Testing Procedures

Assignment 2: RFID Reader

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General

An outline of the software tests designed for Assignment 2: RFID Reader, code name *Tag, You're It*.

Test Environment

The equipment needed to test the program.

Software

- The program itself, RFIDReader

Hardware

- Skyetek RFID Reader Device
- USB connector cable

Test Requirements

These tests assume the RFID device is connected to the computer via USB cable.

Test Case 1: Application Connects to RFID Device

Goal: Application can detect the device to communicate with it further.

Preconditions: The RFID device is in working order and is connected to a USB port.

Test Step: Click "Connect" in the "Connect/Disconnect" menu.

Expected Result: Application should access the correct device and displays "CONNECTED" in the status bar when a device with an RFID reader connects.

Actual Outcome: Application displays "CONNECTED" in status bar for > 5 s, meaning the function has found the correct device and not timed out.

Test Case 2: Application Disconnects from Device

Goal: Disconnect the Application from the device and display that status.

Preconditions: The RFID device may be previously connected to the application.

Test Step: Click "Disconnect" on the "Connect/Disconnect" menu.

Expected Result: The application should disconnect from the RFID reader and displays "DISCONNECTED" on the status bar.

Actual Outcome:

(i) The application was previously connected: The application disconnects from the RFID reader and displays "DISCONNECTED" on the status bar.

(ii) The application was not previously connected: Status bar displays "CONNECTED" for 5 s, then changes to "DISCONNECTED" after searching for devices and not finding anything.

Test Case 3: Application Finds Tag(s)

Goal: Tell the RFID Reader to continuously scan for tags, and if found, save the tag name.

Preconditions: Test Case 1.

Test Step: Place a tag on or very close to the RFID reader.

Expected Result: Application should detect > 0 number of tags.

Actual Outcome: Application finds > 0 tags.

Test Case 4: Application Displays Tag(s)

Goal: Print out the tag hex string to the main application window.

Preconditions: Test Case 1, Test Case 3

Test Step: Place a tag on or very close to the RFID reader.

Expected Result: Tag hex string(s) should display on the application window.

Actual Outcome: Tag hex string(s) display on the application window. If a tag has previously been printed but has been scanned again, it is not printed again. However, if it is taken out of proximity, the previously read tag persists on the screen.