ESPOIR Software Requirements Specification

Version 3.0

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Description:

The ESPOIR Software Requirements Specification provides a list and description of the functional and non-functional specifications for the software components of ESPOIR.

The ESPOIR Software Requirement provides the following views of the requirements.

- A list of the requirements presented numerically.

- A preliminary component grouping of the requirements.

- A preliminary mapping of the requirements against proposed objects and their responsibilities.

- The possible constraints faced by the application and the user.

The document is intended to establish the initial scope of the development effort.

Perspective

This is an application that helps the localities to obtain the government services directly. If the residents of a particular area face any problem with respect to their living environment, they can lodge a complaint to their respective municipality in a short span with the help of this app and specifying their problem and location.

Product Functions System Decomposition View

Preliminary functional components of the product are as follows :

Screen 1: Application Opening

Screen 2: Home Screen with GUI Elements

Screen 3: List of complaint categories

Screen 4: Selection of Location and details

Screen 5: Placing the Complaint

User Characteristics

The user should have an account as well as login id to place complaints.

The user needs to use internet connection and GPS connection available while using this application.

The application provides quick connection with the person who is responsible for betterment of the situation by placing complaints and monitoring it.

External Resource Requirements

The issues dealt within this section of the document pertains to the user and system requirements that affect the operation of the app.

User Interface

In Corona, widgets provide user-interface tools that are standard features when programming in the native development environment for iOS and Android. The app includes the following widgets:

- Buttons-The widget.newButton provides a button that supports onPress ,onRelease and onEvent events.
- Scroll view- The scrollview widget allows you to create scrolling content areas.
- Tab bar- The tab bar allows you to create a customizable tab bar. Tabs are auto positioned based upon the number of buttons.
- Table view- The tableview widget allows you to create a scrolling list. With this widget rendering of individual rows is controlled.

Hardware Interface

The app is supported on all android and iOS devices which includes mobiles, tabs, televisions.

Communications Interface

The user interacts with the app using the internet connection for placing complaints.

The user needs to enable GPS connection to locate the area where the problem occurs.

The user has to have a valid photograph of the problem, this is to verify if the situation actually exists or not.

Functional Requirements Views

This section provides the two views of the functional requirements.

- The first view provides a primary list of the functional requirements. This list is organized sequentially.

- The second view provides a list of the functional requirements as grouped according to component. A component is also called a "screen." Each screen represents a coherent grouping of functionality.

Primary List of Functional Requirements

Requirement 1: Sign up form

1.1: Installation of app:

- The user get a sign up form.

1.2:Details of user:

- This collects the details of the user like name,email-id and mobile number.

1.3:Network availability:

- The internet connection should be available to use the application.

Requirement 2: Login page

2.1:Text box:

- The user gets a text box to enter user name.
- The user has to enter password which has special characters and capital letters.

2.2:Validation:

- The password is verified and validated.

2.3:Submit button:

- This page will have a submit button.

2.4:Forgot password:

- It will display a message "*forgot password*" to help the user in case he has forgotten the password by sending a mail to the email-id given immediately.

Requirement 3: Place complaint

3.1:Complaint button:

- This page will have a button with the message *"place a complaint"* accessing which we can place complaints.

3.2:Complaint Existence:

- Here you can search for the complaints in case it has already been registered.

Requirement 4: Complaint details

4.1:Description:

- The user has to give a description about the complaint

4.2:Location:

- The user has to locate the complaint area using GPS.

4.3:Image:

- The user has to update an image related to the complaint, if possible.

Requirement 5: Complaint category

Some of the categories under which the complaints can be placed are as follows.

5.1: Roads

- Road footpath blocked.
- Potholes.
- Illegal road cutting.
- Dangerous road/footpath.
- Others.

5.2: Garbage

- Segregation of waste not done by officials.

- Garbage thrown all around and no maintenance.

- Cockroach rats and flies problem because of solid waste.

- Removal of garbage.

- Cleaning of vacant sites.

- Removal of construction debris and other debris.

- Burning of garbage.

- Absenteeism of door to door garbage collector.

- Non cleaning of dustbins.

- Nuisance of garbage tractors or trucks.

- Complaint against garbage / sweeping contractor.

5.3: Drains
- Drainage problem.
- Drainage overflow.
- Drainage block.
- De-silting of road side drains

- Cleaning of storm water drains.

5.4: Street Lights
- Street lights not working.

