Use Cases: Starting program Treatment

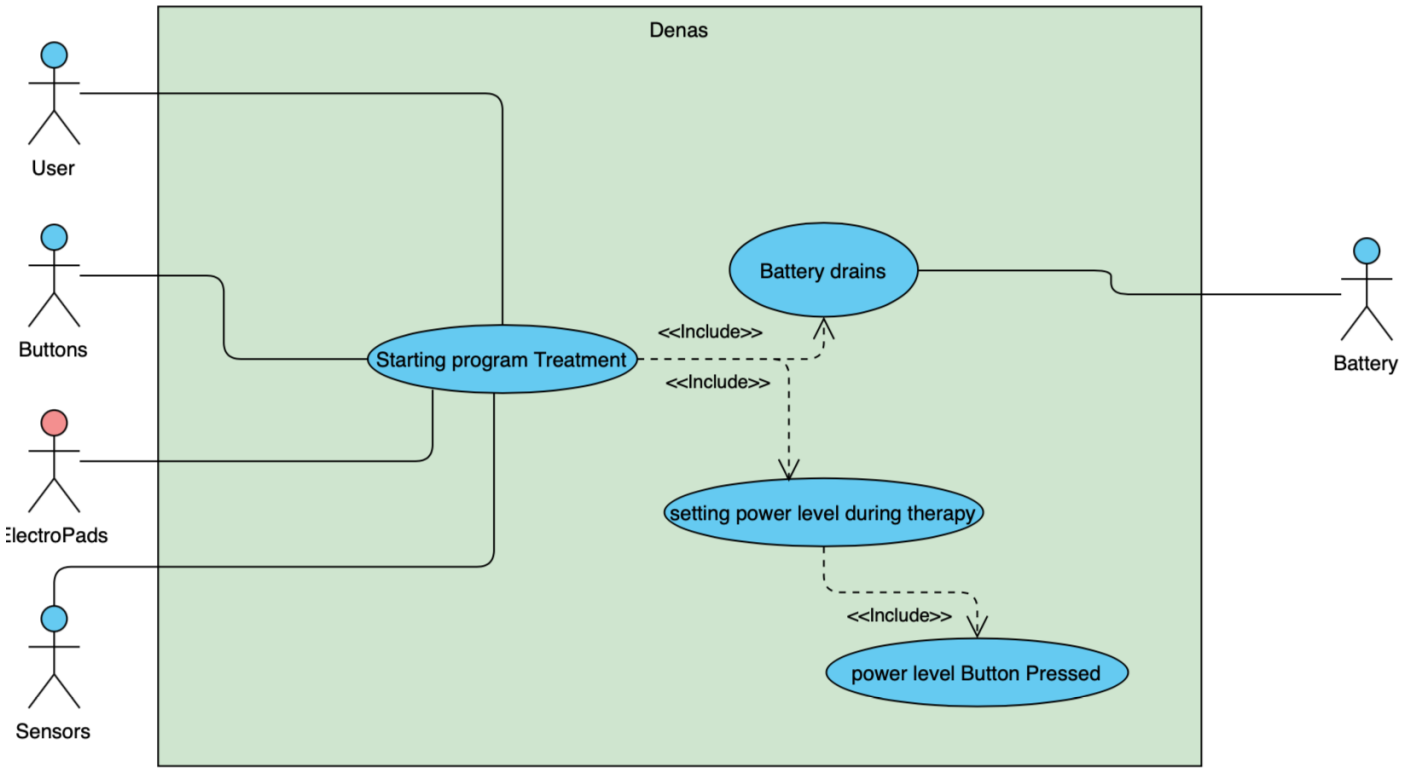
Actor: Electro pads on skin, buttons, sensors, User

User Level: user goal

Precondition: device is turned off
Main success scenario:
Include Battery drains, setting power level during therapy

