Sequence Diagram 1: Normal Operation

This sequence diagram shows the process in which a user starts up the device, takes an HRV test, and powers off the device. The first part of the program's process occurs when the user turns the HeartWave device on, once the user presses the power button of the device, the program initializes and adds main menu options (Start New Session, Settings, and Log History) using the initalizeMainMenu() function which is run. The second part that occurs in this process is once the user selects it particular menu option from the list given, the device screen is updated with its child menu options (ie. *what level of coherence a user wants to use*) which is updated using the updateMenu() function. The last part of the process is the user selects the coherence level using the down and selector buttons, connects the HrContact sensor using the SelectHrContact() function, and collects data with the beginSession() function. Once the process is complete, the device is turned off by clicking the power button which activates the powerButton() function

Sequence Diagram 2: Sensor Interruption

This sequence diagram describes the process in which the sensor is interrupted and contact is no longer occurring. This displays the if statement in which if the Hr contact sensor is not on (!hrContact), this leads to the device triggering the backButton() function which takes the user back to the main menu and stops the active timer. In the case that the Hr Contact is on, it allows the session to begin and the timer that is used during the session.

Sequence Diagram 3: Battery Low

This final sequence diagram describes the process in which the battery is low and fully drained from the HeartWave device. For the battery drainage to occur quickly, a session needs to be started which is shown in the first part of the diagram. Simultaneously, a function in charge of draining the device's battery is triggered which is called drainBattery(). A ChangePowerLevel(newLevel) function is also run during this process however once it reaches the value of 0, the device powers off using the powerOff() function and disables the use of the HeartWave device.

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