SE5100 – Rapid Application Development
Ideation, MVP Scope and Tech Stack Template

Group Details

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Idea Specification

GovEase – an AI-Assisted Customer Management System for Government Services

Project Description:

GovEase is a smart customer management system designed to streamline document submissions and service requests in Sri Lanka's government sector. The system integrates an AI-powered virtual assistant to guide users in submitting documents, tracking requests, and resolving queries efficiently.

Target Audience

- Citizens of Sri Lanka applying for government services (passports, licenses, permits, etc.).
- Government offices & employees handling customer documents and requests.
- Customer service representatives in government departments.

Why Is It Needed?

- **Manual Processes & Long Queues**: Citizens face delays due to physical visits and manual paperwork.
- **Lack of Guidance**: Many applicants struggle with incomplete documents and unclear requirements.
- **Tracking Issues**: No efficient way for citizens to track the status of their service requests.
- **Limited Accessibility**: Rural citizens find it difficult to visit government offices frequently.

MVP Scope

AI-Powered Virtual Assistant

- Provides guidance on document submission.
- Answers FAQs related to service requests.
- Supports Sinhala, Tamil, and English.

Online Document Submission & Validation

- Citizens can upload required documents.
- AI checks for missing or incorrect documents.

Service Request Management

- Submit service requests for government-related processes.
- Automated request tracking and updates.

Application Tracking Dashboard

- Citizens can check the status of their submissions.
- Real-time updates from government offices.

User Authentication

- Secure login using Sri Lanka's NIC-based authentication.
- Multi-role access (Citizen, Government Officer, Admin).

User Stories & Use-case Scenarios

User Story 1: AI-Assisted Document Submission

As a citizen,

I want to upload documents and get AI-driven validation,

So that I can ensure my submission is complete before visiting an office.

User Story 2: Service Request Submission & Tracking

As a citizen,

I want to submit a request (e.g., passport renewal) and track my application,

So that I don't need to visit the office to check progress.

User Story 3: AI Chatbot for Service Queries

As a citizen,

I want to ask questions about government services through a chatbot,

So that I can get instant answers without waiting in line.

User Story 4: Officer Document Review & Approval

As a government officer,

I want to review citizen-submitted documents online,

So that I can approve or request corrections efficiently.

Technology Stack

Frontend (Web & Mobile)
- Flutter (Mobile app for Android & iOS)
- Angular (Web-based portal)
- Material UI / Tailwind CSS (For modern UI design)

Backend
- Java (Spring Boot) – For API development
- Firebase Firestore – For real-time database management
- PostgreSQL – For structured data storage

AI & Automation
- Google Dialogflow – AI chatbot for customer support
- OCR (Optical Character Recognition) – AI document validation
- Langchain or OpenAI API – For intelligent document guidance

Other Integrations
- NIC-Based Authentication API – For secure user login
- Google Maps API – For locating nearby government offices

- Twilio API – For SMS notifications