1. Click Start Button to turn on Device
2. In the main menu the user will find multiple options, use the ok button to select the first option labeled “program”
3. When “program” is selected the user will be displayed multiple program therapies
4. Use the ok button to select the desired program therapy, some of the options are “ALLERGY”, “BLOATING”, “TRAUMA”
5. When a program therapy is selected the user will be displayed with the programs information such as the name, time required for the therapy, frequency, and a start button and end button
6. The user sets the power level, and checks the “device on skin” checkbox to ensure that the electrode pads have been placed on the skin.
7. The user clicks the start button and the user can see that the timer starts to decrease as well as the battery starts to drain.
8. The user can see that the start button now changes label to “stop”
9. If the user clicks the stop button, the battery stops draining as well as the timer stops decreasing
10. If the timer runs out or the user clicks the end button, the user is displayed a dialogue box asking whether he would like to save this program therapy.
11. The user clicks the save option and the recording is saved otherwise the recording is not saved.
12. The timer is reset to the original timer and power level is reset to 0 and the battery stops draining and the “placed on skin” checkbox is unchecked

Postcondition:
The timer is reset to the original timer and power level is reset to 0 and the battery stops draining and the user has received his treatment


Denas
User
Buttons
ElectroPads
Sensors
Starting program Treatment
Battery drains
<<Include>>
<<Include>>
setting power level during therapy
<<Include>>
power level Button Pressed
Battery

Use Cases: Starting frequency Treatment

Actor: Electro pads on skin, device, sensors,

User Level: user goal

Precondition: device is turned off

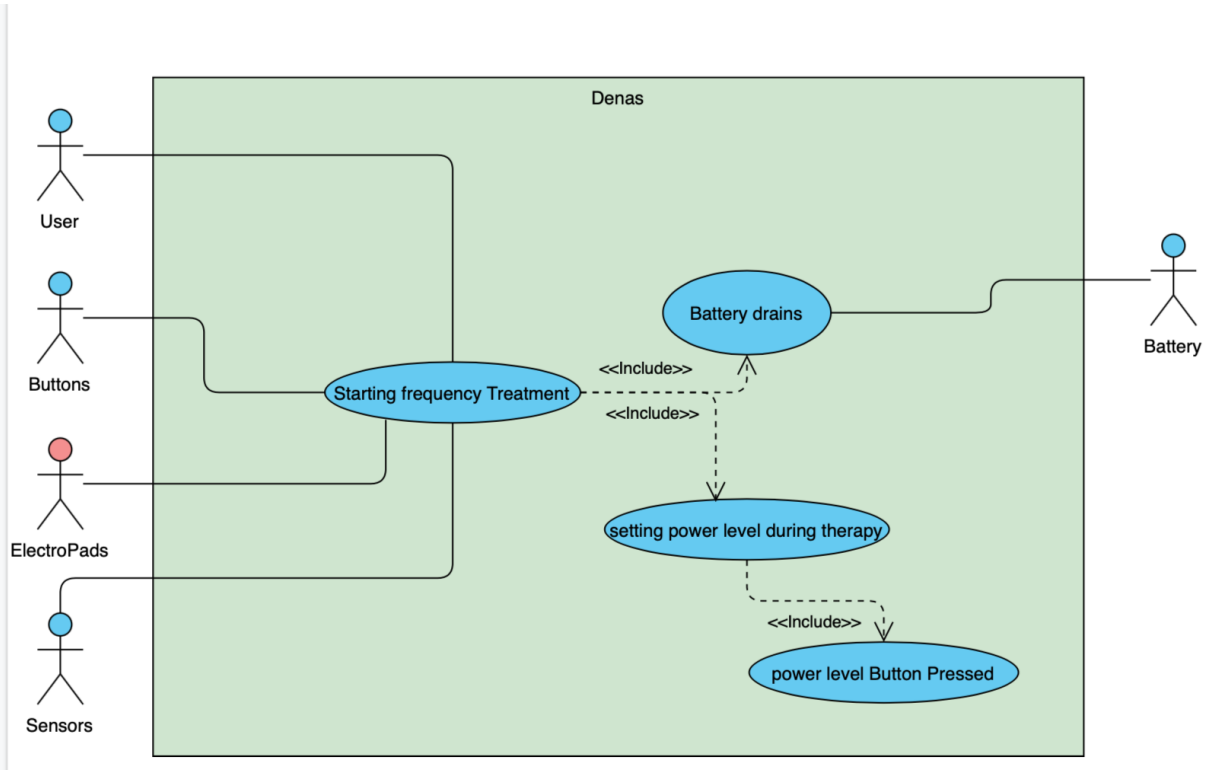
Main success scenario:

