

**Presented By**

Team Nature

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Department: Software Engineering

Course Title: **Software Engineering Design Capstone Project**

Course Code: SE331

**Submitted to**

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**SOFTWARE REQUIREMENTS SPECIFICATION**

Requirements analysis is the best process for identifying the user satisfaction

From the system. So, requirements analysis is an important part of project management. When I selected this project, I thought about some specific software requirements, like as

Ø Who is the stakeholder of this project?

Ø Is it helpful for them or not?

Ø Functional and non-functional requirements

Ø Maintenance of the system

Ø Is it efficient for use?

* 1. **Functional Requirement**

The functional requirements of the system are like below---

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| FR-01 Registration | |
| Description | Super Admin, Admin, and users first need to register themselves by using their name, email, phone, and password. |
| Stakeholder | Super Admin, Admin, and users |

# Login

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| FR-02 Login | |
| Description | Allocate users can log in using email and password. The database will check the username and password to match the person that they are authorized to use. |
| Stakeholder | Super Admin, Admin, and users |

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| FR-03 Map show | |
| Description | Users can show the map here and also access the current place. |
| Stakeholder | Admin, and users |

**Latitude & Longitude**

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| FR-04 Latitude & Longitude | |
| Description | Users can provide latitude & longitude to access any place. |
| stakeholder | Admin, and users |

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| FR-05 Current Location alert | |
| Description | Users can provide latitude and longitude to access their current location to alert them of the disasters. |
| stakeholder | Admin, Users |

**Search**

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| FR-05 Search | |
| Description | Users can search for a place to detect disasters. |
| stakeholder | Admin Users |

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| FR-07 Alert | |
| Description | Users can get alerts from the place by using our app. |
| stakeholder | users |

**Path of the safe zone**

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| FR-08 Path of the safe zone | |
| Description | Users can view the safe zone to be aware of the disaster. |
| stakeholder | Users |

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| FR-09 weather Forecast | |
| Description | Users can watch the weather forecast here. |
| stakeholder | Users |

**Daily disaster**

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| FR-10 Daily disaster | |
| Description | Users can easily update about the daily disaster from our app. |
| stakeholder | Users |

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| FR-11 Earthquake detect | |
| Description | Users can detect earthquakes from the map by using our app. |
| stakeholder | Users |

**Strom detect**

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| --- | --- |
| FR-12 Strom detect | |
| Description | Users can detect Storm from the map by using this app. |
| stakeholder | Users |

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| FR-13 Drought detect | |
| Description | Users can detect Drought from the map by using this app. |
| stakeholder | Users |

**Blizzard detect**

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| FR-14 Blizzard detect | |
| Description | Users can detect Blizzard from the map by using this app. |
| stakeholder | Users |

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| FR-15 Wildfire detect | |
| Description | Users can detect Wildfire from the map by using this app. |
| stakeholder | Users |

**Zone alert**

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| FR-16 Zone alert | |
| Description | Users can watch the color of safe and unsafe zones from this app. |
| stakeholder | Users |

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| FR-17 Get Temperature (5-day forecast) | |
| Description | There will be an option in this for showing a 5 day forecast. |
| stakeholder | Users |

**Show in °F**

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| FR-18 S**how in °F** | |
| Description | Weather will be shown in **°F.** |
| stakeholder | Users |

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| FR-19 Feels like | |
| Description | In this segment users can notify about what the weather feels like. |
| stakeholder | Users |

**Chance of rain**

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| FR-20 Chance of rain | |
| Description | Chance of rain is also shown here in this app. |
| stakeholder | Users |

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| FR-21 Precipitation (**shown in inches)** | |
| Description | There will be perception in weather which will be permitted by inches. |
| stakeholder | Users |

**Humidity**

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| FR-22 Humidity | |
| Description | Humidity is also shown in the weather forecast segment. |
| stakeholder | Users |

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| FR-23 Wind direction | |
| Description | There will be a wind direction in the app. |
| stakeholder | Users |

