**FUNCTION TEST CASES**

**File history**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Changes** | **Creator/Modifier** | **Overview by** |
| 12/3/2013 | Create | Tin Nguyen |  |
| 1/7/2014 | Edited as reviewed | Tin Nguyen |  |
|  |  |  |  |
|  |  |  |  |

**About this Test Cases**

**Testing Methods used in this test:**

Integration testing: Test just the functions of the website by User Roles

(Unit testing has been tested by each developer on each module/function, reviewed by Project Leader)

Function testing based on:

+ System Design Specification - ver 0.1.5 – Additional Features

+ System Feature formulae - ver 0.1.2

**Testing process (on Pivotal Tracker)**

*(Tester uses this document for reference of each test case)*

Create test story> Planning > Use this Test Suite > Execute Test> Report > Fix bugs > Retest > Close

**Resource Requirements**

To perform the test, please see CMS page:

**Reference**

+ System Design Specification - ver 0.1.5

+ System Feature formulae - ver 0.1.2

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**ADDITIONAL FEATURES**

1. Feature 02: Body measurement monitoring
   1. Body measurement monitoring
      1. Elements in Body measurement monitoring report-page

Test objective:

Test web layout and other elements in Body measurement monitoring report-page

Test procedure:

1. From left navigation panel, click “Reports” menu then “Track my health” menu to open “Track my health” page
2. Click “Body measurement monitoring” icon to go to “Body measurement monitoring – Graph report” page

Expected outcomes:

1. Can go to “Track my health” page
2. A webpage shows graph report for Body measurement monitoring feature:

Page title: “Body measurement monitoring – Graph report”

Top navigator:

Show current place “Track My Health > Body Measurement Monitoring”

Click “Track my health” to go back to Track my health page

“Print” icon and “Help” icon shows on the right of top navigator

Click “Print” icon to open Print function for current display

Click “Help” icon to open Help page of current page/topic

Top area:

Show introduction of current page as below:

“Select GRAPH or TABLE buttons to see Body measurement monitoring Report.”

Show 2 buttons: “Graph” and “Table”

Click “Graph” button to show report in graph

Click “Table” button to show report in table

Main/Report area: show content of the report

Recommendation area:

Area Title: “Diagnosis & Recommendations”

Show diagnosis results or/and recommendations

Bottom area: show “Settings” button and “Back to Track my health” button

|  |  |
| --- | --- |
| **Buttons** | **Requirement/Actions** |
| Settings | Click to go to “Body measurement monitoring – Settings” page |
| Back to Track My Health | Click to go back to “Track my health” page |

* 1. Body measurement monitoring/Graph report
     1. Body measurement monitoring feature/View the Graph report

Test objective:

Check if the Graph report for Body measurement monitoring feature show

Test procedure:

1. From left navigation panel, click “Reports” menu then “Track my health” menu to open “Track my health” page
2. Click “Body measurement monitoring” icon to go to “Body measurement monitoring – Graph report” page
3. From popup, select the From Date and To Date
4. Click “Select” to start drawing graph report
5. View graph report of Body measurement monitoring feature

Expected outcomes:

1. Can go to “Track my health” page
2. Show “Body measurement monitoring – Graph report” page

There is a popup showed “Select date to draw chart”

1. Be able to select From Date and To Date

Be able to enter value manually into From Date and To Date

Data entered successfully

1. Entered date are selected, graph report starts to display
2. A graph shows on the webpage

If there is no data on selected dates, a notification shows: **“You have no data to graph”**

* + 1. Body measurement monitoring/Graph report content

Test objective:

Check if the Graph report show correctly

Test prerequisite:

There’s data on selected day and Graph report already shows

Expected outcome:

1. A 2D-chart with x-axis and y-axis shows.

Y-axis labels:

|  |  |
| --- | --- |
| **Labels** | **y-axis data** |
| BMI | Shows Body Mass Index value, filled with different colors |
| WHR | Shows Waist-To-Hip Ratio value, filled with different colors |
| BF% | Shows Body Fat Percentage value, filled with different colors |
| Ideal weight | Shows the value of Ideal weight suggestion |
| Metabolic age | Show the value of Metabolic age |

(See the Body Measurement Formula for the color and other information)

X-axis Label: **“DateTime” –** Label is a hyperlink: Click to open a popup to select Date

X-axis data: shows the date/time for y-axis values. Date format: MM/DD/YY

1. The diagnosis area show correctly according to data loading
   1. Body measurement monitoring/Table report
      1. Body measurement monitoring/View the Table report

Test objective:

Check if the Graph report for Body measurement monitoring feature showing

Test procedure:

1. From Graph report page, click “Table” tab to go to “Body measurement monitoring – Table report” page
2. From popup, select the From Date and To Date
3. Click “Select” to start drawing graph report
4. View table report of Body measurement monitoring feature

Expected outcomes:

1. “Table” tab is selected.

