
RFID Reader

Assignment 2

Test Documentation

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Test #	Description	Test	Expected Results	Pass/Fail	Supporting Details
1	Attempting to connect to reader	Ensure the program isn't connected. Ensure the RFID read is connected. Click the connect button at the top of the program. Once connected, attempt to read a tag.	The program will attempt to connect with the RFID reader, and prompt the user with success when connected.	PASS	See figure 1.
2	Read a Tag	Placing a tag on the connected RFID reader while the program is in "connected" mode.	Data about the tag read should be populated to the list view on the program. Including the index of the tag, the name of the tag, and the type.	PASS	See figure 2.
3	Read different type of tags	Placing different tags on the reader, one at a time, on the RFID reader while the program is in "connected" mode.	Data about each tag should show up in the list view as specified above. The list should include different tag names and tag types.	PASS	See figure 3.
4	Attempting to disconnect from reader	Ensure the program is connected. Click the disconnect button at the top of the program. Attempt to read a tag after disconnect, expected not to read.	The program will attempt to disconnect from the RFID reader. The user will be alerted on success.	PASS	See figure 4.
5	Attempting to clear the list view.	Clicking the clear button at the top of the program.	The list view should clear all items populated from within itself.	PASS	See figure 5.
6	Opening the help window.	Clicking the help button at the top of the program.	A dialog window containing help information should appear for the user.	PASS	See figure 6.
7	Window updates when resizing, minimizing, maximizing, and moving the window	Resizing the window while the program is attempting to read a tag in connected mode. Also maximize, minimize and move the window.	The list should stay populated and the program should continue to read.	PASS	See figure 7.
8	No memory leaks when successive disconnecting/connecting.	Attempt to disconnect and reconnect several times. Monitor memory usage of the program in windows task manager.	The memory should not increase on disconnects and reconnects.	PASS	See figure 8.
9	How efficient is the list view for keeping track of items.	Attempt to populate the list with 100,000 items.	The list should be as responsive as before, and hold all 100,000 items.	PASS	See figure 8-10.

10	Attempt to cycle through connect and disconnect, ensuring the features work completely.	Ensure the program is disconnected. Ensure the RFID reader is connected. Connect by clicking the button at the top of the program. Attempt to read a tag. Attempt to disconnect by clicking disconnect at the top of the program. Attempt to read a tag (expected to be not readable). Attempt to connect again.	The program should be able to read a tag and display its information to the list view when connected, and not display any tag when disconnected. The program should be able to reconnect after the first disconnect.	PASS	See all figures. All figures were taken in the same program instance.
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Figure 1 – Connected Prompt

