Software Requirements Specification Document

Project Name: Digital-Village

Team Number: 45

Members:

- Ananya Amancherla
- Samruddhi Shastri
- Gunjan Gupta
- Ayush Goyal

Problem Statement: The purpose of this project is to build a mobile application to aid in the everyday working of the village panchayat. It is an application aimed to simplify complicated procedures such as announcements, complaint registration, payments, records of villagers etc. within the village. It is built primarily keeping in view the working of Panchayat and requirements of the villagers.

Requirements

- System Requirements
  - Frontend: React
  - Database: PostgreSQL
  - API: Flask or Django (Python)
  - Android version (10+)
  - ORM tool: Python SQLAlchemy
  - MockingBot Wireframe Creator

Users Profile

The app hosts two kinds of users - Admin(authorities) and end users(villagers).

1. **Admin**:
   - Sarpanch and VRO will use the app in this mode.
   - Familiarity with using computers/mobile is assumed to be greater than that of the villagers.
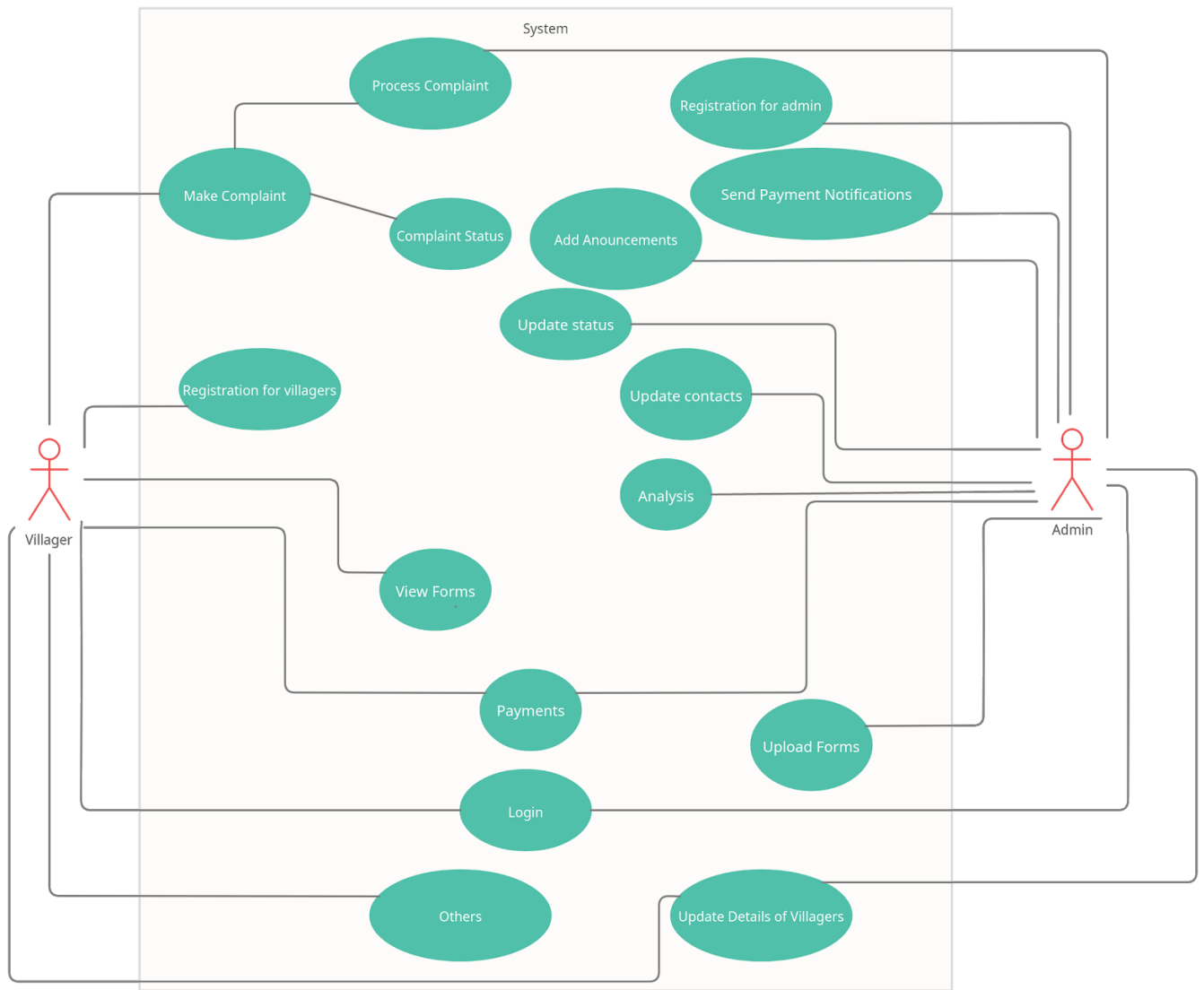
2. **End-User:**
   - All residents of the village can use the app in this mode
   - The app caters to little to no experience with computers/mobile. Registration for the user can be done by the admin.