Include Battery drains, setting power level during therapy

1. Click Start Button to turn on Device
2. In the main menu the user will find multiple options, use the ok button to select the first option labeled “frequency”
3. The user Will be displayed with a page asking to set the desired frequency using the slider bar,if the user does not select a desired frequency then the frequency will be set to the minimum frequency 60
4. When the user clicks the “start frequency button” the user will be displayed with the Frequency Information information such as the name, time which is set to “00:00”, frequency, and a start button and end button
5. The user sets the power level, and checks the “device on skin” checkbox to ensure that the electrode pads have been placed on the skin.
6. The user clicks the start button and the user can see that the timer starts to increase as well as the battery starts to drain.
7. The user can see that the start button now changes label to “stop”
8. If the user clicks the stop button, the battery stops draining as well as the timer stops increasing
9. If the timer runs out or the user clicks the end button, the user is displayed a dialogue box asking whether he would like to save this program therapy.
10. The user clicks the save option and the recording is saved otherwise the recording is not saved.
11. The timer is reset to “00:00” and power level is reset to 0 and the battery stops draining and the “placed on skin” checkbox is unchecked

PostCondition:

The timer is reset to the original timer and power level is reset to 0 and the battery stops draining and the user has received his treatment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<<Include>>
power level Button Pressed
Battery

Use case: Battery drains- Abstract Case
Actor: sensors, battery
Precondition: A therapy is ongoing
Main success scenario:

1. The Battery starts draining when the therapy starts
2. If the therapy is stopped the battery stops draining
3. When the battery reaches 0 the battery is fully drained
4. The device is turned off the therapy is ended and is not saved
5. The power level is reset to 0
6. **The recharging battery use case is then executed**

Postcondition: Battery is fully rained and Recharging battery happens

Use case: setting power level during therapy- Abstract-Case
Actor: sensor, Buttons
Precondition: The user is going to start a new Therapy, or is in between a therapy
Main Success Scenario

Include power level Button Pressed Abstract Use case

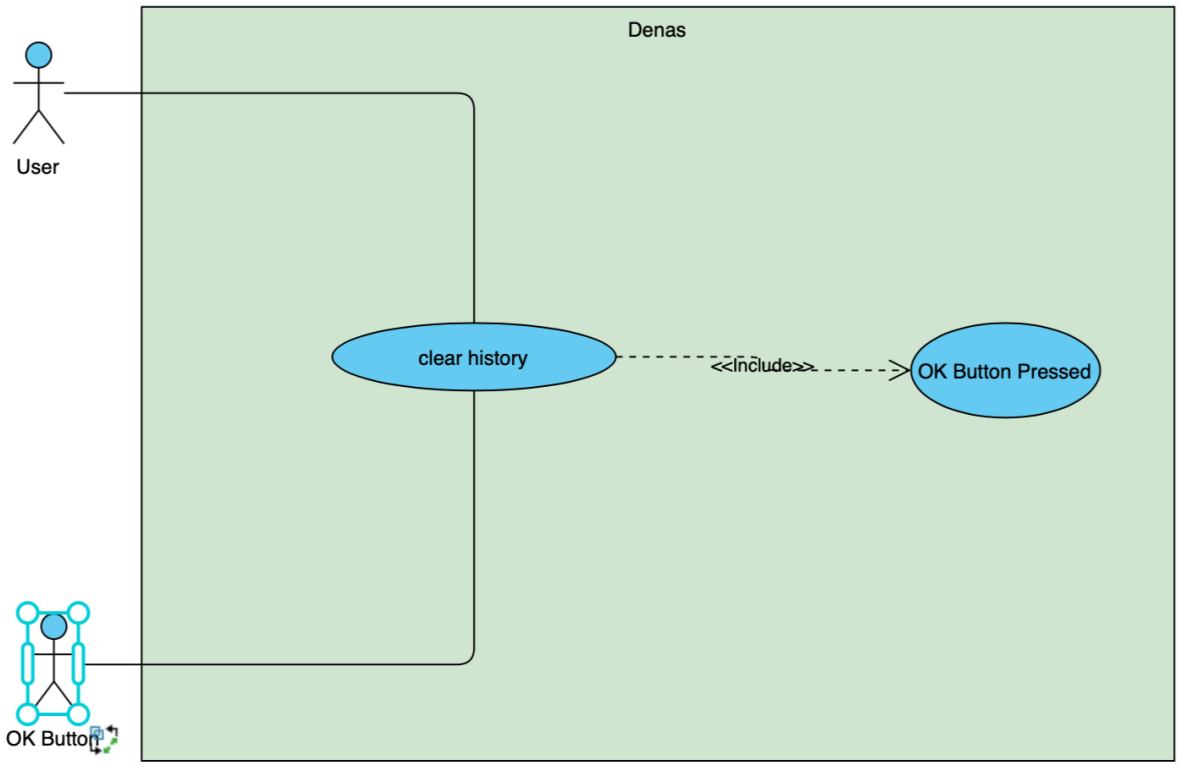
1. When the user initially starts a therapy, the user is allowed to set the desired power level
2. When the therapy starts, the user is allowed to decrease the power level but cannot increase the power level more than the initial power level setting.
3. The user can only decrease the power level until 1