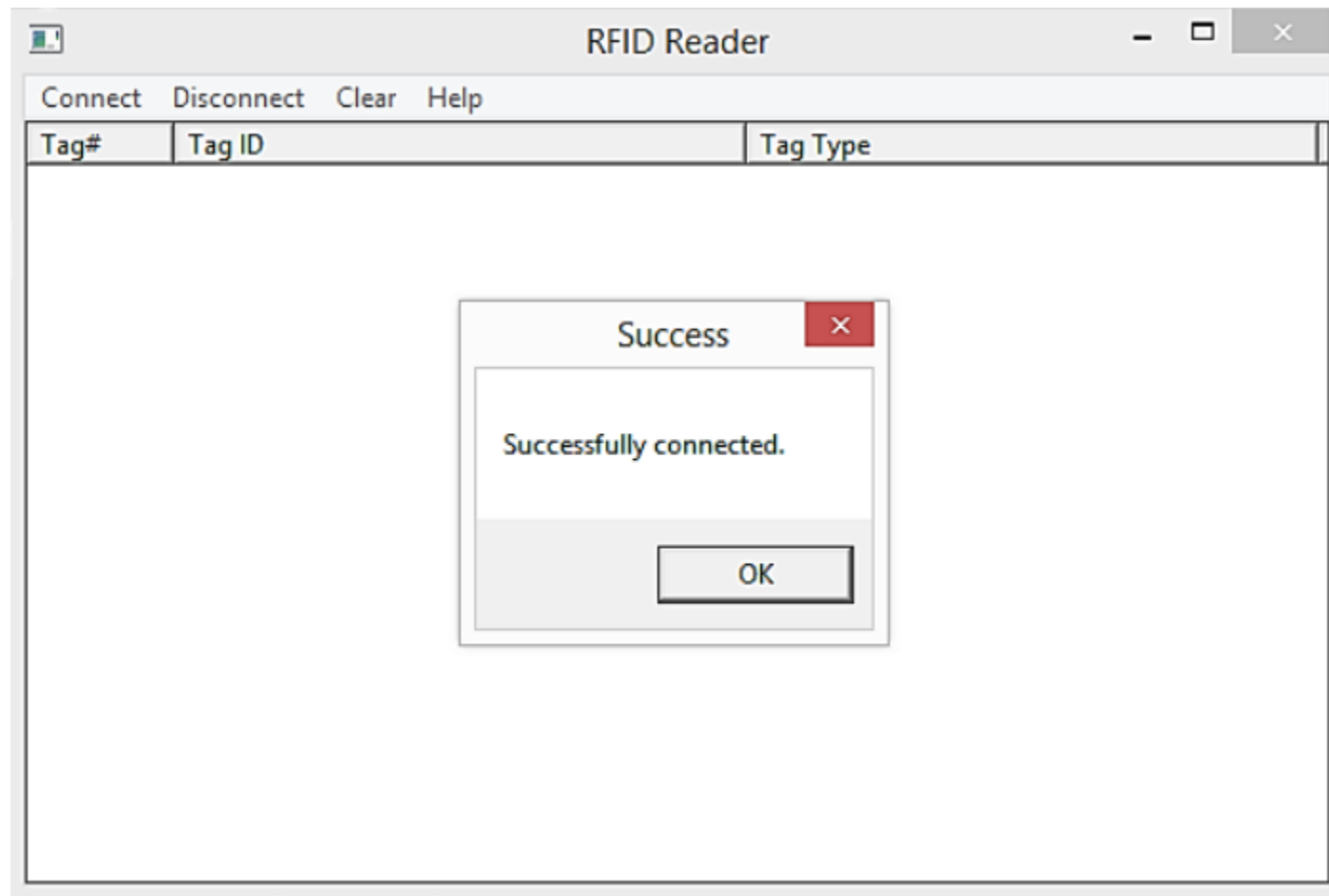
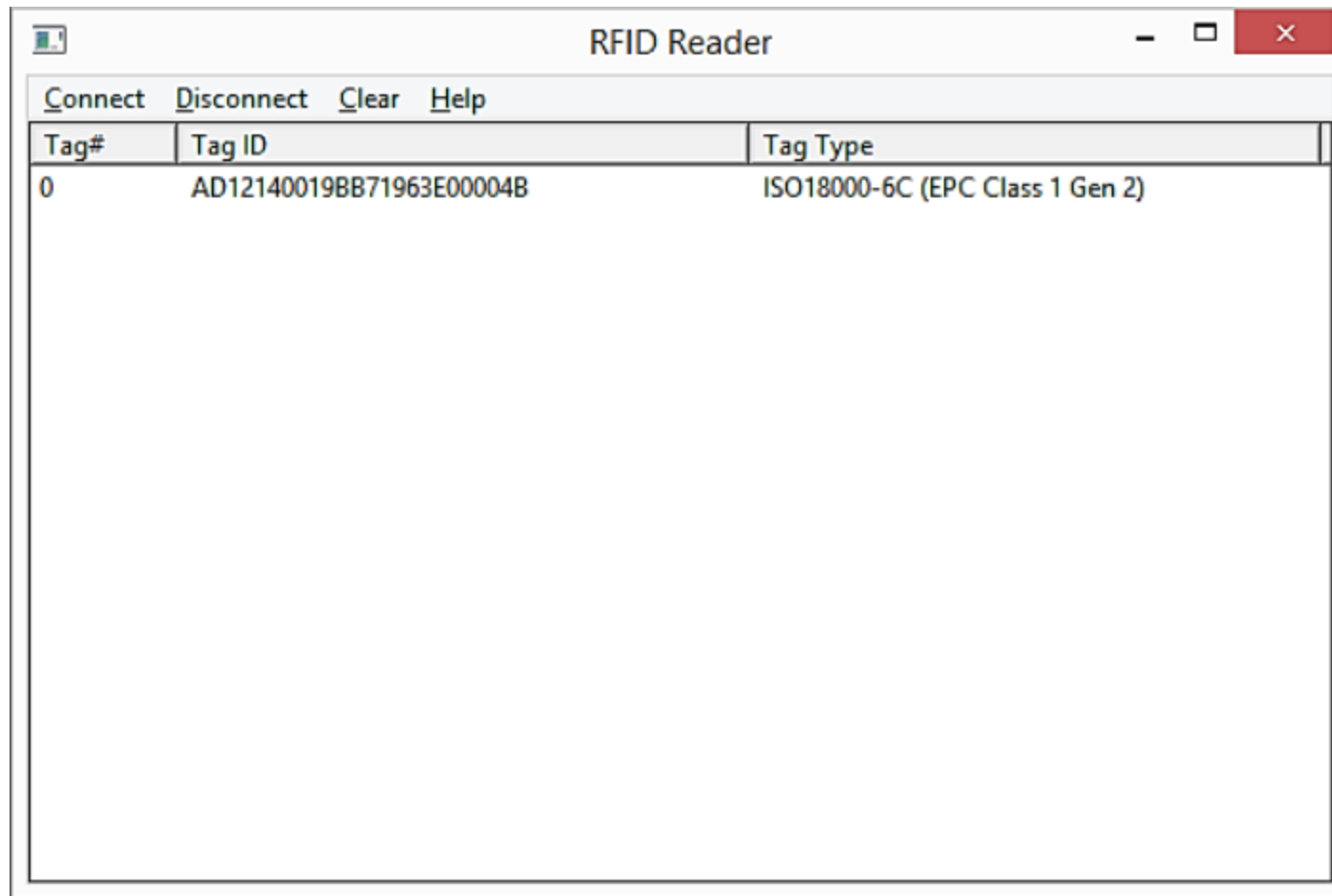