**wind speed**

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| FR-24 wind speed | |
| Description | Users can easily get notified about the wind speed from our app. |
| stakeholder | Users |

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| FR-25 Explore Galaxy | |
| Description | Here in this segment users can explore the galaxy and this will have some fun to explore from the app. |
| stakeholder | Users |

**Prepared advice on disasters using maps**

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| FR-26 Prepared advice on disasters using maps | |
| Description | Users can prepare themselves by getting advice or alerts from the disaster using a map. |
| stakeholder | Users |

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| FR-27 Track natural disasters in real-time | |
| Description | Users can track natural disasters from this app. |
| stakeholder | Users |

**Monitoring locations and specific hazards**

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| FR-28 Monitoring locations and specific hazards | |
| Description | Users could monitor specific hazards as well. |
| stakeholder | Users |

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| FR-29 Sending safety alerts | |
| Description | Users will notify from this app that he/she will get a safety alert. |
| stakeholder | Users |

**Notification**

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| FR-30 Notification | |
| Description | Notification will be there for the user that they can notify about the disaster from this app. |
| stakeholder | Users |

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| FR-31 Message | |
| Description | There will be a chatting option there for any issues. |
| stakeholder | Users |

**Explore Mars**

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| FR-32 Explore Mars | |
| Description | Users can explore mars here as well and that will be fun as well. |
| stakeholder | Users |

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| FR-33 Validity checks | |
| Description | There will be a validation of everything they can check there by using the app. |
| stakeholder | Users |

**Sol hours with data**

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| FR-34 Sol hours with data | |
| Description | They can sol hours with data. |
| stakeholder | Users |

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| FR-35 View cards (Research documentation of mars) | |
| Description | Users will see the research documentation here with a card view. |
| stakeholder | Users |

**Contact**

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| FR-36 Contact | |
| Description | Contact options will be there for the users. |
| stakeholder | Users |

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| FR-37 Loading spinner | |
| Description | There will be a loading spinner there to show data when it comes from the backend. |
| stakeholder | Users |

**FAQ**

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| FR-38 FAQ | |
| Description | There will be an option for the user to frequently ask questions. |
| stakeholder | Users |

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| FR-39 Terms And Conditions | |
| Description | Terms and conditions will be there for some rules and regulations. |
| stakeholder | Users |

**Dashboard(for admin)**

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| FR-40 Dashboard(for admin) | |
| Description | There will be a dashboard for admin. Only the admin can view this. |
| stakeholder | Admin |

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| FR-41 Dashboard(for super admin) | |
| Description | There will be a dashboard for admin. Only the admin can view this. Here super admin can add admin and super admin as well. |
| stakeholder | Super-Admin |

**Dashboard(for users)**

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| FR-42 Dashboard(for users) | |
| Description | There will be a dashboard for users. Only the users can view this. |
| stakeholder | Users |

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| FR-43 User controls | |
| Description | And there will be a control segment where they can add, edit and delete. |
| stakeholder | Users |

**Admin controls**

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| FR-44 Admin controls | |
| Description | And there will be a control segment where they can add, edit and delete. |
| stakeholder | Admin |

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| --- | --- |
| FR-45 Super Admin controls | |
| Description | And there will be a control segment where they can add, edit and delete. |
| stakeholder | Super admin |

**Earthquake tips**

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| FR-46 Earthquake tips | |
| Description | There will be an option for the tips of earthquakes. |
| stakeholder | Users |

**Strom tips**

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| FR-47 Strom tips | |
| Description | There will be an option for the tips of storms. |
| stakeholder | User |

**Flood tips**

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| FR-48 Flood tips | |
| Description | There will be an option for the tips of flood. |
| stakeholder | Users |

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| FR-49 Drought tips | |
| Description | There will be an option for the tips of drought. |
| stakeholder | Users |

**Blizzard tips**

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| --- | --- |
| FR-50 Blizzard tips | |
| Description | There will be an option for the tips of blizerds. |
| stakeholder | Users |

