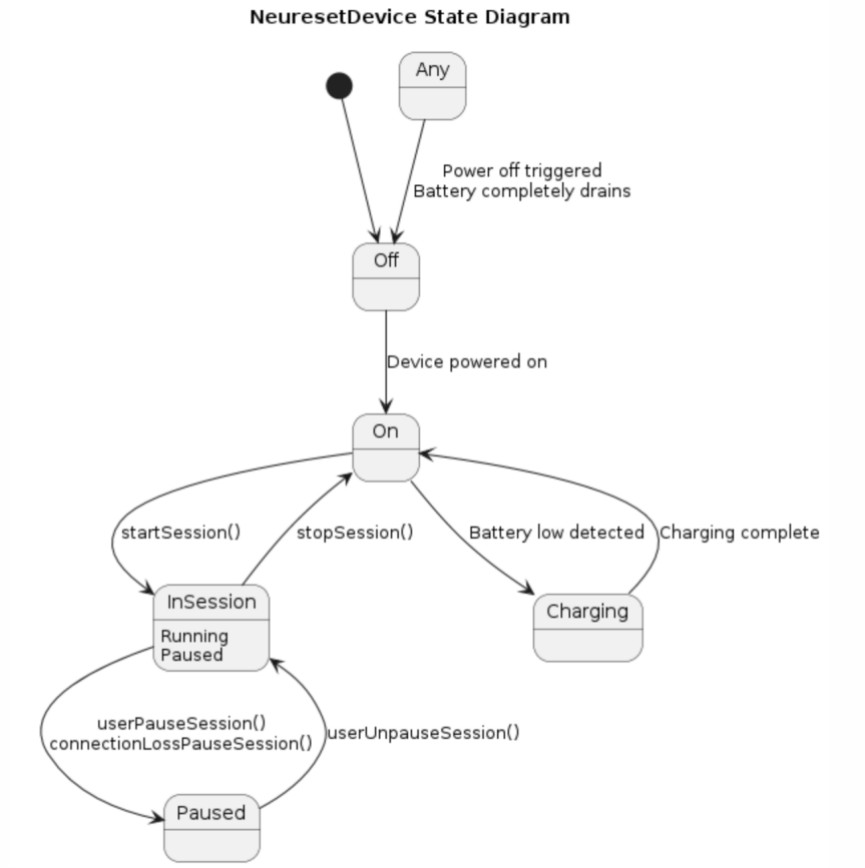
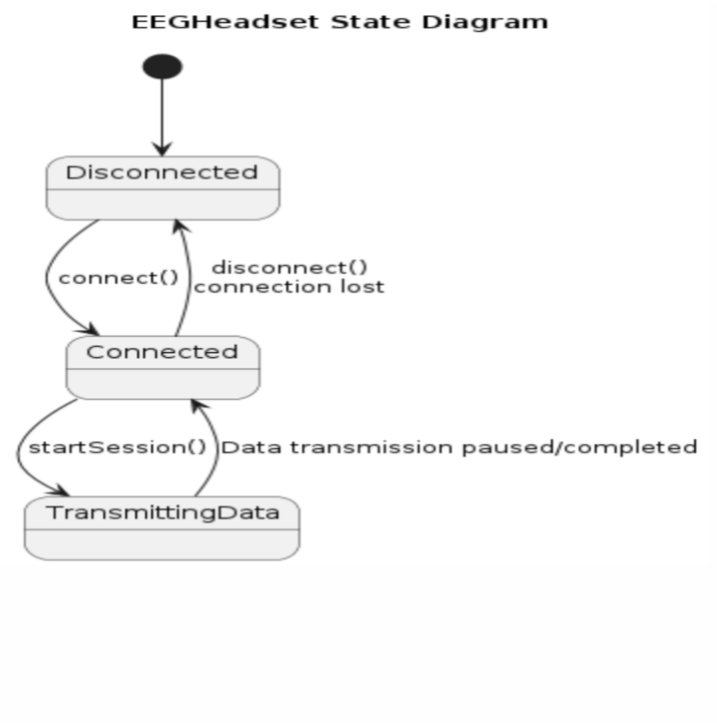
UML State Diagram for Neureset Device



Explanation:

The Neureset device has various states that reflect its operational status. Initially the device is in the 'Off' State when not used. When the device is powered on it transitions into the 'On' state, where it remains idle but can be used. When starting a session with the 'startSession' function the device then moves to 'inSession' state, in this state exists two sub-states: One of them being 'Running' where the device conducts a session, and the other being 'Paused' where the session is temporarily halted due to a user action or a connection disconnect. The device can exist the session and go back to the 'On' state by calling 'StopSession'

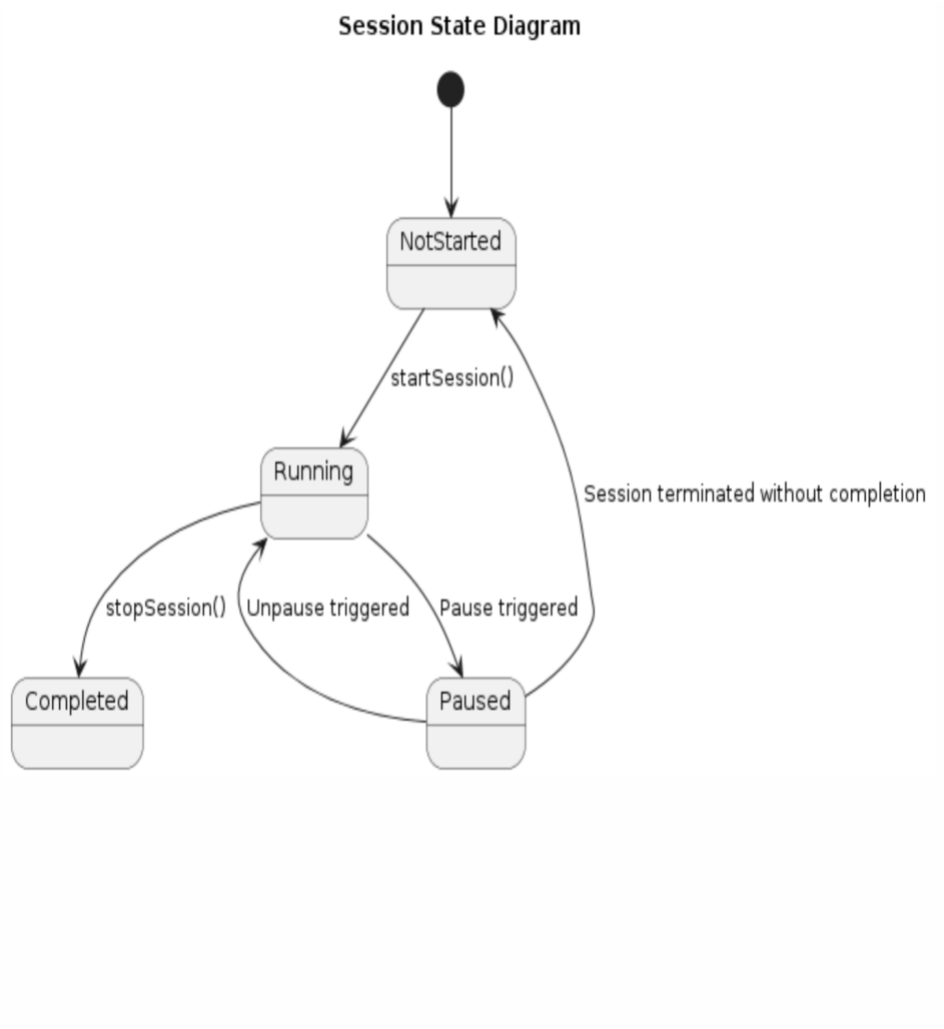
UML State Diagram for EEGHeadset



Explanation:

The EEGHeadset begins in a ‘Disconnected’ state when not used or properly connected. When transitioning into the ‘Connected’ state happens the headset is appropriately connected through the ‘connect()’ function. In this state the headset can either begin transmitting data upon ‘startSession()’, moving to the ‘TransmittingData’ state or go back to the ‘Disconnected’ state due to losing connection. The ‘TransmittingData’ state shows active participation within a session, which can revert to the ‘Connected’ if data transmission get interrupted.

UML State Diagram for Session



Explanation:

Each session begins in the 'NotStarted' State. When a session is initiated using 'startSession()' function, it transitions to the 'Running' State where the session process are performed. If the session Is paused due to user interaction or system issues, it moves into the 'Paused' state. The session can resume to the 'Running' state when the pause conditions are fixed. When all session processes transitions the state to the 'Completed' state through the 'stopSession()' function. From the 'Paused' state, a session can also end in advance bringing it back to the 'notStarted' state. Therefore being an incomplete session.