Postcondition: Successful Completion, the power level has been set to the value desired

Use case: clear history
Include OK Button Pressed Abstract Use case
Actor: Ok button, The user
Main Success Scenario:

1. The user Navigates to the history options page
2. The user is displayed two options “View History”, “Clear”
3. The user presses the “Clear” option using the OK button
4. The user selects the “View History” option and finds the page empty

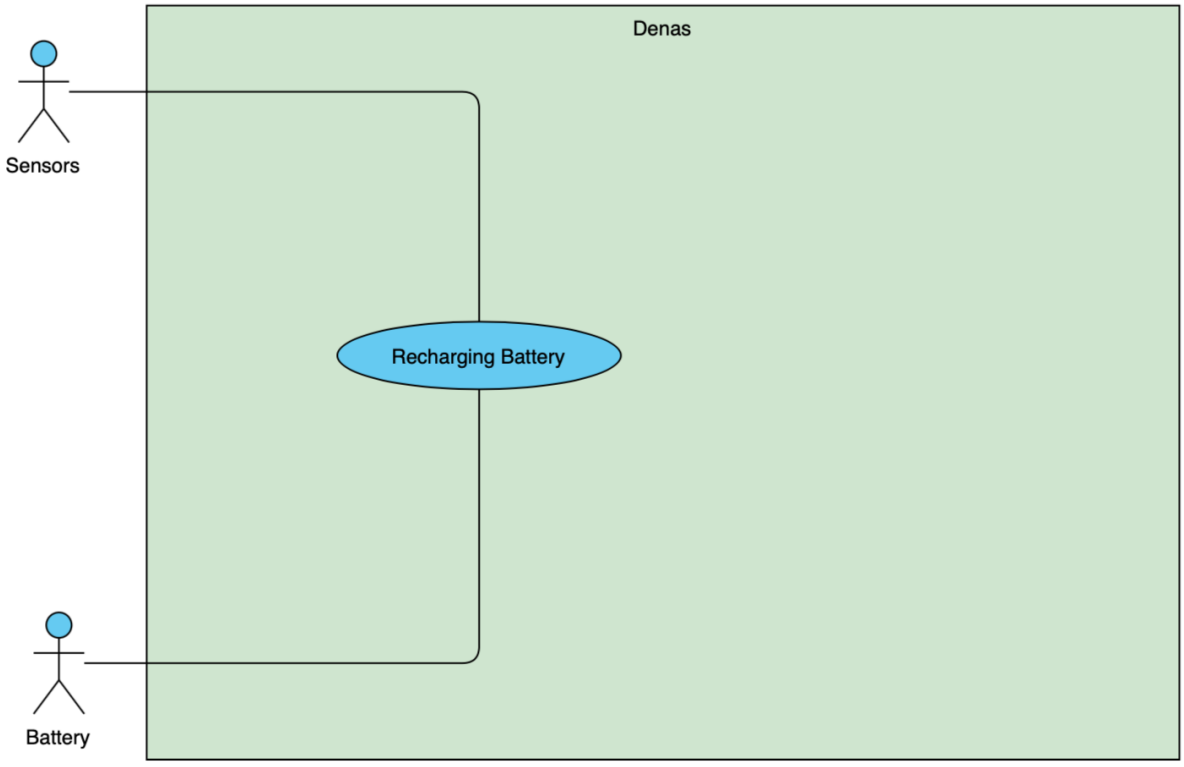
PostCondition: The History Page is cleared



