Software Requirements Specification (SRS) Document

Project Name: Vaccination Service for Digital Village

Team Number: 10

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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 to keep in view the working of the Panchayat and the requirements of the villagers.

Additionally, a vaccination micro-service will be incorporated with the general digital village app through which the village admin will be able to track, edit and update the Covid Vaccination details of every member in the village. Analysis updates related to current affairs say the spread of the new Covid variant shall be published so as to also work as a holistic local news medium. Mechanisms to send out personal notifications regarding vaccination camp information to the villagers shall also be implemented.

This way, the app shall serve the purpose of an all-in-one platform customized to suit the needs of the rural community in an area.

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

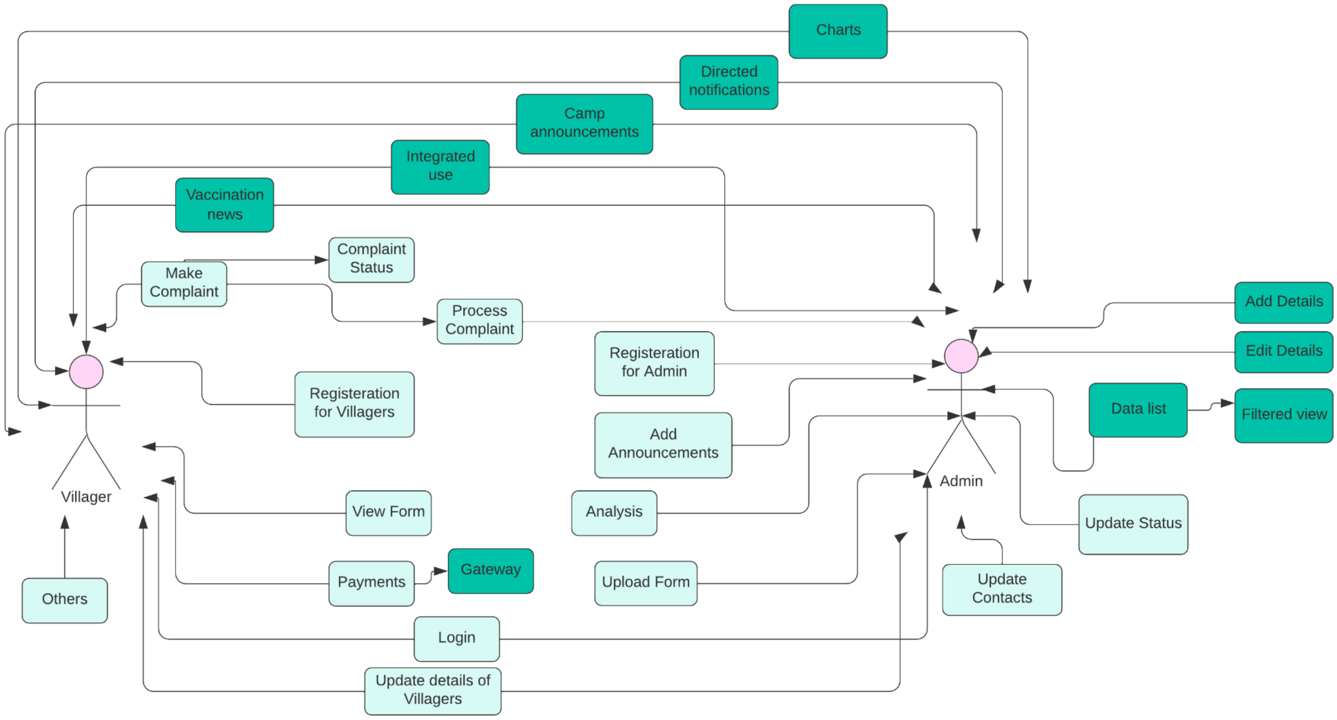
No.	User Case Name	Description	Release
1.	Add user	User gets added to the vaccination service database	R1
2.	View/Edit/Update details	Village administration can view/edit all - user details - vaccination details - covid status	R1
3.	Publishing news	Publishing local news updates/government schemes on a regular basis	R1
4.	Vaccination list	A tab for viewing and analyzing the vaccination/affection status of all the village members	R1
5.	Filtered View	Viewing filtered results from the vaccination list based on their vaccination/affection status	R1

