ID	Requirement	Related Use Case	Implemented by	Tested by	Description
1	A symbol on the screen that indicates an active pulse reading.	Use Case 1: Individual Monitoring Session	Mainwindow.ui	Running the program. The HR disconnect and HR reconnect buttons are used to simulate the HR being disconnected and reconnected.	During a session while the session is being run and showcased in the display the symbol indicates an active pulse. Reading is occurring and the HR is connected. If the HR is not connected the user is notified and the symbol indicates that it is not connected.
2	A user interface consisting of the following components: A screen that contains menu options and the display graph. Eight buttons that include an off/on button for the device, a menu button, a standard back button, four arrow buttons (up/down,left/right) and a selector in the center of the arrow buttons.	Use Case 1: Individual Monitoring Session	Mainwindow.ui, DCS, Display	Running the program.	While running the program the user interface always has the following components displayed: a screen that has its display updated based on what functionality the user currently selected. The following buttons are always showcased on the device: eight buttons that include an off/on button for the device, a menu button, a standard back button, four arrow buttons (up/down,left/right) and a selector in the center of the arrow buttons.
3	An LED light that changes to red, blue or green to indicate coherence level.	Use Case 1: Individual Monitoring Session	DCS, LED	Running the program and starting a session. Also, the low coherence, medium coherence and high coherence	In the session screen the LED will change colors based on coherence level. Running the low medium and high coherence simulations will showcase how the

				simulations.	LED light changes to reflect various levels of coherence.
4	The following functionality of the UI: Pressing the selector to initiate and end a session and also to select required functionality. The menu options are displayed as default on the session screen. Pressing the menu button while on a menu screen will return you to the menu screen. There is an option at the top to start a new session and the menu consisting of the following options: start new session, settings, log/history.	Use Case 1: Individual Monitoring Session	Mainwindow, DCS, Display	Running the program and pressing the selector, menu, settings, and log/history buttons.	The menu options are displayed as default on the session screen. The selector button is used to initiate and end a session and also to select required functionality based on what the arrow buttons configured. The arrow buttons can be used when on the menu display to select to view the log/history or settings. If neither the log/history or settings buttons are colored in blue the selector will start a session when on the menu display screen. Pressing the menu button while not on a menu screen will return you to the menu screen.
5	The session screen displays the main HRV graph (HR vs time).	Use Case 1: Individual Monitoring Session	Display, DCS	Running the program and starting a session. Also, the low coherence, medium coherence and high coherence simulations will showcase the	When running a session the display will showcase an HRV graph that reflects the current level of coherence.

				HRV graph with correspondingly low, medium or high coherence level graphs.	
6	The metrics on the screen during a session above the graph include the current coherence score (numerical value), length (duration of session), achievement (total sum of coherence scores sampled every 5 seconds)	Use Case 1: Individual Monitoring Session	Display, DCS, Session	Running the program and starting a session. Also, the low coherence, medium coherence and high coherence simulations will showcase the corresponding data.	When running a session the display will showcase session data that reflects the current level of coherence.
7	A breath pacer in the form of a strip of lights on the machine itself, or a ball going back and forth on the session screen, default set at one breath every 10 seconds, adjustable in settings	Use Case 1: Individual Monitoring Session	BreathRegulation, DCS, Display, mainwindow	Then running a session with the breath optionality on.	When the breath settings are configured in the settings tab the breath pacer will be showcased and reflect the corresponding breath level when running a session.
8	The settings tab that includes breath pacer settings including the option to turn on and off the breath pacer, set the level of the breath pacer and reset the device. The breath pacer, 1-30 seconds, increases the time interval between each breath, default at 10 seconds.	Use Case 3: Device Configuration	DataStorage, DCS, Display, mainwindow	Going to settings and toggling on the breath setting. Adjusting the breath level as well. Then run a session.	Turn on the device and then navigate to the settings tab from the menu page. Once in the menu tab change the breath settings. Navigate back to the menu page and start a session to view your changes.
9	When the user ends a session a summary view will appear that	Use Case 1: Individual Monitoring	DCS, Display	Running a session and then ending it.	Once a session is finished (indicated by the user pressing the

	includes the following information: percentage of time in different coherence levels (low, medium and high), average coherence, length of session, achievement score	Session			selector button) an individual history frame will be shown in the display. This frame showcases the information about the session.
10	The menu contains a log or history tab of all sessions, with dates, when selected show the summary view, as well as the ability to delete a session	Use Case 2: Individual Monitoring Session	DCS, Display, DataStorage	Running a session and selecting the History tab.	Once sessions have been run the history tab will contain their logs and a user can select a session to view it's session details.
11	An option to reset, wipe all data and restore the device to the initial install condition.	Use Case 3: Device Configuration	DCS, mainwindow	Running the program and going to the settings tab. Then pressing the reset button.	When a user presses reset on the settings tab the device data is changed into its initial state. This means that the breath pacer is not visible during the session, the breath level is set to 10, and all the data that was previously stored is removed.
12	There is a battery charge indicator on the session screen.	Use Case 1: Individual Monitoring Session	Battery, DCS, Device, Display, mainwindow	Running the program. Also, using the low battery and recharge device tests.	While the device is turned on it will be depleting the battery. Once the battery is at 10% the user will be alerted that it should charge its device. Once the battery dies current session data is saved and the device is powered off.
13	A beep goes off when a new coherence level is reached	Use Case 1: Individual Monitoring Session	Session, DCS	Running the program.	When a new coherence level is reached the user will be notified via the application output.
14	(Optional and implemented)	Use Case 1: Individual	DCS, Display	Running the program.	Every 5 seconds data is generated for a

	Using the coherence algorithm to calculate coherence and updating the graph in the sessions tab every 5 seconds.	Monitoring Session		Also, the low coherence, medium coherence and high coherence simulations.	corresponding coherence level and display the data on HRV graph.