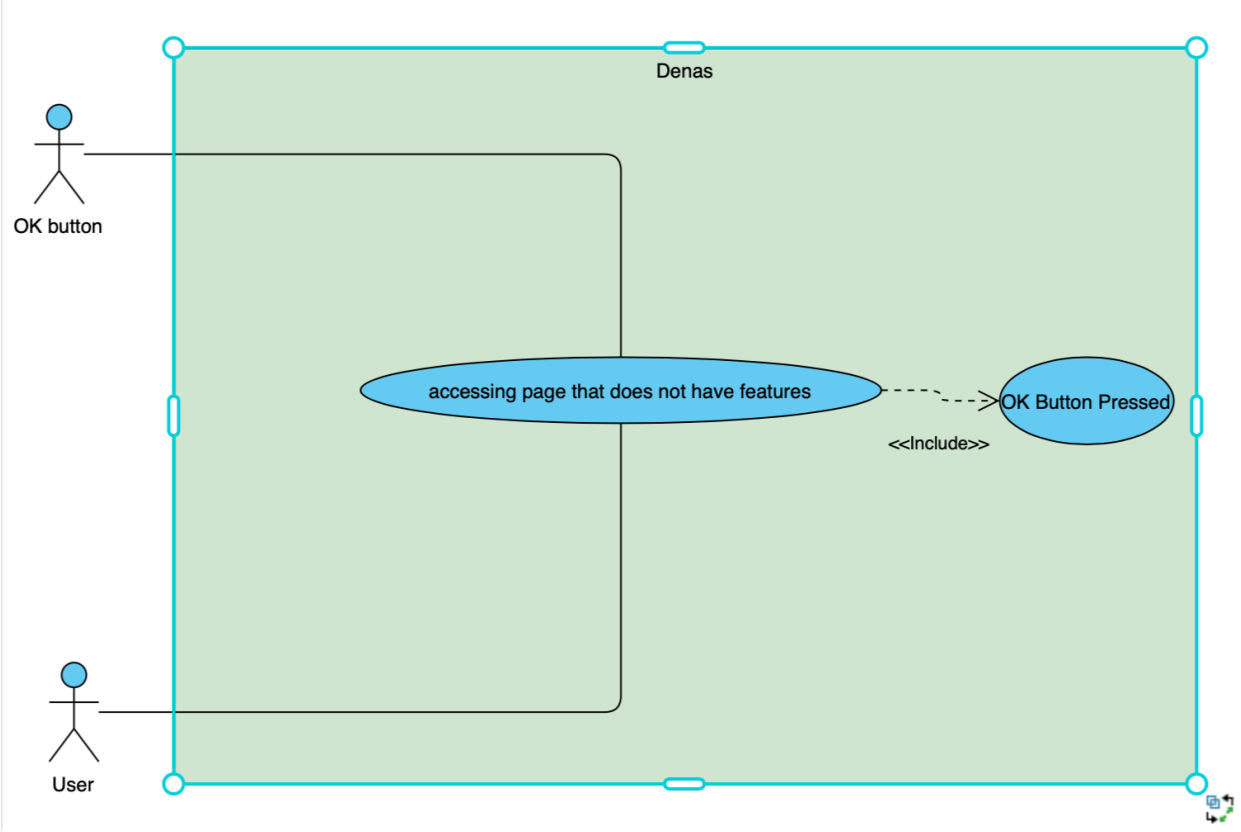
Use case: Recharging battery
Precondition:The battery is fully drained
Actor: The sensors,battery
Main Success Scenario:

1. The User is displayed a new page with the label “Recharging” placed in the middle
2. The user waits 7 seconds while the battery recharges
3. The battery bar appears to increase in 25 % increments
4. The battery reaches 100

Postcondition: The battery is fully charged and the user returns to the starting page



