **Spring Boot** (REST APIs)
* Spring Security & JWT for Authentication
* Hibernate & JPA (Database Integration)

**Database:**

* **Azure SQL Database** (Primary)
* Redis Cache for performance improvement

**DevOps & Deployment:**

* **Azure App Services** (Hosting)
* **Azure DevOps Pipelines** (CI/CD)
* **Azure Key Vault** (Secret Management)
* **Azure Monitor & Log Analytics**

**Sprint Planning Example (2 Weeks Sprint)**

**Sprint 1: User Authentication & Registration**

* Implement user registration with form validation
* Set up authentication with JWT
* Configure Azure SQL Database
* Deploy MVP to Azure

**Sprint 2: Transactions & Fund Transfer**

* Develop deposit, withdrawal, and transfer APIs
* Implement frontend UI for transactions
* Secure fund transfers with OTP verification

**Sprint 3: Security & Monitoring**

* Integrate **Azure Key Vault** for security
* Enable **logging & monitoring** with Azure Monitor
* Implement fraud detection alerts

**Sprint 4: CI/CD & Auto-Scaling**

* Configure **Azure DevOps Pipelines**
* Set up **containerization with Docker**
* Implement **auto-scaling on Azure**