Feature Requirements

No.	User Case Name	Description	Release
1	Registration for villagers	Register new user (admin or villager)	R1
2	Registration for admin	Register new Admin	R1
3	Login for villagers and admin	Login user to the application depending if the user is admin or a villager	R1
4	Add Announcements	Admin can create announcements and upload them	R2
5	Complaint Status	It contains id, title , status and details of the complaints along with an option to search using id and title.	R1
6	Make Complaint	The make complaint consists of input fields for user name , the category of complaint, a description for the complaint, phone number and an option to upload a relevant file.	R1
7	Process Complaint	Admin can view the complaints	R1
8	Update Details for villagers	See and update user information filled during registration	R1
9	Others	Organisation Chart: Displays the organisation chart of the village	R1

		Contact Us: Displays the names, designations , phone numbers and email addresses of the authorities. About Us: Display information about the parent company of the app. Update Organisation Chart: Admin can upload a new organisation chart.	
10	Payments	View dues (water bill, electricity bill, land taxes) and options to make payments	R2
11	Update details by admin	Admin has the privilege to update information of the user filled during the registration . The data of the users is presented in a table and there is a search option corresponding to every field.	R1
12	Update Status	Change the complaint status to 'In Progress'/ 'Done'/ 'Rejected'.	R1

13	Analysis	Display report of the
		    1. Villagers (filters)
		    2. Revenue
		    3. Complaints
			R2

14	Upload Forms	Admin can upload the necessary forms	R2
15	View Forms	Villagers can view and download forms	R2
16.	Send Payment Notifications	Admin can send notifications regarding payments.	R2

Use Case Diagrams

System

Process Complaint

Registration for admin

Make Complaint

Send Payment Notifications

Complaint Status

Add Anouncements

Update status

Registration for villagers

Update contacts

Analysis

Villager

Admin

View Forms

Payments

Upload Forms

Login

Others

Update Details of Villagers

Use Case Description

Use Case Number:	UC-01
Use Case Name:	Registration for villagers
Overview:	Register new villager with personal details along with username and password
Actors:	Villagers
Pre Condition:	Data should exist
Flow:	1. Registration form for the villagers will take input as name, Address, Date of Birth, Aadhar number, Contact number and profession. 2. Once the form is filled and details are verified, the registration form will be submitted
	Alternate Flow: N/A
Post Condition:	Data is updated, villager will get registered

Use Case Number:	UC-02
Use Case Name:	Registration for admin
Overview:	Register new admin
Actors:	Admin
Pre Condition:	Data should exist
Flow:	1. One admin account is provided thru backend 2. Admin can make other users Admin
Post Condition:	Data is updated, Admin will get registered

Use Case Number:	UC-03
Use Case Name:	Login for villagers and admin
Overview:	Login the user with username and password
Actors:	Admins and Villagers
Pre Condition:	User should be registered and Data should exist
Flow:	1. Login user to the application depending if the user is admin or a villager 2. Users should be able to login with username and password. If the user forgets password, a password is sent to him by SMS after checking OTP.
	Alternate Flow: N/A
Post Condition:	User will get logged in and dashboard will be displayed according to the user type (admin or villager)

Use Case Number:	UC-04
Use Case Name:	Add Announcements
Overview:	Admin can create announcements
Actors:	Admin
Pre Condition:	Admin should be logged in and Data should exist
Flow:	1. Admin can create announcements and upload them 2. Audio and Video files can be attached with the announcements 3. A filter option is available to filter the villagers to send the announcements
	Alternate Flow: N/A
Post Condition:	The announcement will be visible to all the villagers depending upon the

	filters

Use Case Number:	UC-05
Use Case Name:	Complaint Status
Overview:	The user is given an option to check the current status of ongoing complaint or to raise a new complaint.
Actors:	Villager
Pre Condition:	Data must exist
Flow:	1. Villagers can search for complaints using complaint ID or phone number.
	Alternate Flow: N/A
Post Condition:	The complaint status displays id, title , status and details of the complaints

Use Case Number:	UC-06
Use Case Name:	Make Complaint
Overview:	A form to register complaints for the villagers. They need to enter their name, complaint category, mobile number, complaint description and may upload a file.
Actors:	Villager
Pre Condition:	Data must exist
Flow:	1. Villager must fill in details required by the form.
	Alternate Flow: N/A
Post	The complaint instance is stored in the database and a complaint number is

Condition:	automatically assigned to it. Complaint status is unaddressed by default.