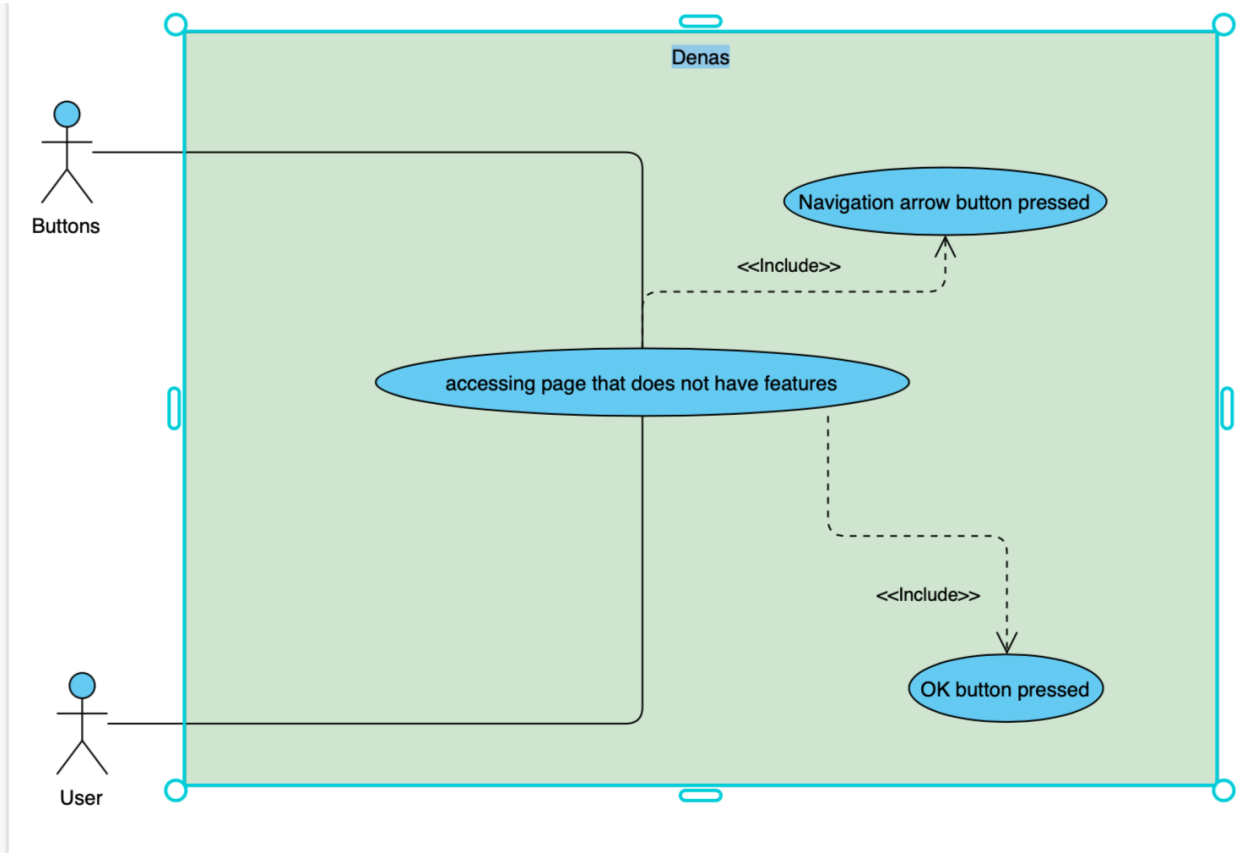
Use case: accessing page that does not have features
Include OK Button Pressed Abstract Use case
Actor: OK Buttons,user
Precondition: device turned on
Main Success Scenario:
The user clicks on an option that has features that were not implemented
Postcondition: A page is displayed to the user with label “Features have not been implemented”