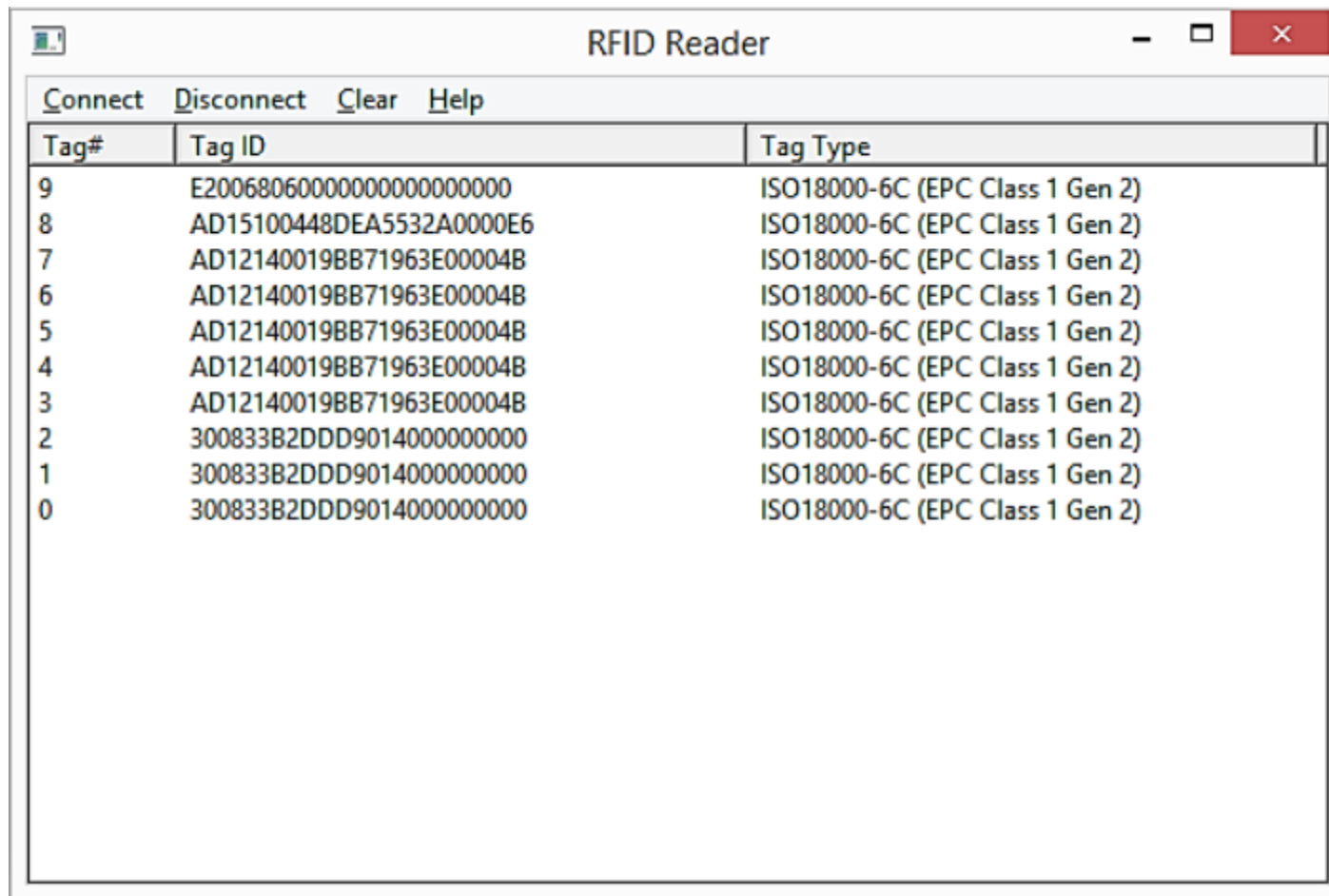
Figure 2 – A Single Tag



The image shows a screenshot of a software application titled "RFID Reader". The window has a standard Windows-style title bar with a minimize button, a maximize button, and a red close button. Below the title bar is a menu bar with four items: "Connect", "Disconnect", "Clear", and "Help". The main area of the window contains a table with three columns: "Tag#", "Tag ID", and "Tag Type". The table has one data row with the following values: "0" for Tag#, "AD12140019BB71963E00004B" for Tag ID, and "ISO18000-6C (EPC Class 1 Gen 2)" for Tag Type.

Tag#	Tag ID	Tag Type
0	AD12140019BB71963E00004B	ISO18000-6C (EPC Class 1 Gen 2)

Figure 3 – Several IDs Populated



The image shows a screenshot of a software application titled "RFID Reader". The window has a menu bar with "Connect", "Disconnect", "Clear", and "Help". Below the menu bar is a table with three columns: "Tag#", "Tag ID", and "Tag Type". The table contains ten rows of data, indexed from 9 down to 0. The "Tag ID" column contains a mix of hexadecimal and decimal strings. The "Tag Type" column for all entries is "ISO18000-6C (EPC Class 1 Gen 2)".

Tag#	Tag ID	Tag Type
9	E20068060000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
8	AD15100448DEA5532A0000E6	ISO18000-6C (EPC Class 1 Gen 2)
7	AD12140019BB71963E00004B	ISO18000-6C (EPC Class 1 Gen 2)
6	AD12140019BB71963E00004B	ISO18000-6C (EPC Class 1 Gen 2)
5	AD12140019BB71963E00004B	ISO18000-6C (EPC Class 1 Gen 2)
4	AD12140019BB71963E00004B	ISO18000-6C (EPC Class 1 Gen 2)
3	AD12140019BB71963E00004B	ISO18000-6C (EPC Class 1 Gen 2)
2	300833B2DDD9014000000000	ISO18000-6C (EPC Class 1 Gen 2)
1	300833B2DDD9014000000000	ISO18000-6C (EPC Class 1 Gen 2)
0	300833B2DDD9014000000000	ISO18000-6C (EPC Class 1 Gen 2)