There is a popup showed “Select date to draw chart”

1. Be able to select From Date and To Date

Be able to enter value manually into From Date and To Date

1. Data entered successfully

Entered date are selected, graph report starts to display

1. A table shows data on the webpage

If there is no data on selected dates, a notification shows: **“You have no data to show”**

* + 1. Body measurement monitoring/Table report content

Test objective:

Check if Table report show correctly

Test prerequisite:

There’s data on selected date and Table report already shows

Expected Outcome:

Table Report page shows a data table

|  |  |
| --- | --- |
| **Row Headers** | **Requirements** |
| Date Time | It is a link. Click to open a popup calendar.  Select From Date/To Date for the data to show in the table |
| BMI | Shows BMI value |
| WHR | Show WHR value |
| BMR | Show BMR value (Basal Metabolic Age) |
| BF% | Show BF% value |
| LBW | Show LBW value (Lean Body Weight) |
| Ideal W | Show Ideal Weight value |
| Meta. Age | Show Metabolic Age value |
| Act. Level | Show Activity Level value |
| Cal. Needs | Show Calorie Needs value |

|  |  |
| --- | --- |
| **Column Headers** | **Requirement** |
| Value | Show the value of each Row Headers |
| Diagnose | Show the diagnose for the value |

* 1. Body measurement monitoring/Settings
     1. Body measurement monitoring/Settings

Test objection:

Test setting pages for Body measurement monitoring feature

Test procedure:

1. At the bottom of Body measurement monitoring Graph/Table Report, Click Settings button to go to Body measurement monitoring settings page
2. View or make change the settings
3. Click Save settings to save
4. Click Cancel to discard

Expected outcomes:

1. Can go to “Settings” page for Body measurement monitoring feature
2. Current settings are shown.

User can show current settings.

1. New settings are saved to database.

New settings will be shown next time user go to settings page.

1. No changes are made and go back to previous page.

The Body measurement monitoring settings page includes 2 groups of settings:

Group 1: The methods used in Body measurement: **“Measurement methods:”**

|  |  |
| --- | --- |
| **Methods** | **Requirements/information** |
| IW method | The method used to calculate Ideal Weight  There are 2 methods: Formula and Decimal.  The drop-down list shows the current method.  Click drop-down list to change the setting to one different method. |
| BF% method | The method used to calculate Body Fat Percentage  There are 3 methods: Deurenberg, CUN-BAE and U.S Navy  The drop-down list shows the current method.  Click drop-down list to change the setting to one different method. |
| Fat Evaluate | The method used to evaluate Body Fat Percentage  There are 3 methods: WHO, Tanita or Brainy  The drop-down list shows the current method.  Click drop-down list to change the setting to one different method. |
| BMR method | The method used to measure Basal Metabolic Rate  There are 4 methods: Cunningham, Katch-McArdle, Muffin or Roza Shizgal  The drop-down list shows the current method.  Click drop-down list to change the setting to one different method. |

Group 2: The body measurements of current user: **“Current body measurements:”**

The unit is in US or Metric system according to Global Setting of current user

|  |  |
| --- | --- |
| **Measurement** | **Requirements** |
| Weight | A Text box shows current weight of current user (kg or lb)  Edit by entering a different number |
| Height | A Text box shows current height of current user (cm or feet/inch)  Edit by entering a different number |
| Waist | A Text box shows current waist measurement of current user (cm or inch)  Edit by entering a different number |
| Hip | A Text box shows current hip measurement of current user (cm or inch)  Edit by entering a different number |
| Neck | A Text box shows current neck measurement of current user (cm or inch)  Edit by entering a different number |

There are 2 buttons in page:

|  |  |
| --- | --- |
| **Buttons** | **Requirements/Action** |
| SAVE SETTINGS | When user does not make any changes, the button will dim and non-function  When user makes a change, the button is active and function. Action: Click to save all settings and stay on page. Button then dim again and non-function until there’s another change |
| CANCEL | Click Cancel to discard changes and go back to Body measurement monitoring default page |