- No lights in the park.

- Other.

5.5: Welfare

- No proper allocation of students to hostel.

- Maintenance of hostels is poor.

- Health kits not provided.

- Financial assistance not given to backward class.

- No school in my colony.

- No teachers in the school in my colony.

- Books not given to the children.

- Food served in school is not hygienic.

- Uniforms not given to the children.

- Not getting school admission as per RTE act.

5.6: Tree Control

- Tree problems, tree plantation, pruning of trees, removal of fallen dry dangerous and trees.

- Smuggling of forest property.

- Illegal cutting of trees.

- Fallen tree branch.

- Dangerous tree condition.

5.7: Advertisement Related

- BBMP boarding data.

- Abusive advertisement.

- Other.

- Hoarding is reducing the visibility of the road.

- Illegal hoarding in the colony.

5.8: Animal Health

- No medicines in the clinic, no maintenance in the clinic.

- Doctor not treating the animal.

- Training and assistance of maintaining pets.

- Others

5.9: Dangerous Condition

- Poorly maintained bus shelter.

- Environmental protection.

- Dangerous condition in bus shelter.

- Fencing for lake.

- Other.

5.10: Health Related

- Home related centre complaints.

- Cockroach rats and flies problem because of solid waste.

5.11: Illegal Activity

- Illegal stalls and vendors.

- Lake water is misused.

- Vehicles are washed in the lake.

- Illegal dumping of dangerous materials of lake.

- Hotels or factory dumping solid waste in the colony.

- Garbage is thrown all around.

- Illegal house inside the forest.

- Illegal entry of citizens into the forest.

- Other.

5.12: Pollution Related

- Fish in the lakes are dying.

- Lakes are not clean and are not maintained properly.

- Reduce pollution effect.

- Other.

5.13: Garbage Related

- Market is not clean not maintained.

- No garbage collection in my street.

- Need training on segregation of solid waste.

- Cleaning of roads.

- Water logging.

- Sanitary land fill sites.

- Unauthorized restaurants.

- Hospitals related matters.

- Biomedical waste.

- Hearse works / Crematorium.

- Burial grounds.

- Cremation grounds.

- Hotels or factory dumping solid waste in the colony.

5.14: Stray Animals

- Stray dogs.

- Control of animal diseases not done.

- Animal threat.

- Bird menace.

- Other.

5.15: Health

- The wastes from market is causing health hazard.

- Practitioner doctor complaints.

- Nursing home complaints.

- Medical record complaints.

- Hospital complaints.

- Health plan complaints.

- Could not get help from health centres.

- Could not get medicines from health centres.

- Health hazard due to facility.

- Clinic dispensary complaints.

- Establishment of clinic in the colony.

- Other.

5.16: Public Safety

- Dangerous bus shelter facility.

- Public safety.

- Hoarding is not safe.

- Dangerous electric wire condition on street.

- Dangerous access to lake.

Requirement 6: Complaint confirmation

6.1:SMS intimation:

- After selecting the category and placing the complaint, you will be notified with an SMS to the registered mobile number which will contain the details of the person and the department that is responsible for resolving the complaint that you have placed.

Requirement 7: Complaint status

7.1:Select Button:

- The button *"my complaints"* takes the user to a page will have the details of the user name, complaint id, complaint category, complaint date, complaint description.

7.2:Status:

- Along with this it will also show the status of the complaint like received, waiting list, complaint resolved.

7.3:SMS intimation:

- If the complaint is resolved, then you will be notified with another SMS.

Requirement 8: Update and Share

8.1:Bug report:

- App has an option where the user can report a bug through Email.

8.2:Update:

- This helps the developers check and provide updated version to the user.

8.3: Share:

- The app can be shared.

Design Constraints

The application runs only if the user is online, we do not provide offline operation.
The user has to keep his GPS on when he wants to place a complaint as it is easy for the application to validate the address.

Availability

The application is available for use after installation. A single installation package allows the user to install the application. After the installation is done, the user must register by providing his/her name, email-id and contact number. After the registration is done, the user can place a complaint any-time provided they have internet connection.

Security

The security issues which might occur are:
- Duplicate accounts - created to place invalid complaints by invalid users.
- Redundancy - same complaints by different users.

Maintainability

- The database which has details of complaints placed and its status, this has to be updated frequently.
- The app has to check whether the complaints placed are resolved or not.