Figure 4 – Disconnected Prompt

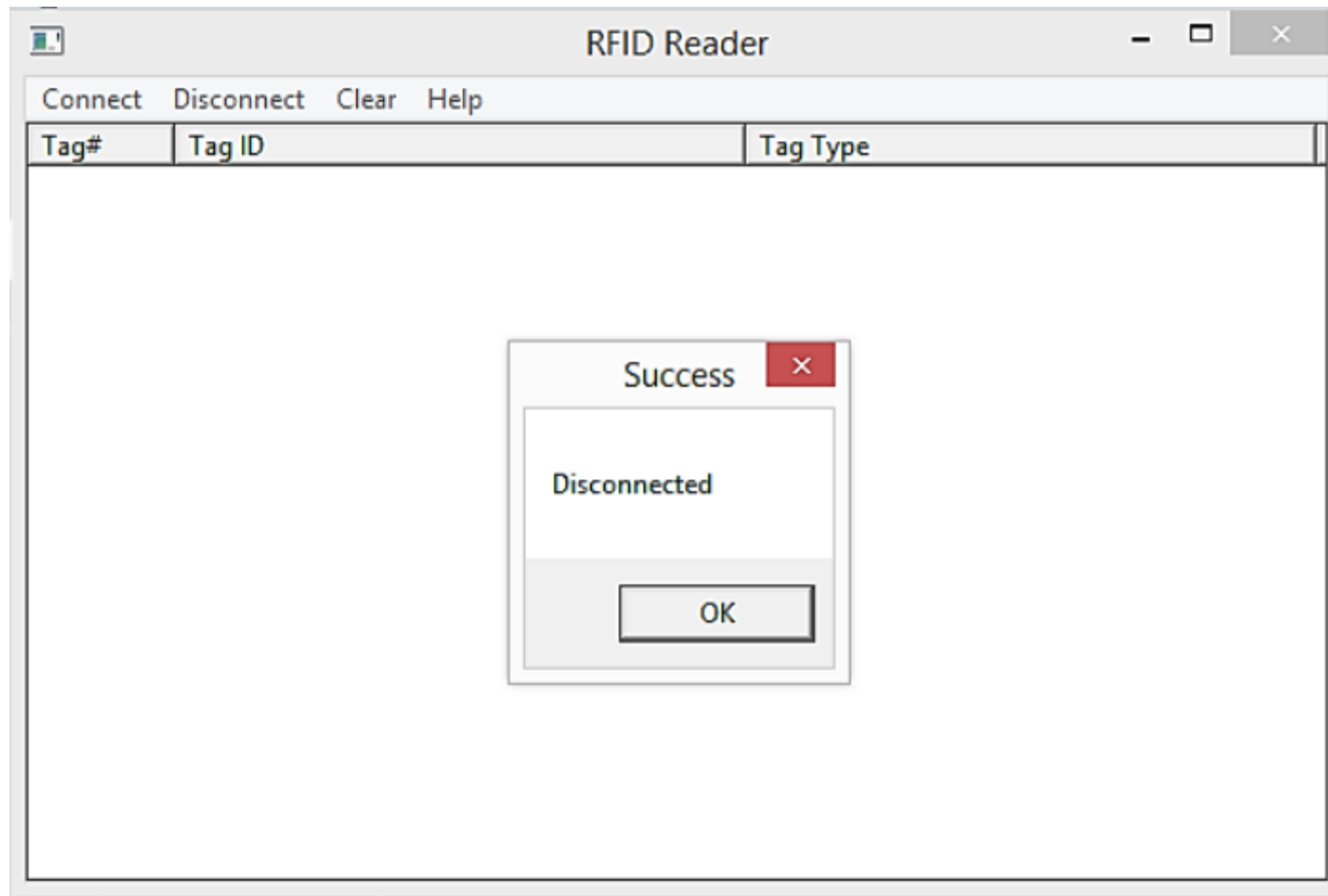


Figure 5 – Cleared List

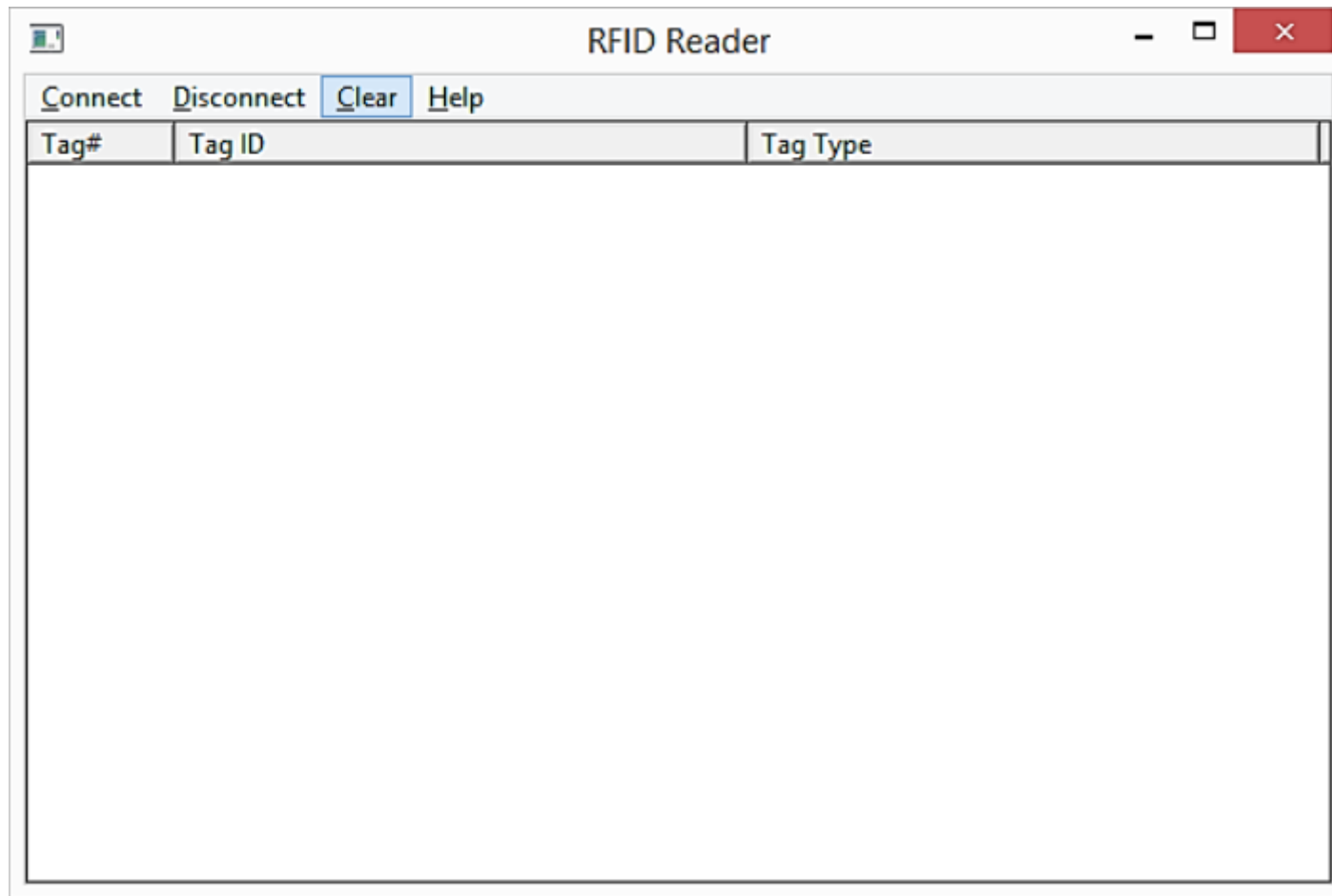


