

CS Capstone Design

Final Project Demo Grading Sheet (50 pts)

	50
A: +90%	45
B: +80%	40
C: +70%	35
D: +60%	30
F: <50%	25

TEAM: _____ **Team Radio Pi** _____

Overview: The main purpose of the “Technical Demos” is to very clearly explore the extent to which the team has implemented the key functional and performance requirements for their project. Grading is based on two factors:

- **Completeness:** Have all of the key requirements been implemented. To what extent does the product have all of the functionalities and performance that was promised.
- **Quality:** Just having basic functionality is the bare minimum. What is the quality of the implementation? Is the resulting product aesthetically pleasing, easy to use, and a pleasure to work with; to what extent is it “ready for market”?

This template is fleshed out by the team, **reviewed and approved by CS mentor beforehand**, and then brought to demo in hardcopy for the mentor to use as a grading sheet.

Requirements Review

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

R1: Dashboard Access.

The team shall build a C2 dashboard in to access the product

An accessible web application dashboard has been built containing the following major sections:

- Device Lookup
- Device Activation, Deactivation
- Device Status Display

R2: Database Implementation.

The team shall implement a database that is small in footprint, yet still meets the rigorous demands of the product.

Such a database has been built as follows:

- Using SQLite3
- Database has been tested (testing document has already been presented), and remains small in memory resource requirements, remains functional under high stress, maintains state in the case of a unexpected event and or shutdown, and is built to sustain minimal data loss in the event of a catastrophic system failure.
- The database is able to be written to, queried from, and the like, in a timely manner and fashion.
- The database contains support for files, device status, device temperature, device ID, database size, and time of query.

R3: Device Management

The team shall build the product such that devices managed from a single, usable interface.

Successful device management will be demonstrated as follows:

- A device will be activated and stored in the database
- A device will be deactivated and removed from the database

R4: Device Lookup

The team shall build the product such that an individual device can be searched and its information reviewed, in favor of searching through a potentially exhausting list.

Successful device lookup will be demonstrated as follows:

- A device that has been activated within the database will be searched, and its information displayed to the user.
- A device that has not been activated within the database will be searched, and nothing will be returned to the user.

R5: Device Status Display

The team shall build the product such that all registered devices in the database will be displayed in a single view whether the device is on or off.

Successful device status display view will be demonstrated as follows:

- The user will navigate to the web page and then navigate to the device status display page, and will be presented with all devices that have been registered in the database.

Demonstration Sequences:

This section outlines the demonstration sequences prepared to prove the above functionalities. Each sequence is a coherent walk-through of some piece/area of the product, designed to highlight implementation of specific requirements/functionalities outlined in the last section.

Demonstration Sequence 1: Dashboard Access

Requirements demonstrated: R1

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. The user will navigate to the home page of the web application C2 dashboard
2. They will be displayed with a home tab, and three other options to navigate to, Device look up, device management, device status display.

Evaluation (filled in real-time by mentor):

- ✓ Convincingly demo'd each of targeted requirements?

 - ✓ Quality, aesthetics and other evaluative comments:
-

Demonstration Sequence 2: Database Actions

Requirements demonstrated: R2

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. The database size will be displayed with each query of the main simulated SDR device, the size displayed has been updated at the exact time of each new query, and this is confirmed by the timestamp.
2. The database size displayed will be confirmed by showing the statistics of the database running on the simulated device, which will be accessed via SSH from the machine running the final demonstration

Evaluation (filled in real-time by mentor):

- ✓ Convincingly demo'd each of targeted requirements?

 - ✓ Quality, aesthetics and other evaluative comments:
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Demonstration Sequence 3: Device Management

Requirements demonstrated: R3

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. The user will navigate to the web application dashboard, and be presented with the home page.
2. The user will navigate to the device status tab and confirm that the device about to be activated has not yet been added to the database.
3. The user will navigate to the device management tab and activate the device.
4. The user will navigate to the device status tab and confirm that the device has been added to the database.
5. The user will navigate to the device look up tab for and look up the device that has just been added for further confirmation.
6. The user will then navigate to the device management tab and remove the same simulated device from the database.
7. The user will navigate to the device status tab and confirm that the device has been removed.
8. The user will navigate to the device look up tab and attempt to look up the device that has been removed, nothing will be displayed to them.

Evaluation (filled in real-time by mentor):

- ✓ Convincingly demo'd each of targeted requirements?

- ✓ Quality, aesthetics and other evaluative comments:

Demonstration Sequence 4: Device Lookup

Requirements demonstrated: R4

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. The user shall navigate to the dashboard web application.
2. The user shall than navigate to the device look up tab.
3. The user shall enter in a valid device number and be displayed with that specific device's information.

Evaluation (filled in real-time by mentor):

- ✓ Convincingly demo'd each of targeted requirements?

 - ✓ Quality, aesthetics and other evaluative comments:
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Demonstration Sequence 5: Device Status Check

Requirements demonstrated: R5

Flight Plan for this demo sequence: Step by step plan of things to do/demo

1. The user shall navigate to the dashboard web application.
2. The user shall than navigate to the device status display tab.
3. The user will be displayed with an updated view of all devices that have been registered into the database.

Evaluation (filled in real-time by mentor):

- ✓ Convincingly demo'd each of targeted requirements?

 - ✓ Quality, aesthetics and other evaluative comments:
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