**FUNCTIONAL REQUIREMENTS**

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| **Functional Requirement ID** | **Requirement Description** | **Acceptance Criteria** | **Source of Data** |
| FR1.1 | The system shall allow users to input an area code. | Area code accepts up to 5 numeric characters. | User Input |
| FR1.2 | The system shall display the corresponding geographic area name. | Area names are displayed and verified within 5 seconds of area code input. | Location Services |
| FR2 | The system shall display weather conditions updated within the past 5 minutes from a weather data provider. | Weather data displayed must be no older than 5 minutes from the data provider. | Weather Data Provider |
| FR3 | The system shall provide a refreshed 7-day weather forecast every 3 hours. | Forecast updated and displayed every 3 hours. | Weather Data Provider |
| FR4 | The system shall display severe weather alerts relevant to the user’s location | Alerts displayed within 5 minutes of official release. | Meteorological Authority |
| FR5 | The system shall provide clothing recommendations based on the forecast for the user’s specified location. | Recommendations align with current weather conditions. | Weather Data Provider |
| FR6.1 | The system shall provide an administrative panel that shall display real-time statistics of system usage. | The panel updates and displays system usage statistics at least every minute. | Test the panel’s ability to update and display system usage statistics in real time. |
| FR6.2 | The admin panel shall allow administrators to view logs of system activities. | Administrators can access and view a log of system activities, including timestamps and types of activities. | Test the functionality by accessing and reviewing the activity logs through the admin panel. |
| FR6.3 | The admin panel shall provide alerts for any operational anomalies or system errors. | The panel sends alerts within 5 minutes of detecting operational anomalies or system errors. | Simulate operational anomalies and system errors to test the alert system’s response time and accuracy. |

**NONFUNCTIONAL REQUIREMENTS**

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| **Non-Functional ID** | **Requirements Category** | **Requirements Description** | **Acceptance Criteria** | **Verification Method** |
| NFR1.1 | Usability | The system shall display weather related information using standardized terminology consistent with meteorological standards. | Information shall be displayed in usable terminology for the user. | Conduct usability testing with a sample group of users. |
| NFR1.2 | Usability | The system shall provide on-screen help messages for data features. | Weather data features have accompanying help messages that can be accessed and understood by the user. | User interface inspection and user testing. |
| NFR1.3 | Usability | The system shall provide tooltips for weather data features. | Tooltips appear when the user hovers over weather data features providing additional information in a clear format. | User interface inspection and user testing. |
| NFR2 | Robustness | The system shall handle incomplete or incorrect input. | The system displays error messages, prompting for a correct input. | Input validation testing. |
| NFR3.1 | Reliability | The system must restore functionality within 5 minutes after a failure. | Full system recovery is confirmed within the 5-minute time frame. | Recovery testing. |
| NFR3.2 | Reliability | The system must restore functionality within 5 minutes after a reboot. | After a simulated system reboot, all application features are fully operational. | Intentional reboot recovery testing. |
| NFR4 | Availability | The system shall be operational with an uptime of 99.5%. | System down time is no more than 3.5 days in a year, excluding maintenance. | System log monitoring. |
| NFR5 | Performance | The system shall display requested information within 5 seconds. | Weather data is displayed within the 5 second timeframe. | Performance testing. |
| NFR6 | Supportability | The system shall allow updates with minimal downtime. | System updates occur with no more than an hour of downtime. | Maintenance recording. |
| NFR7.1 | Implementation | The system shall be implementable on standard web hosting platforms. | System installs on web hosting services with standard configurations. | Deployment testing. |
| NFR7.2 | Implementation | The system shall be compatible with the latest versions of major browsers. | The application functions correctly on the latest version of major browsers. | Browser compatibility testing. |
| NFR8 | Interface | The web service shall integrate with third parties utilizing standard APIs. | Successful data exchange with third party entities. | API Integration testing. |
| NFR9 | packaging | The system shall be deployable remotely. | Remote deployment is possible using standard tools. | Deployment testing. |
| NFR10 | Legal | The system shall comply with regulations relevant to web services. | The system meets or exceeds requirements for data protection. | Compliance auditing. |