

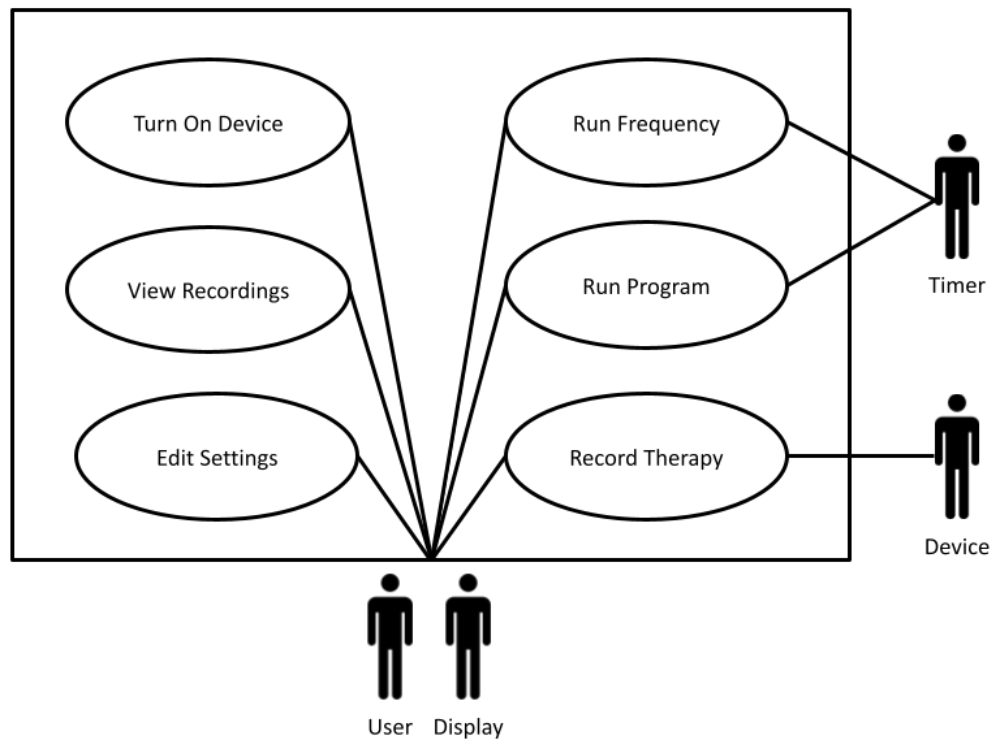
# COMP3004 - Team Project

## Use Cases

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### Use Case Diagram



## Turn On Device Use Case

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**Actors:** User, Display

**Precondition:** The Denas PCM battery level is not empty.

**Description:**

1. User clicks the “Power On” button on the Denas Simulator.
2. The Denas Display simulator powers on and displays 4 options: Programs, Frequency, Recordings and Settings.

**Postcondition:** The Denas PCM has been turned on.

**Extensions:**

- If the battery level reaches 0, the device turns off.

## Run Program Use Case

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**Actors:** User, Display, Timer

**Precondition:** The Denas PCM is powered on.

**Description:**

1. User selects the “Programs” option from the Display menu by pressing the “OK” button.
2. User navigates 4 Program options using up and down buttons and selects which ailment applies to them using the “OK” button.
3. Display updates and prompts the user to select power level and place the device on skin.
4. User sets power level.
5. User simulates skin contact with the device on the designated area by selecting the skin contact check box.
6. The timer is triggered to indicate how long the user must make contact with the device.
7. Display is updated and returns to the home screen.

**Postcondition:** Therapy has been achieved.

**Extensions:**

- Power level is set via a slider.
- Battery decreases faster depending on power level.
- If the battery level reaches 0, the device turns off.

## Run Frequency Use Case

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**Actors:** User, Display, Timer

**Precondition:** The Denas PCM is powered on.

**Description:**

1. User selects the “Frequency” option from the menu by pressing the “OK” button.
2. User navigates 4 Frequency (different Hz) options using up and down buttons and selects which frequency they would like to continue with.
3. Display updates and prompts the user to select power level and place the device on skin.
4. User sets power level.
5. User simulates skin contact with the device on the designated area by selecting the skin contact check box.
6. The timer is triggered to indicate how long the user must make contact with the device.
7. Display is updated and returns to the home screen.

**Postcondition:** Therapy has been achieved.

**Extensions:**

- Battery decreases faster depending on power level.
- If the battery level reaches 0, the device turns off.
- Frequency level is set via a slider.

## View Recordings Use Case

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**Actors:** User, Display

**Precondition:** The Denas PCM is powered on.

**Description:**

1. User selects the “Recordings” option from the menu by pressing the “OK” button.
2. Device displays all previously recorded therapies.

**Postcondition:** User is able to see the history of therapies.

**Extensions:**

- If the battery level reaches 0, the device turns off.

## Record Therapy Use Case

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**Actors:** User, Device, Display

**Precondition:** The Denas PCM is powered on.

**Description:**

1. User enables the recording checkbox.
2. User runs a program/frequency. (See run programs use case/run frequency use case).
3. Device disables the recording checkbox automatically after the timer expires.
4. Display is updated by returning the user to the home screen.

**Postcondition:** Therapy/therapies run by the user are recorded and can now be found in the recordings option of the main menu.

**Extensions:**

## Edit Settings Use Case

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**Actors:** User, Display

**Precondition:** The Denas PCM is powered on.

**Description:**

1. The Denas simulator displays 4 options: Programs, Frequency, Recordings and Settings.
2. User selects the “Settings” option from the menu by scrolling down the menu and pressing the “OK” button.
3. Display updates to show setting options.
4. User can navigate 8 options to alter: Sound, Brightness, Economy, Recording, Clock, Alarm Clock, Language and Color.

**Postcondition:** User had edited desired setting.