6.	Data analysis charts	Graphs showing - Present status of covid active cases - Vaccination types/status	R2
7.	Camp Announcements	Administrators can post announcements related to vaccination camps etc	R2
8.	Directed notifications	Administrators can send notifications to a targeted set of villagers using filters based on their vaccination/affection status	R2
9.	Integrated use	The vaccination module gets linked to the digital village project to offer the users an all-in-one system	R2
10.	Payment Gateway	Bill payment system built on the existing view payment system	R2
Previous Releases			
1	Registration for villagers	Register new villager	
2	Registration for admin	Registering new admin	
3	Login for villagers and admin	Login user to the application depending on if the user is admin or a villager	
4	Add Announcements	Admin can create announcements and upload them	
5	Complaint Status	It contains id, title, status and details of the complaints along with an option to search using id and title.	

6	Make Complaint	The make complaint consists of input fields for username, the category of complaint, a description for the complaint, phone number and an option to upload a relevant file.
7	Process Complaint	Admin can view the complaints
8	Update Details for villagers	See and update user information filled during registration
9	Others	Organization Chart: Displays the organization chart of the village 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.
10	Payments	View dues (water bill, electricity bill, land taxes) and options to make payments
11	Update details by admin	Admin has the privilege to update the 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.
12	Update Status	Change the complaint status to ‘In Progress’/ ‘Done’/ ‘Rejected’.

13	Analysis	Display report of the 1. Villagers (filters) 2. Revenue 3. Complaints
14	Upload Forms	Admin can upload the necessary forms
15	View Forms	Villagers can view and download forms
16	Update contacts	Update contact information of village officials

Use Case Diagrams



Use Case Description-

Use Case Number:	UC-01
Use Case Name:	Add Details
Overview:	The user gets added to the vaccination service database
Actors:	Admin
Pre condition:	The database should be made
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 out and details are verified, the registration form will be submitted.
Alternate Flows:	1. The user details are obtained from the existing digital village service (if integrated)
Post Condition:	The villager is registered, Data is updated

Use Case Number:	UC-02
Use Case Name:	View/Edit/Update Details
Overview:	View/ Edit - user details - vaccination details - covid status

Actors:	Admin
Pre condition:	Villager data should exist
Flow:	1. Admin can view personal logs of each villager 2. Admin updates covid related information for the user from the same tab through which they view their details
Alternate Flows:	N/A
Post Condition:	The villager is registered, Data is updated

Use Case Number:	UC-03
Use Case Name:	Publishing news
Overview:	Publishing local news updates/government schemes on a regular basis
Actors:	Admin
Pre condition:	N/A

Flow:	1. Covid related general news is posted by the admin on the vaccination service app.
Alternate Flows:	N/A
Post Condition:	News can be viewed by all users

Use Case Number:	UC-04
Use Case Name:	Vaccination list
Overview:	A tab for viewing and analyzing the vaccination/affection status of all the village members
Actors:	Admin
Pre condition:	Villagers’ data should exist
Flow:	1. A datasheet like list displaying all the covid and vaccination-related details column-wise 2. Search toolbar to find by name
Alternate Flows:	N/A
Post Condition:	Data can be viewed and searched by the admin

Use Case Number:	UC-05

Use Case Name:	Filtered View
Overview:	Viewing filtered results from the vaccination list based on their vaccination/affection status
Actors:	Admin
Pre condition:	● Villagers’ data should exist ● Vaccination list should have been implemented
Flow:	1. Menu for Covid related filters viz: a. Doses b. Vaccination type c. Affection status 2. The vaccination list gets filtered out accordingly
Alternate Flow 1:	1. Buttons to filter
Alternate Flow 2:	1. Separate tabs for different views
Post Condition:	Filtered view of villager’s covid details is possible