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| FR-51 Wildfire tips | |
| Description | There will be an option for the tips of wildfire. |
| stakeholder | Users |

**Help Center**

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| FR-52 Help Center | |
| Description | There will be a help center for the user where they can inform us if they face any issues. |
| stakeholder | Users |

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| FR-53 Emergency contacts | |
| Description | There will be an option for emergency contacts. There we will put some emergency contact information for the user that they could get any service if they face a natural disaster. |
| stakeholder | Admin, Users |

**About us**

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| FR-54 About us | |
| Description | Here we will put our info for the users. |
| stakeholder | Super-admin, Users |

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| FR-55 Donors list | |
| Description | There will be donors for the victims of natural disasters. So they will be shown here if anyone helps someone by using our app. |
| stakeholder | Admin, Users |

**Add Request**

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| FR-56 Add Request | |
| Description | Donor will send us a request for approval. |
| stakeholder | Admin, Users |

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| FR-57 Cancel request (within 24 hours) | |
| Description | They can cancel that as well and also they have permission to the admin to cancel any request. |
| stakeholder | Admin, Users |

**Donors payable request**

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| FR-58 Donors payable request | |
| Description | They can request payment for someone through the app. The request will be shown here and the admin will control this. |
| stakeholder | Admin, users |

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| FR-59 Donors-Leaderboard | |
| Description | There will be a leaderboard in the app for the donors. |
| stakeholder | Admin, Users |

**Logout**

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| FR-60 Logout | |
| Description | Allocate users can log out from the app. |
| stakeholder | Super-Admin, Admin, Users |

## Non Functional Requirements

* + 1. **Security**

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| NFR-01 Security | |
| Description | Using token-based authentication, session, validation 2FA it will be Secure from unauthorized access. |
| Priority | High |

* + 1. **Availability**

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| NFR-02 Availability | |
| Description | The system should work 24/7 as user can get access and service. |
| Priority | High |

* + 1. **Accuracy**

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| NFR-03 | Accuracy |
| Description | Data or process requirement concerned with defining the precision which the solution will record or produce data. |
| Priority | High |

* + 1. **Maintenance**

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| NFR-04 Maintenance | |
| Description | Its way how easy to support, change and enhance the system. |
| Priority | High |

* + 1. **Speed and Latency Requirements**
       1. Dataset would be inserted in Mongo Databases
       2. UI design-build on the user fulfills table data set and show.

## Precisions or Accuracy Requirements

* + - 1. All users are capable to show accurate pages.
      2. Admin can Update any information
      3. Admin can manage any information (NDAS).
      4. Admin can add and delete components as well. (NDAS).

## Capacity Requirements

* + - 1. At times multiple users can use this system.
      2. Users can track natural disasters with the help of maps.

## Dependability Requirements

* + 1. **Reliability Requirements**
       1. Super Admin, Admin, and users should log in to the system using their valid email and password after registration.

## Availability Requirements

* + - 1. When we are using this system need to connect it to MongoDB & run the server side as well for localhost.
      2. Need to know commands to run properly and easily.
      3. This web application should run on a web browser and it’s a responsive website anyone can browse this via mobile phone as well. (Preferable browser is Chrome, Firefox, and Internet Explorer).

## Maintainability and Supportability Requirements

* + 1. **Maintenance Requirements**
       1. If we need data to recover or update then the super admin will solve this.
       2. We need to maintain all security and other work.

## Supportability Requirements

* + - 1. When the system did not work perfectly then need to check the database and other work.
      2. Update security patches and other systems.

## Adaptability Requirements

* + - 1. This is a very important website.
      2. This website can help people to aware about natural disaster.

## Scalability or Extensibility Requirements

1. This website is good and reliable for each and every one.
2. Website is good to help for awareness of natural disasters.

## Security Requirements

* + 1. **Access Requirements**
       1. Only registered users access this main system.
       2. Guest cannot allow for this system’s main work.

## Integrity Requirements

* + - 1. This website cannot access another user like guest user.

## Privacy Requirement

* + - 1. Here we are using activate user system.