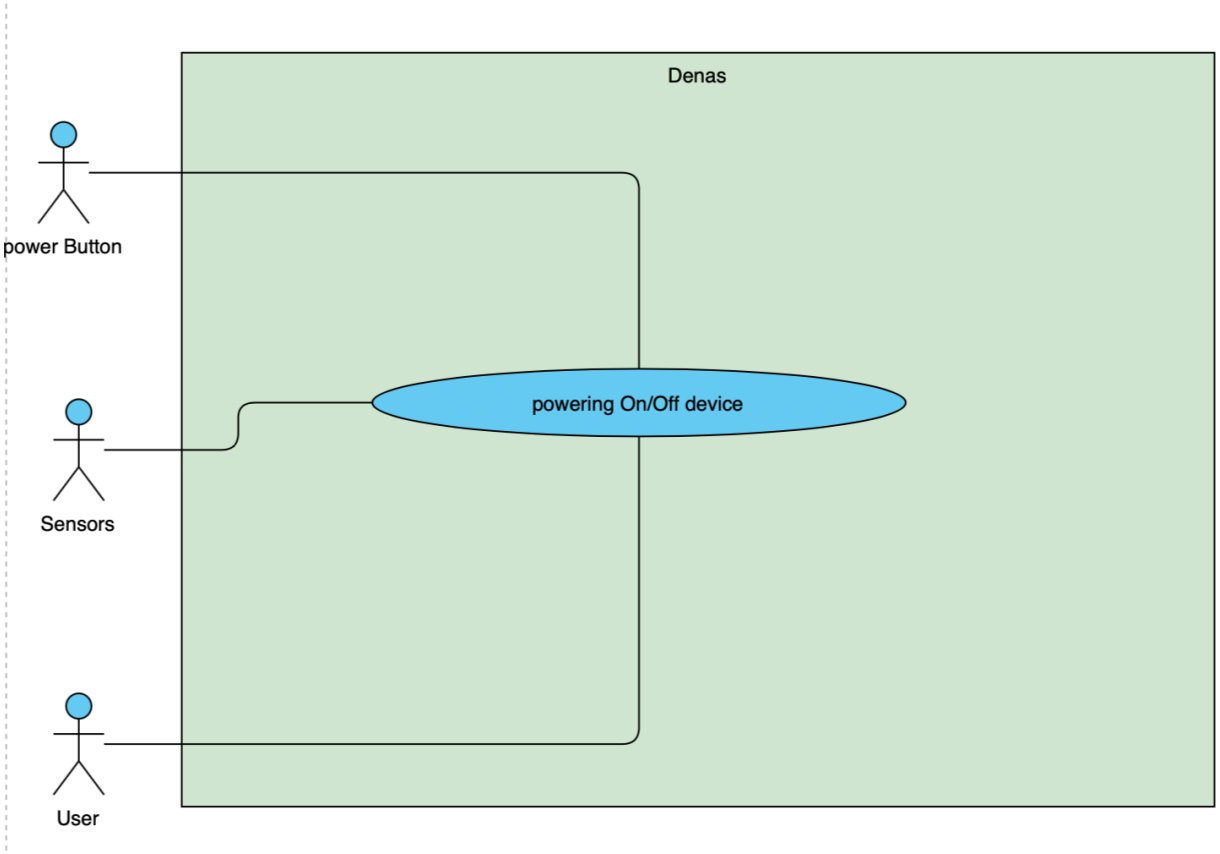
Use case: Viewing history page - Concrete use case:
Precondition:user recorded a therapy
Actor: user,buttons
Include: Navigation arrow button pressed,**OK button pressed**
Main Success Scenario:

1. User navigates to the history options page
2. User clicks the option “view History”
3. The user is displayed the recorded treatment

Postcondition: The user is displayed the name, current time, therapy duration, frequency and chosen power level



Use case: powering On/Off device - Concrete use case:
Precondition: Device Turned Off
Actor: User, power button,sensors
Main Success Scenario:
The user clicks on the power button which changes the displayed page from the starting page to the main menu page
Postcondition: The device is turned on and the page displayed is the main menu page
Alternatives:
The device is turned on and the user clicks the power button which changes the page from main menu page to the powered off page



Use Cases for buttons:

Power level button pressed - abstract use case:
Actor: The right button on the DENAS device, User, device sensors
Precondition: The therapy program is selected sw3
Main success scenario:
The user presses the right button to increase the power level
Postcondition: The power level has increased
Alternatives:
The user presses the left button to decrease the power level, which results in the decrease of the power level.

DENAS OK button pressed - abstract use case:
Actor: The OK button on the DENAS device
Precondition:The device is on and selector is on desired choice
Main success scenario:
The user pressed the OK button on the DENAS device while navigating the menu
Postcondition: The system responds by navigating to the choice that was selected in the navigation menu when the button was pressed.

Navigation arrow button pressed - Concrete use case:
Actor: The up and down buttons on the DENAS device, User, device sensors
Precondition: The device is turned on.
Main success scenario:
The User wants to navigate the menu and presses one of the up or down button
Postcondition: The system responds by moving the selector up on selection on the DENAS system menu.

Alternatives: The user has pressed the down navigation button on the DENAS device. The system responds by moving the selector down on the DENAS system menu.

Use case: using back button - Concrete use case:
PreCondition: Device Turned on, User is not on the main menu page
Actor: User, Buttons,Sensors
Main Success Scenario:
The user wants to navigate back to the previous page that he was on
Postcondition: The user returns back to the previous page that he was on