Use Case Number:	UC-6
Use Case Name:	Data analysis charts
Overview:	Graphs showing - Present status of covid active cases - Vaccination types/status
Actors:	● Admins

	- Users
Pre condition:	Data should exist
Flow:	1. Pie charts/bar graphs depicting: a. Vaccination status based on doses b. Affection status
Alternate Flows:	N/A
Post Condition:	Data is graphically represented for quick statistics

Use Case Number:	UC-7
Use Case Name:	Camp Announcements
Overview:	Administrators can post announcements related to vaccination camps etc
Actors:	Admins
Pre condition:	Admin should be logged in and Data should exist
Flow:	1. Admins can type messages about the camps to be sent to all the people 2. Click Send
Alternate Flow:	1. Camp announcements are published as news updates on the app
Post Condition:	Announcements are sent/posted

Use Case Number:	UC-8
Use Case Name:	Directed notifications
Overview:	Administrators can send notifications to a targeted set of villagers using filters based on their vaccination/affection status
Actors:	Admins
Pre condition:	Admin should be logged in and Data should exist
Flow:	1. The admins set filters for selecting the person/set of people to send notifications to. 2. Then Type the message to be sent 3. Click on send
Alternate Flows:	N/A
Post Condition:	A notification is sent to a specific set of users.

Use Case Number:	UC-9
Use Case Name:	Integrated use
Overview:	The vaccination module gets linked to the digital village project to offer the users an all-in-one system.
Actors:	● Admin ● Villagers

Pre condition:	User/Admin is registered
Flow:	1. Button on the homepage that opens the vaccination service 2. Home button on vaccination module to return to the base app
Alternate Flows:	1. Menu option on the navigation bar on the digital village app that opens the vaccinations service 2. Home button on vaccination module to return to the base app
Post Condition:	The User/ Admin can now switch between the Digital village and the Vaccination Service.

Use Case Number:	UC-10
Use Case Name:	Payment Gateway
Overview:	Bill payment system built on the existing view payment system
Actors:	Villagers
Pre condition:	● The data should exist ● View payment module of Digital village should be complete
Flow:	1. Clickable links to payment gateways for various bills 2. The users can pay their bills online through these links
Alternate Flows:	N/A
Post Condition:	Payment succeeded

Previous Releases:

Use Case Number:	UC-01
Use Case Name:	Registration for villagers
Overview:	Register new villagers 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, villagers 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:	**To be discussed
Alternate flow:	

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 a username and password. If the user forgets the password, a password is sent to him by SMS after checking OTP.
Alternate flow:	N/A
Post Condition:	User will get logged in and the 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. Villagers must fill in details required by the form.
Alternate flow:	N/A

Post Condition:	The complaint instance is stored in the database and a complaint number is 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
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 : ● Organization Chart ● Contact Us ● About Us
Actors:	Villager and admin
Pre Condition:	Data must exist
Flow:	Choose the option to view the organization chart in the menu.
Alternate Flow:	Choose the option ‘Contact Us’ on the dashboard.
Alternate Flow:	Choose option to view ‘About Us’
Post Condition:	Organization chart will be displayed. Alternate Flow: Name, designation, phone number and email ID of village officials are displayed. Alternate Flow: Actors can view information about the company that developed the app

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 electricity bill, water bill, house tax and land 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:	Analysis
Overview:	Admin can view reports
Actors:	Admin
Pre Condition:	Admin should be logged in
Flow:	1. Admin must select the subject of the 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
Alternate flow:	N/A
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:	Update Contacts
Overview:	Admin can update the existing contact information of village officials
Actors:	Admin
Pre Condition:	Data must exist
Flow:	1. Admin can enter the name, designation, phone number and email ID of contact to be added.
Alternate flow:	Admin must select the phone number of the contact to be deleted.

Post Condition:	Appropriate contact information of the village official must be added or deleted and reflected in the user UI.