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Course: Distributed System and Cloud Computing

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Assignment No 1

Describe a service for a company that you

as the CEO is planning to offer to the community scalable, collaboration and Fault Tolerance

Answer

This is a description of a planned service for the African community by the use of a digital Agricultural connect service that connect farmers, buyers and agricultural experts through a simple mobile platform. It is focusing on scalable, collaborative, and fault tolerance design along with a real life situation

Service: Digital Agricultural Connect

As CEO, I plan to launch Digital Agricultural connect, a mobile first decentralized digital platform designed to empower smallholder farmers across Africa by providing real time agricultural data, market price access and financial service.

The Key Design principles

Scalability

The platform will utilize a modular, cloud-native architecture that allows people to expand into a new regions and the integration of new features like localized weather forecasting or pest alerts.

Collaboration

Collaboration is the center to the platform value and operation, connecting multiple stakeholders.

Farmer to Farmer An integrated knowledge sharing forum and peer to peer training module will allow farmers to share successful farming technology and method to control the disease

Partnership We will collaborate with agri- tech startups, financial instruction, NGO to offer services like micro-loans, Certified seeds, and extension services directly through the platform

Fault Tolerance: The service must function reliably even in areas where there is poor internet connectivity, which is common across the internet

Redundancy Data will be backed up and mirrored across multiple regional servers to prevent data loss from single hardware failure

How Digital Agricultural connect can solved it in Africa community

.climate and risk is the problem facing and to solved it we need real time, localized forecasts and advisory alerts

.Low yields/ Pest To Solve this situation we need precision farming advice, disease identification

.Lack of Credit Digital Agricultural Services solve this by putting in place digital transaction history acts as verifiable credit score

.Poor Infrastructure to solve it by offline functionality and low bandwidth service delivery