1. Feature 03: Heart Rate Monitoring
   1. Heart rate monitoring page
      1. Elements in Heart Rate page

Test objective:

Test elements in Heart Rate page

Expected outcomes:

There are 4 sections in this main page:

+ Title of the page: **“Track My Health > Heart Rate Monitoring”** with Print link and Help links

+ Report area shows: Graph report and Table report

+ **“Diagnosis & Recommendations”** area shows: result or recommendations

+ Bottom buttons: There are 2 buttons: “**Settings**” and “**Back to Track My Health**”

Buttons actions:

|  |  |
| --- | --- |
| **Buttons** | **Requirement/Actions** |
| Settings | Click to go to Setting page for Heart Rate Monitoring feature |
| Back to Track My Health | Click to go back to Track My Health home page |

* 1. Graph Report
     1. Heart rate monitoring/Graph Report

Test objective:

Check Graph Report for Heart rate monitoring feature

Test procedure:

On Heart rate page, click GRAPH buttons

Expected outcomes:

1. There are 2 options to view Graph report:

+ Report with Heart rate data

+ Report with HRV data

The default view is: Heart rate data view

If there is no data to display, a notification shows: **“You have no data to graph”**

* + 1. Heart rate monitoring/ View Graph report with Heart rate data

Test objective:

Check Graph Report for in Heart rate data view

Test procedure:

1. From Heat rate page, click GRAPH button
2. Click drop-down list below “Graph” button and select “Heart rate data” view
3. View Graph report

Expected outcome:

1. Graph report is selected
2. Be able to select “Heart rate data” from dropdown list.
3. A 2D Line chart with x-axis and y-axis shows.

Y-axis label: “Beats per minute (Bpm)”

Y-axis shows numbers of heart rate unit

X-axis Label: **“DateTime”.** Label is aHyperlink: Click to open a popup to select date

X-axis data: shows the date/time for y-axis values.

Legends: is on top right of the graph report

|  |  |  |
| --- | --- | --- |
| **Legends** | **Color** | **Description** |
| HR voltages | Light blue line | User’s raw heart rate voltage |
| HR | Light red line | User’s heart rate over time |
| Resting HR | Orange dots | User’s resting heart rate |
| High threshold | Red hashed line | High threshold marker for heart beats recorded |
| Low threshold | Blue hashed line | Low threshold marker for heart beats recorded |

* + 1. Heart rate monitoring/View Graph report with HRV data

Test objective:

Check Graph Report for in HRV data view

Test procedure:

1. From Heat rate page, click GRAPH buttons
2. Click drop-down list below “Graph” button and select “HRV data” view
3. View Graph report

Expected outcome:

1. Graph report is selected
2. HRV data is selected
3. A 2D Bar chart with x-axis and y-axis shows.

Y-axis: shows parameters of different categories by green bars with unit and max values for each sub-graph

|  |  |
| --- | --- |
| **Categories** | **Description** |
| Mean HR | Mean Heart Rate |
| Std. HR | Standard Heart Rate |
| Mean RR | The mean of the all NN intervals |
| SDNN | The standard deviation of the all NN inter |
| RMSSD | … |
| pNN50 | … |

X-axis Label: **“DateTime”.** Label is aHyperlink: Click to open a popup to select date

X-axis data: shows the date/time for y-axis values.

* 1. Table Report
     1. Heart rate/Table Report home page

Test objective:

Check Table Report for Heart rate monitoring feature

Test procedure:

On Heart rate page, click TABLE button

Expected outcomes:

There are 2 options to view Table report:

+ Report with Heart rate data

+ Report with HRV data

The default view is: Heart rate data view

* + 1. Heart rate monitoring/View Table report with Heart rate data

Test objective:

Test Heart rate report when viewing in table view with heart rate data

Test procedure:

1. On Heart rate page, click TABLE button
2. Click drop down list below “Table” button and select “Heart rate data”
3. View table report

Expected outcomes:

1. “Table” button is selected and dimed
2. “Heart rate data” is selected
3. A table shows data in different categories

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Date/Time | Column header is a link. Click the link to open Popup Calendar.  Use this popup calendar to filter the date/time for data to show in table |
| Heart rate (bpm) |  |
| Resting HR (bpm) |  |
| Voltage |  |
| Diagnosis |  |

