DESCRIPTION : AgriConnect

1. Project Context and Objectives

Context:

Agriculture in Africa is a crucial sector for the economy, but smallholder farmers face major challenges, including:

- Inability to purchase agricultural inputs in bulk due to financial constraints
- Complex and often inaccessible traditional loan processes
- Unpredictable fluctuations in the prices of agricultural inputs
- Financial planning difficulties for purchasing essential inputs

General Objective:

Develop an innovative mobile application, AgriConnect, aimed at revolutionizing access to agricultural inputs by:

- Allowing flexible payments adapted to farmers' income
- Offering a transparent and accessible subscription system
- Pooling purchases to obtain better prices
- Simplifying the entire process of acquiring agricultural inputs

Specific Objectives:

- Create a flexible payment platform integrating local solutions (USSD, Mobile Money).
- Set up a subscription system tailored to the financial capacity of farmers.
- Develop a group-buying mechanism to reduce costs.
- Provide simplified access to essential products via an intuitive interface.

2. Solution Description

Application Name: AgriConnect - Agricultural Input Access Solutions

Target Audience:

The app targets a large and growing market:

- Over 40 million smallholder farmers in Nigeria alone

- Farmers seeking flexible payment solutions
- Operators wishing to optimize their input costs

Key Features:

- **Flexible Subscription Management:**
    - Three plans: basic, standard, premium depending on farm size and other factors
- **Integrated Payment System:**
    - Full integration with Interswitch for secure payments
    - Multiple payment options:
        - Bank cards
        - USSD
        - Direct transfers
    - Real-time transaction history available

3. Technologies

Technical Stack:

- **Frontend:** JavaScript/TypeScript (React JS).
- **Backend:** JavaScript (Node.js).

APIs to Integrate:

IPG: web checkout for subscription payments

VAS: For additional services via generate token, bill payments, customer validation.

Complementary Tools:

- **Development Tools:** VS Code, Postman (API testing), GitHub (code management).
- **Deployment Platform:** Vercel
- **Push Notification System:** Firebase Cloud Messaging (FCM).

4. Estimated Timeline

- **Day 1:** Conceptualization and architecture
- **Day 2:** Prototyping and design
- **Day 3-5:** Feature development
- **Day 6:** Testing and debugging

- **Day 7:** Preparation and final presentation

5. Expected Deliverables

Technical Deliverables:

- Complete technical documentation (concept, architecture, integrated APIs).
- Technical architecture diagram.
- Source code of the MVP (hosted on GitHub or similar).

Functional MVP:

- Operational web platform
- Integrated payment system
- Full primary features (payments, marketplace)

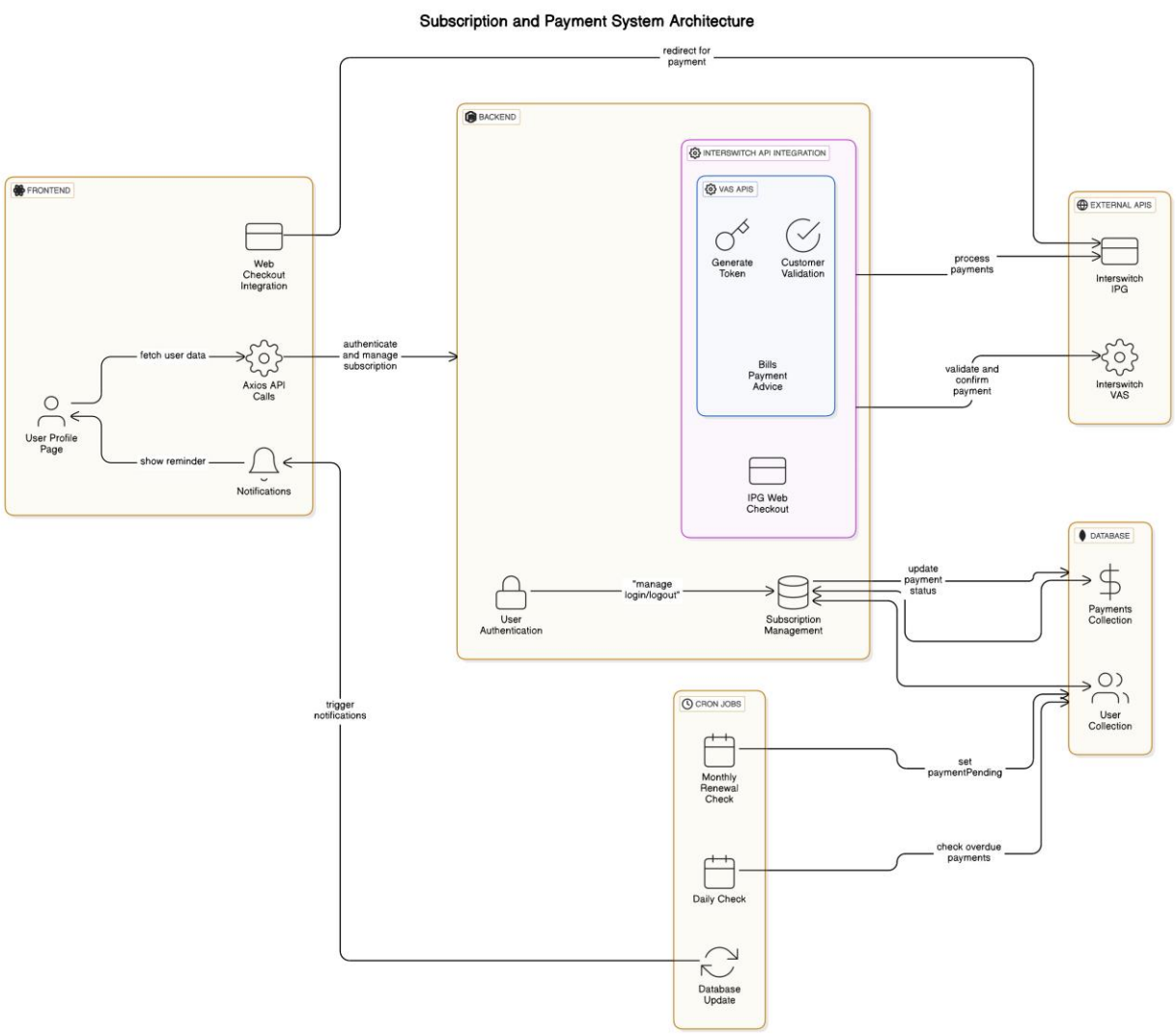
Presentation Deliverables:

- 10-minute pitch
- Live demonstration
- Presentation of competitive advantages

6. Teams and Roles

Team Composition (5 members):

- **Frontend Developers:** BOKO Anéric; Fathane MARCOS and ELEGBE Katia
- **Backend Developers:** Julia GOUDALO and Houcham MAMA-GAO
- **Resources and Documentation:** ELEGBE Katia



Technicaldiagram.svg