Figure 6 – Help Prompt

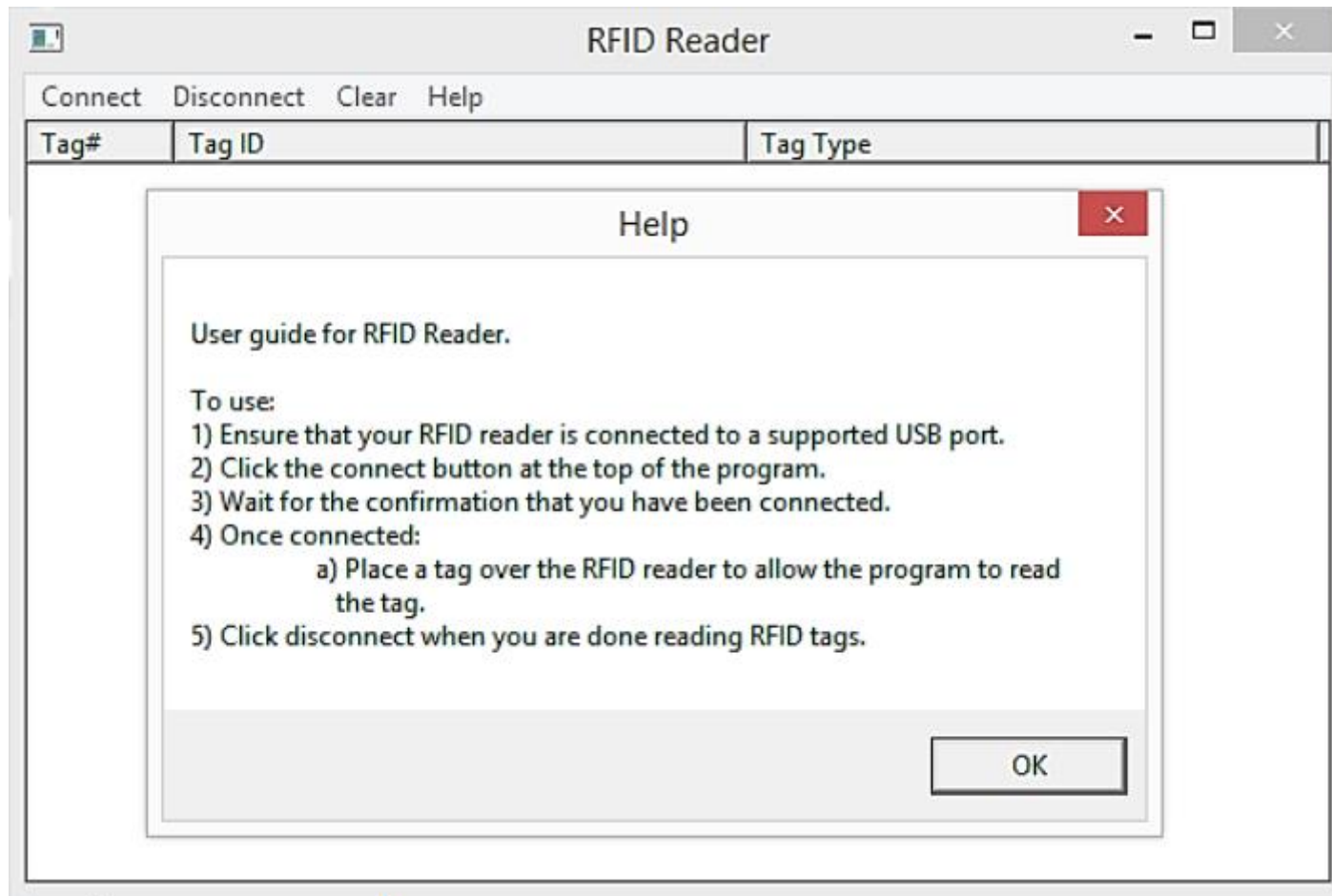
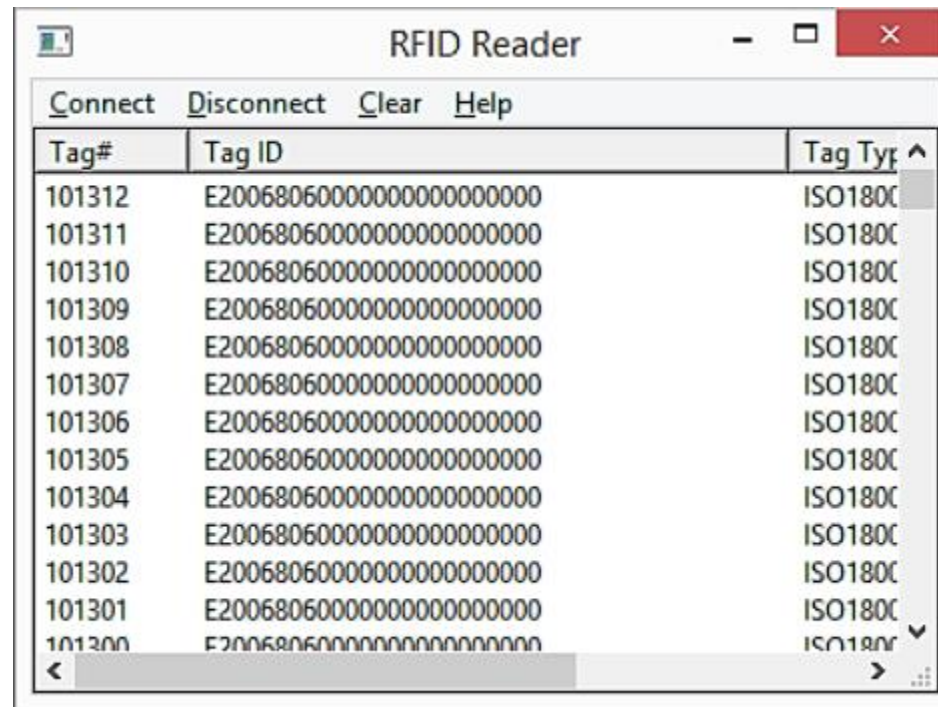