Use Case Number:	UC-07
Use Case Name:	Process Complaint
Overview:	The admin can process and update the complaints.
Actors:	Admin
Pre Condition:	Admin should be logged in
Flow:	1. The admin enters a complaint ID for search using all complaints displayed as reference. 2. The complaint ID section in the table links to the details of that complaint in the update status.
	Alternate Flow: N/A
Post Condition:	Complaint details will be displayed with an option to update status.

Use Case Number:	UC-08 (OPTIONAL)
Use Case Name:	Update Details for Villagers
Overview:	See and update details of the particular villager.
Actors:	Villager
Pre Condition:	Details must exist
Flow:	1. Villagers can update any field of their details.
	Alternate Flow: N/A
Post Condition:	Corresponding details are updated in the database.

Use Case Number:	UC-09
Use Case Name:	Others
Overview:	View : ● Organisation Chart ● Contact Us ● About Us ● Update Contacts
Actors:	Villager and admin
Pre Condition:	Data must exist
Flow:	Choose the option to view the organisation chart in the menu.
Alternate Flow:	Choose the option 'Contact Us' on the dashboard.
Alternate Flow:	Choose option to view 'About Us'
Alternate Flow:	1. Choose option to update contacts 2. Admin can enter name, designation, phone number and email ID of contact to be added. 3. Admin must select the phone number of contact to be deleted.
Post Condition:	Organisation chart will be displayed. Alternate Flow: Name, designation, phone number and email ID of village officials are displayed. Alternate Flow: Actor can view information about the company that developed the app Alternate Flow: Appropriate contact information of the village official must be added or deleted and reflected in the user UI.

Use Case Number:	UC-10

Use Case Name:	Payments
Overview:	View and pay dues
Actors:	Villager
Pre Condition:	Data must exist.
Flow:	1. The user can view their water bill, house tax due. 2. The user can pay online.
	Alternate Flow: N/A
Post Condition:	N/A

Use Case Number:	UC-11
Use Case Name:	Update details by admin
Overview:	Admin can update details of any villager
Actors:	Admin
Pre Condition:	Data must exist
Flow:	1. Admin must select villagers using a search on any field, referring to a table that displays details of all villagers. 2. Admin can update any field of selected villager
	Alternate Flow: N/A
Post Condition:	Corresponding details of the villagers are updated in the database.

Use Case Number:	UC-12
Use Case Name:	Update Status
Overview:	Admin can view a report based on filtering details of villagers, revenue or complaints.
Actors:	Admin
Pre Condition:	Complaint data must exist
Flow:	1. Admin must select resolved, reject or working(in progress) to update the status of that complaint
	Alternate Flow: N/A
Post Condition:	N/A

Use Case Number:	UC-13
Use Case Name:	Analytics
Overview:	Admin can view reports
Actors:	Admin
Pre Condition:	Admin should be logged in
Flow:	1. Admin must select subject of report (villagers, revenue, complaints) 2. Admin must select relevant filters/options
	Alternate Flow: N/A
Post Condition:	Reports/ graphs will be displayed

Use Case Number:	UC-14
Use Case Name:	Upload forms
Overview:	Admin can upload forms
Actors:	Admin
Pre Condition:	Data should exist
Flow:	1. Admin can upload forms relevant to government schemes, vaccines or scholarships
Post Condition:	Forms should be available for download in the users' UI

Use Case Number:	UC-15
Use Case Name:	View forms
Overview:	User can view and download forms
Actors:	Admin
Pre Condition:	Data should exist
Flow:	User can download form
	Alternate Flow: N/A
Post Condition:	N/A

Use Case Number:	UC-16
Use Case Name:	Send payment notifications
Overview:	Admin can send notifications to villagers about payments due.
Actors:	Admin
Pre Condition:	Data should exist
Flow:	1. Admin selects type of bill. 2. Admin selects frequency of payment required. 3. Admin selects which houses to send notifications to.
	Alternate Flow: N/A
Post Condition:	Payment notifications will be visible on users' homepage filtered by house.