* + 1. Hear rate monitoring/View Table report with HRV data

Test objective:

Test Heart rate report when viewing in table view with HRV data

Test procedure:

1. On Heart rate page, click TABLE button
2. Click drop down list below “Table” button and select “HRV data”
3. View table report

Expected outcomes:

1. “Table” button is selected and dimed
2. “Heart rate data” is selected
3. A table shows data in different categories

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Date/time | Column header is a link. Click the link to open Popup Calendar.  Use this popup calendar to filter the date/time for data to show in table |
| Mean HR (bpm) |  |
| Std.HR (bpm) |  |
| Mean RR (ms) |  |
| SDNN (ms) |  |
| RMSSD (ms) |  |
| pNN50 (%) |  |
| Diagnosis |  |

* 1. Settings
     1. Heart rate monitoring/Settings

Test objection:

Test setting pages for Heart rate monitoring feature

Test procedure:

1. At the bottom of Heart rate monitoring Graph/Table Report, Click Settings button to go to Heart rate monitoring settings page
2. View or make change the settings
3. Click Save settings to save
4. Click Cancel to discard

Expected outcomes:

1. Can go to Heart rate monitoring settings page
2. Show correctly current settings when navigating to Settings page, Save settings button and Save function are inactive before changing setting parameters. Save settings button is active when there is something changed.
3. Settings is saved correctly (show saved settings in next time user go to settings pages). Make sure any change is kept tracks in the database.
4. No change saved and go back previous page.

The Heart rate monitoring settings includes:

|  |  |
| --- | --- |
| **Settings** | **Requirements** |
| Sample rate | The time |
| Max HR estimation | Gatti or Kolata |
| High Resting HR threshold | Beats per minute (bpm) |
| Low Resting HR threshold | Beats per minute (bpm) |
| HRV analysis interval | The time |

1. Feature 04: Oxygen Monitoring (Sp02)
   1. Oxygen Monitoring page
      1. Elements in Oxygen monitoring page

Test objective:

Test elements in Oxygen monitoring page

Expected outcomes:

There are 4 sections in this main page:

+ Title of the page: **“Track My Health > Oxygen monitoring Monitoring”** with Print link and Help links

+ Report area shows: Graph report and Table report

+ **“Diagnosis & Recommendations”** area shows: result or recommendations

+ Bottom buttons: There are 2 buttons: “**Settings**” and “**Back to Track My Health**”

Buttons actions:

|  |  |
| --- | --- |
| **Buttons** | **Requirement/Actions** |
| Settings | Click to go to Setting page for Oxygen Monitoring feature |
| Back to Track My Health | Click to go back to Track My Health home page |

* 1. Graph Report
     1. Oxygen monitoring/Graph report

Test objective:

Check elements in Oxygen Graph Report

Test procedure:

From Features Selection page click Oxygen monitoring feature

On Oxygen monitoring page, click GRAPH button

A popup calendar shows, click from Date/to Date to select Start and End date

Expected outcomes:

A 2D Line chart with x-axis and y-axis shows.

If there is no data to display, a notification shows: **“You have no data to graph”**

Y-axis: shows blood oxygen saturation percentage

|  |  |
| --- | --- |
| **Lines** | **Requirements** |
| Black line | represents the user's blood oxygen saturation percentage over time |
| Blue Hashed line | Below the black line  represents a low threshold for the user's blood oxygen saturation percentage |

X-axis: shows the date/time for y-axis values.

Label: **“DateTime”**

Hyperlink: Click to open a Date/Time selection popup

Buttons and links in page:

|  |  |
| --- | --- |
| **Buttons** | **Actions** |
| Settings | Click to open Settings page for Body Measurement Feature |
| Back to Track My Health | Click to go back to |

* 1. Table Report
     1. Oxygen monitoring feature/Table report

Test objective:

Test table report for Oxygen monitoring feature

Test procedure:

From Oxygen monitoring page, click TABLE button

Expected outcomes:

A table shows data:

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Date/time | Column header is a link. Click the link to open Popup Calendar.  Use this popup calendar to filter the date/time for data to show in table |
| Blood oxygen saturation percentage (%SpO2) |  |
| Threshold |  |
| Mode |  |
| Diagnosis |  |

* 1. Settings
     1. Oxygen monitoring feature/Settings

Test objective:

Test setting page of Oxygen monitoring feature

Test procedure:

At the bottom of Heart rate monitoring Graph/Table Report

Click Settings button to go to Heart rate monitoring settings page

View or make change the settings

Click Save settings to save

Click Cancel to discard

Expected outcomes:

The Oxygen monitoring settings includes:

|  |  |
| --- | --- |
| **Settings** | **Requirements** |
| Sample rate | The time |
| Tracking mode | Normal monitoring  Sleep apnea syndrome monitoring  COPD patients monitoring  Patients on long-term oxygen therapy monitoring  Asthma patients monitoring  Acute respiratory infections monitoring |
| Warning threshold | Can not make change to this setting, warning threshold depends on Tracking mode |
| Measurement duration |  |

1. Feature 05: Fitness Monitoring
   1. Fitness monitoring page
      1. Elements in Fitness monitoring page

Test objective:

Test element in Fitness monitoring page

Test procedure:

On the left navigation panel, click Track my health to open Features selection page

From Features selection page, click Fitness monitoring

Expected outcomes:

Fitness monitoring report page show: Graph or Table report

There are 4 sections in this main page:

+ Title of the page: **“Track My Health > Fitness monitoring”** with Print link and Help links

+ Report area shows: Graph report and Table report

+ **“Diagnosis & Recommendations”** area shows: result or recommendations

+ Bottom buttons: There are 2 buttons: “**Settings**” and “**Back to Track My Health**”

Buttons actions:

|  |  |
| --- | --- |
| **Buttons** | **Requirement/Actions** |
| Settings | Click to go to Setting page for Fitness Monitoring feature |
| Back to Track My Health | Click to go back to Track My Health home page |

* 1. Graph Report
  2. Table Report
     1. Fitness monitoring/Select Table report views

Test objective:

Check Table report views for Fitness monitoring feature

Test procedure:

From fitness monitoring report page, click TABLE buttons

Expected outcomes:

There are 2 options to view: HR exercise and Pedometer

The default view is: HR exercise view

* + 1. Fitness monitoring/View Table report with HR exercise data

Test objective:

Test table report when using HR exercise data

Test procedure:

On Fitness monitoring page, click TABLE button

Click drop-down list and select HR exercise data

Expected outcomes:

A data table shows:

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Date/time |  |
| Duration |  |
| Exercise |  |
| Time in zones |  |
| Target HR |  |
| Average HR |  |
| Maximum HR |  |

* + 1. Fitness monitoring/View Table report with Pedometer data

Test objective:

Test table report when using with pedometer data

Expected outcomes:

A data table shows:

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Date/time |  |
| Target |  |
| Steps |  |
| Distance |  |
| Average speed |  |
| Calories burned |  |
| Duration |  |

* 1. Settings
     1. Settings for Fitness monitoring feature

Test objective:

Test settings for Fitness monitoring feature

Test procedure:

At the bottom of Fitness monitoring Graph/Table Report

Click Settings button to go to Fitness monitoring settings page

View or make change the settings

Click Save settings to save

Click Cancel to discard

Expected outcomes:

The Fitness monitoring settings includes 2 settings groups:

**Heart rate exercise**

|  |  |
| --- | --- |
| **Settings** | **Requirements** |
| Exercise mode | Single or Multi-stage |
| Target HR method | General or Zoladz |
| Custom exercise programs | (This setting is only visible when select Multi-stage)  Show current customized program.  Click the link to open the Editing page for Custom exercise programs. |

**Pedometer**

|  |  |
| --- | --- |
| **Settings** | **Requirements** |
| Target settings |  |
| Remind setting |  |
| Calories burned method |  |

* + 1. Fitness/Settings/Custom exercise programs

Test objective:

Test editing Custom exercise programs

Test procedure:

Open Fitness monitoring settings page.

\*\* Note: You can only edit Custom exercise programs when Exercise mode is Multi-stage.

Enter number of stages and press TAB on keyboard

For each Stage, enter:

|  |  |
| --- | --- |
| Stage | The name for the stage |
| Target HR | Dropdown list to select from Zone 1 to Zone 5 |
| Time | Enter time.  Click dropdown list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour) |

Enter a name for this program.

