# Background:

Micro-current biofeedback (MB) devices are non-invasive medical devices used by physicians, therapists and chiropractors to manage acute, postoperative and chronic pain. It simulates the body's own bioelectric system, promotes natural healing and relieves various symptoms of pain. The technology relies on generating micro-current output directed directly to specific types of nerve endings, which can be formulated to treat pain and medical conditions neurotransmitters.

# Description:

The device has following components:

1. Microprocessor: modulate electrical signals through electrodes directly exposed to the skin to communicate with the peripheral nervous system to achieve the purpose of therapeutic intervention.
2. Power level Selection (up/down): increase and decrease frequency.
3. Visual Indicator (display): LCD or LED screen displays the user graphic interface and displays instructions.
4. Audible indicator (speaker): Announce a specific beep as a notification device.
5. Treatment mode (selection switch): Pre-defined program, including micro-current frequency and specific time settings. Each procedure is carried out for a specific medical condition.
6. Indicators: display informational indicators such as error and success codes.
7. Electrodes: These contains; the output circuit sends out modulated micro-current pulses through the patient's skin, Pulse generator and Detector/receiver for detecting nerve endings conducted to the patient's skin.
8. USB interface: Connect external electrodes for treatment that cannot be completed by internal electrodes.

# Activity Diagram:

The activity diagram demonstrates the relationship between various use cases, and divides their relation on specific points.

Figure 9: Activity Diagram:

