TEAM SKYWARD

Frost Monitor Project

Acceptance Test & Requirements Review

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Skyward

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Requirements Review

Based on our requirements acquisition work and evolution during implementation, the following are the key technical requirements driving of our product:

R1: Web Application Displays and Stores Various Data.

- The Web Application displays the following information on the front page of the application:
    - Telescope status information
    - Weather status information
    - NEO target information
- The Web Application stores the data that is displayed within a database.

Specific implemented functionalities that satisfy this requirement:

- Telescope status information is displayed via a table of information, as well as images within the front page of the application.
- Weather status information is displayed via graphs within the front page of the application.
- NEO Target information is displayed within a table on the front page of the application.
- All of the above-listed data is stored within the Django application's sqlite3 database - which is queried by the REST API for display.

R2: Web application contains a single password-protected admin user.

- The web application has an already established admin user account made up of the following parts:
    - Account user-name
    - Account password

Specific implemented functionalities that satisfy this requirement:

- The admin-login page requires the admin account credentials to be entered and authenticated before the admin page is displayed.

R3: Broker communication between 'Nuthatch' database server and web application.

- The web application communicates between the server via a REST API (JackFrost) which is built upon the Django Rest Framework. The JackFrost REST API allows for two way data flow between Nuthatch and the web application.

Specific implemented functionalities that satisfy this requirement:

- Various calls to the REST API allow for data to be queried and displayed on the front-page of the web application
- Serializers info / specifics?

R4: Maintain list of last issued commands to telescope.

- The web application stores and displays "log" files that are created by FRoST.
- The log files are sent from the telescope via the REST API to be stored by the web application.

Specific implemented functionalities that satisfy this requirement:

- The telescope log section of the dashboard dynamically displays the received telescope log files.

R5: Telescope Shutdown Button.

- The web application offers a 'shutdown' button that allows for a message to be sent once clicked
- The shutdown button must be only accessible to an admin within the admin screen

Specific implemented functionalities that satisfy this requirement:

- The admin page of the web application contains a shutdown and reset button that is capable of sending a message once clicked

R6: Accessing Weather Information and All-sky Images.

- The web application is able to access the weather information supplied by Lowell Observatory / Mesa weather station information.
- The all-sky images are accessible via a soft-link to Nuthatch

Specific implemented functionalities that satisfy this requirement:

- Dr. Mommert has written a script to access Lowell's secured network and supply data to the web application via the JackFrost API.
- Dr. Mommert has provided a link to the All-sky and telescope images within Nuthatch.
- Both the weather information and images on our site are displayed within the front-page of the web application

Demonstration Sequences:

Demonstration Sequence 1: Dashboard Display & Database

Requirements demonstrated: R1, R4, R6

Flight Plan for this demo sequence:

1. View the dashboard and verify correct data is displayed within the dashboard.
2. Look at the queries from database that are grouping data to be pulled into template.

Evaluation (filled in real-time by mentor):

ü Convincingly demo'd each of targeted requirements?

ü Quality, aesthetics and other evaluative comments:

Demonstration Sequence 2: Admin Login & Telescope Shutdown

Requirements demonstrated: R2, R5

Flight Plan for this demo sequence:

1. Login to admin panel with password protected admin account.
2. Verify that the "Shutdown" button exists behind the login page.

Evaluation (filled in real-time by mentor):

ü Convincingly demo'd each of targeted requirements?

ü Quality, aesthetics and other evaluative comments:

Demonstration Sequence 3: JackFrost API Usage & Verification

Requirements demonstrated: R3

Flight Plan for this demo sequence:

1. Push data to Frost Monitor System via JackFrost script.
2. Verify that the pushed data is indeed stored within Frost Monitor database.

Evaluation (filled in real-time by mentor):

ü Convincingly demo'd each of targeted requirements?

ü Quality, aesthetics and other evaluative comments: