

# **COMP 3004 W Project - Neurofeedback Device**

## **Group 21**

**(TRACEABILITY MATRIX)**

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ID	Requirements	Related Use Case	Fulfilled by	Test	Description
1	Turn on device	Use Case 1.1	On/off button, main operation, battery, mainwindow, menu, menu button	Press on/off button and see if the menu is showing after pressing menu button	The user will press the on/off button to start the device, the menu will be ready
2	Request New Session	Use Case 1.1	New session button, main operations, mainwindow, timer, Logs	Press new session button	The user will press new session button to start a session, timer starts, info written to logs
3	Pause the session	Use Case 1.1	Pause session button, main operations, timer	Press pause session button during the session	The user can pause the session anytime during the treatment session by pressing the pause button, timer pauses
4	Brain wave frequency calculation	Use Case 1.1	Main operations, EEG, EEGArray, Headset, Logs	Start a session and check if the brain wave frequency is being calculated	Each EEG will calculate the brain waves of the user, info written to logs
5	Average calculation	Use Case 1.1	Main operations, mainwindow, Headset, Logs	Check if the average is being calculated after the EEG sites gets the brain waves data	The main operations will calculate the average frequency of user's brain wave, info written to logs
6	Treatment delivery	Use Case 1.1	Main operations, Headset, EEG, EEGArray, mainwindow, Logs	Check if the treatments are delivered by the sites	The EEG sites will deliver treatments in one sec (each), info written to logs
7	Battery check	Use Case 1.1	Main operations, mainwindow, battery	Check if the battery is changing during the use of device	Battery will be checked before each use, and will be updated after each session

8	View session logs	Use Case 1.2	Main operations, session log button, battery, Logs	Press session log button and see if histories are displayed	The session logs will be displayed when view session log button being pressed
9	Setting date and time	Use Case 1.3	Main operations, setting button, input	Press setting time button and change the settings, check if the date/time is updated for the session	User selects setting time button on the menu and change the time/date, the logs will store the session with given date/time
10	Low battery	Use Case 1.4	Main operations, mainwindow, battery	Check if the low battery icon shows when the battery drops , and the device still works	Device displays an alert of low battery
11	Device connection lost	Use Case 2	Main operation, mainwindow, light, timer	Check if the display is showing the correct info, light flashes, alert beeps, timer paused	Device tries to reestablish, or shuts down after 5 mins
12	Out of battery	Use Case 3	Main operations, mainwindow, battery, menu button	Check if the menu button responds, console show message and the battery icon is empty	Menu button disabled, battery icon is showing as empty (black)