SOLUTION ARCHITECTURE

Date	04 november 2025
TeamID	NM2025TMID04293
ProjectName	To supply leftover food to poor
MaximumMarks	4 marks

Solution Architecture:

Goals of the Architecture:

The goals of the architecture for supplying leftover food to the poor are to create a **reliable, efficient, and scalable system** that connects food donors with beneficiaries. It should ensure **real-time tracking** of available food, **safe and timely collection and delivery**, and effective coordination between volunteers, NGOs, and donors. The architecture aims to minimize food waste, maximize reach to those in need, maintain hygiene standards, and provide data for monitoring impact and improving operations over time.

Key Components:

The key components of supplying leftover food to the poor include food donors such as restaurants, households, and events; a safe collection and storage system to maintain hygiene; a volunteer or NGO delivery network; and the beneficiaries who receive the food. A coordination platform, like a mobile app or hotline, connects donors, volunteers, and NGOs in real time, while monitoring and tracking systems ensure efficient distribution and impact measurement. Partnerships with local authorities and social organizations provide support, resources, and compliance, making the system safe, efficient, and scalable.

Development Phases:

The development of a system to supply leftover food to the poor involves several phases: first, planning and research to identify donors, beneficiaries, and partners; next, designing the platform and logistics for safe collection and delivery; then, launching a small-scale pilot to test operations and gather feedback; followed by evaluation and process optimization; and finally, scaling the system to additional areas while continuously monitoring performance and impact to ensure efficiency, safety, and maximum reach.

Solution Architecture Description :

The solution architecture for supplying leftover food to the poor is a **structured system that efficiently connects food donors, volunteers, NGOs, and beneficiaries**. It consists of a digital platform—such as a mobile app or web portal—where donors can register surplus food, and volunteers or partner organizations can schedule pickups and deliveries. The system includes modules for tracking food quantity, ensuring hygiene and safety, and monitoring delivery status and impact. Communication channels and data management tools coordinate all stakeholders, while partnerships with local authorities and social organizations ensure compliance, scalability, and timely distribution to those in need.

Solution Architecture Diagram:

Views of a solution architecture