Figure 7 – Resized Window Still Drawn



Tag#	Tag ID	Tag Type ^
101312	E2006806000000000000000000	ISO180C
101311	E2006806000000000000000000	ISO180C
101310	E2006806000000000000000000	ISO180C
101309	E2006806000000000000000000	ISO180C
101308	E2006806000000000000000000	ISO180C
101307	E2006806000000000000000000	ISO180C
101306	E2006806000000000000000000	ISO180C
101305	E2006806000000000000000000	ISO180C
101304	E2006806000000000000000000	ISO180C
101303	E2006806000000000000000000	ISO180C
101302	E2006806000000000000000000	ISO180C
101301	E2006806000000000000000000	ISO180C
101300	E2006806000000000000000000	ISO180C

Figure 8 – CPU Usage for Large List

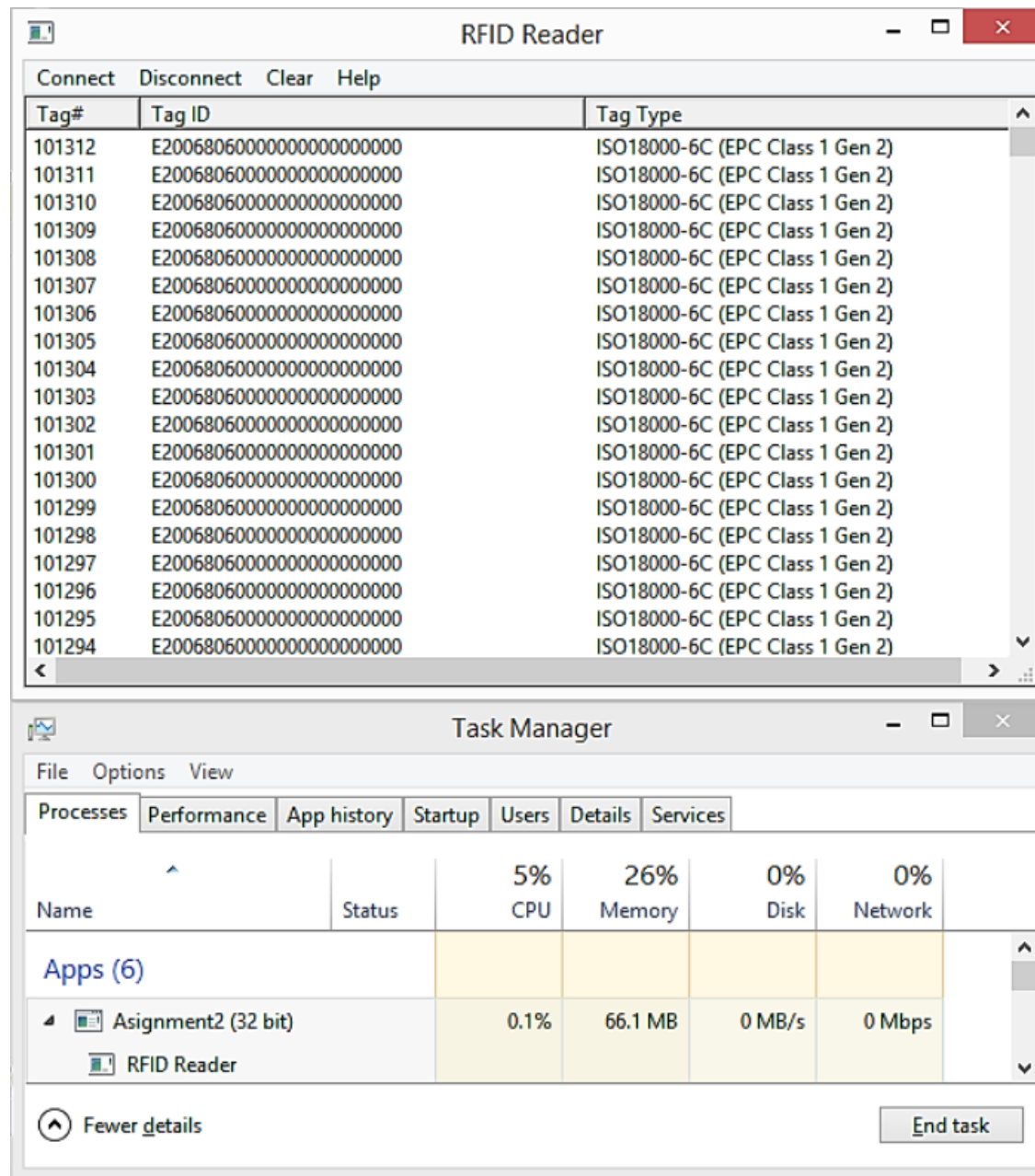
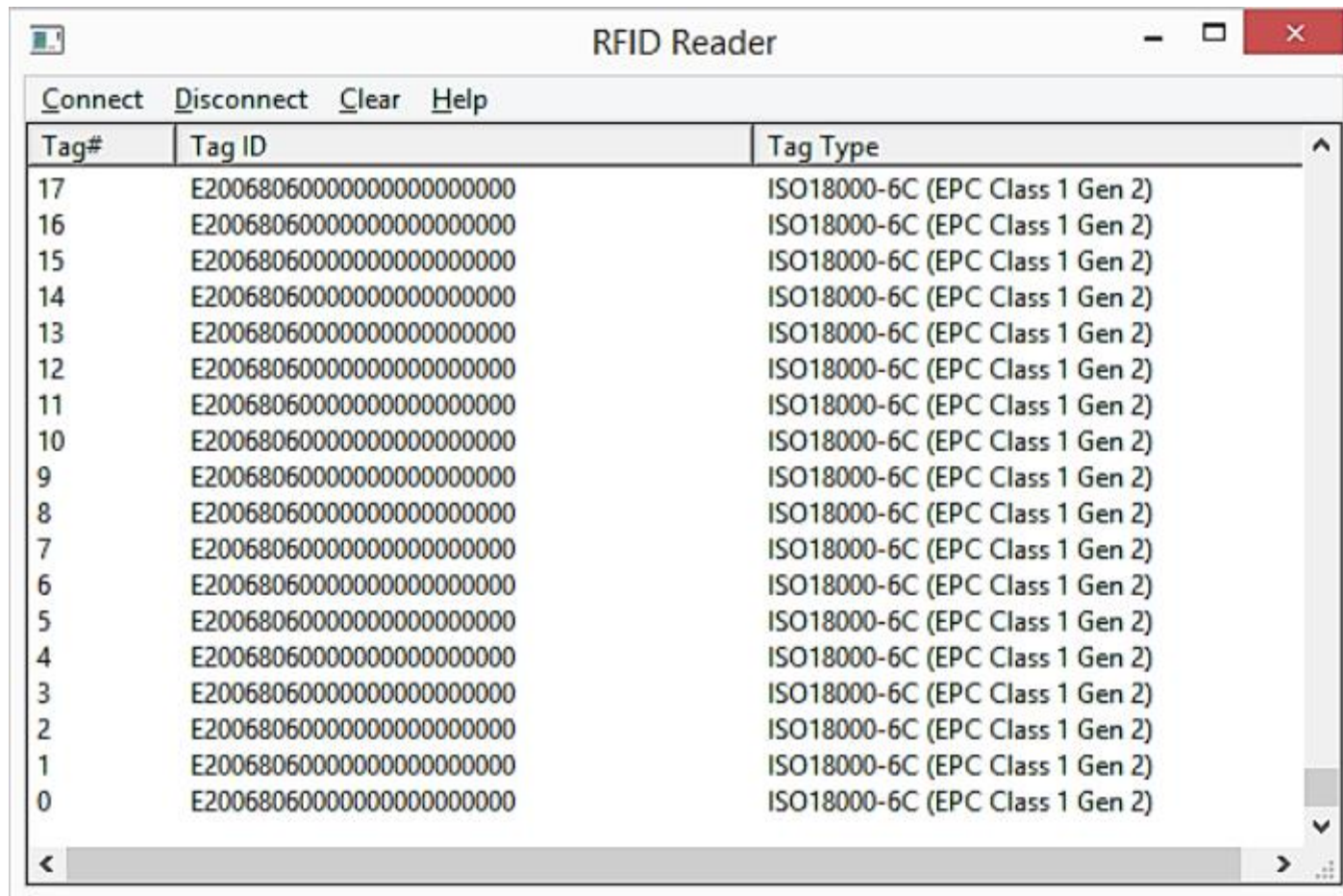


