

Textual Explanation for the HRV Device Design:

Class Explanation:

The design of the HeartWave HRV device consists of a main HeartWave class that controls the overall functionality of the device, including the user interface, data processing, and session management. The main class contains several methods that control various aspects of the device, including: starting and stopping sessions, updating coherence levels and HRV graphs, and managing settings.

The HeartWave device relies on several components and data sources to function. These components include the heart rate monitor (text files in our case), which provides real-time heart rate data. The device also includes components on the user interface, such as the display screen, buttons, and LED light indicators.

In the current design, session data is only saved to the device's database if there is at least one coherence value present. This decision was made because session data without any coherence values would be considered useless and not provide any meaningful insights to the user. Since coherence values update every 5 seconds during a session, this requirement ensures that only sessions with a minimum duration and valid heart rate data are saved, providing the user with meaningful session history and progress tracking.