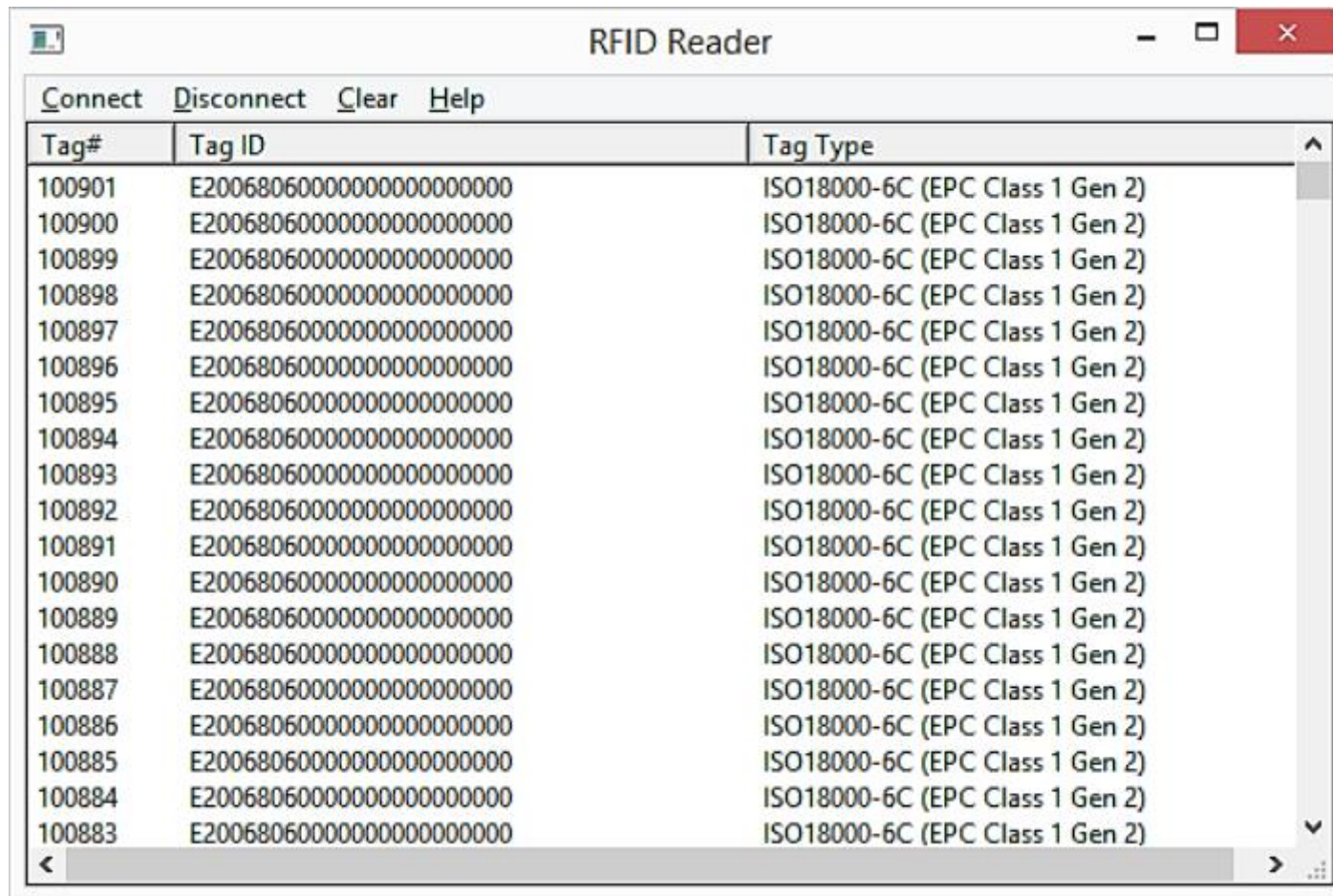
Figure 9 – Large List at the Bottom



The screenshot shows a software window titled "RFID Reader" with a menu bar containing "Connect", "Disconnect", "Clear", and "Help". The main area displays a table with three columns: "Tag#", "Tag ID", and "Tag Type". The table contains 18 rows of data, all with identical values. A vertical scrollbar on the right indicates that the list is longer than what is currently visible, with the bottom of the list being truncated. The bottom of the window features a horizontal scrollbar and a small icon in the bottom right corner.

Tag#	Tag ID	Tag Type
17	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
16	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
15	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
14	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
13	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
12	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
11	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
10	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
9	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
8	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
7	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
6	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
5	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
4	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
3	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
2	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
1	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
0	E2006806000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)

Figure 10 – Large List at the Top



The screenshot shows a software window titled "RFID Reader" with a menu bar containing "Connect", "Disconnect", "Clear", and "Help". Below the menu is a table with three columns: "Tag#", "Tag ID", and "Tag Type". The table contains 17 rows of data, all of which are visible at the top of the window. The "Tag#" column lists values from 100901 down to 100883. The "Tag ID" column lists a series of E20068060000000000000000000000000. The "Tag Type" column lists "ISO18000-6C (EPC Class 1 Gen 2)". A vertical scrollbar is visible on the right side of the table, and a horizontal scrollbar is at the bottom.

Tag#	Tag ID	Tag Type
100901	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100900	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100899	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100898	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100897	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100896	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100895	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100894	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100893	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100892	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100891	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100890	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100889	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100888	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100887	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100886	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100885	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100884	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)
100883	E20068060000000000000000000000000	ISO18000-6C (EPC Class 1 Gen 2)