Click Save

Expected outcomes:

A new customized exercise program was created or updated

1. Feature 06: Stress Monitoring
   1. Stress monitoring page
      1. Elements in Stress monitoring page

Test objective:

Test elements in Stress monitoring page

Expected outcomes:

There are 4 sections in this main page:

+ Title of the page: **“Track My Health > Stress monitoring”** with Print link and Help links

+ Report area shows: Graph report and Table report

+ **“Diagnosis & Recommendations”** area shows: result or recommendations

+ Bottom buttons: There are 2 buttons: “**Settings**” and “**Back to Track My Health**”

Buttons actions:

|  |  |
| --- | --- |
| **Buttons** | **Requirement/Actions** |
| Settings | Click to go to Setting page for Stress Monitoring feature |
| Back to Track My Health | Click to go back to Track My Health home page |

* 1. Graph Report
     1. Stress monitoring/Graph Report page

Test objective:

Check Graph Report for Stress monitoring feature

Test procedure:

On Stress monitoring page, click GRAPH buttons

Expected outcomes:

There are 2 options to view Graph report:

+ Report in %Stress view

+ Report with Raw data

The default view is: %Stress

If there is no data to display, a notification shows: **“You have no data to graph”**

* + 1. Stress mornitoring/ View Graph report with % Stress

Test objective:

Check Graph report in %Stress view

Test procedure:

From Stress monitoring page, click GRAPH buttons

Click drop-down list, select %Stress

Expected outcome:

A 2D bar chart with x-axis and y-axis shows.

Y-axis: shows % Stress (Stress percentage or Stress level)

X-axis: shows the date/time for y-axis values.

Label: **“DateTime”** withHyperlink: Click to open a Date/Time selection popup

* + 1. Stress/View Graph report with Raw data

Test objective:

Check Stress report in Raw data view

Test procedure:

From Stress monitoring page, click GRAPH buttons

Click drop-down list, select Raw data view

Expected outcome:

A 2D line chart with x-axis and y-axis shows.

Y-axis: shows different categories

|  |  |
| --- | --- |
| **Categories** | **Requirements** |
| HR | Light red line |
| HR voltage | Yellow line |
| GSR | Black line |
| G-value X | Green line |
| G-value Y | Red line |
| G-value Z | Blue line |

X-axis: shows the date/time for y-axis values.

Label: **“DateTime”**

Hyperlink: Click to open a Date/Time selection popup

* 1. Table Report
     1. Stress monitoring/Table Report home page

Test objective:

Check Table Report for Stress monitoring feature

Test procedure:

On Stress monitoring page, click TABLE button

Expected outcomes:

There are 2 options to view Table report:

+ Report in Stress level (or Stress percentage)

+ Report with Raw data

The default view is: Heart rate data view

* + 1. Stress monitoring/View Table report with Stress level data

Test objective:

Test Stress report when viewing in table view with heart rate data

Test procedure:

On Stress monitoring page, click TABLE button

Click drop-down list and select Stress level data

Expected outcomes:

A table shows data:

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Date/Time | Column header is a link. Click the link to open Popup Calendar.  Use this popup calendar to filter the date/time for data to show in table |
| Stress level | Show stress level (in %) |
| Diagnosis | Show diagnosis |

* + 1. Stress monitoring/View Table report with Raw data

Test objective:

Test Stress monitoring report when viewing in table view with Raw data

Test procedure:

On Stress monitoring page, click TABLE button

Click drop down list and select Raw data

Expected outcomes:

A table shows data:

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Date/time | Column header is a link. Click the link to open Popup Calendar.  Use this popup calendar to filter the date/time for data to show in table |
| HR |  |
| HR voltage |  |
| GSR |  |
| G-value X |  |
| G-value Y |  |
| G-value Z |  |
| Diagnosis |  |

* 1. Settings
     1. Stress monitoring/ Settings

Test objective:

Test setting page for Stress monitoring feature

Test procedure:

At the bottom of Stress monitoring Graph/Table Report

Click Settings button to go to Stress monitoring settings page

View or make change the settings

Click Save settings to save

Click Cancel to discard

Expected outcomes:

The Stress monitoring settings include:

|  |  |
| --- | --- |
| **Settings** | **Requirements** |
| Measurement duration | Enter time.  Click dropdown list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour) |
| Heart rate sample | Enter time.  Click dropdown list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour) |
| GSR sample rate | Enter time.  Click dropdown list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour) |
| Accelerometer sample rate | Enter time.  Click dropdown list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour) |

1. Feature 07: Sleep Monitoring
   1. Sleep monitoring page
      1. Elements in Sleep monitoring page

Test objective:

Test elements in Sleep monitoring page

Expected outcomes:

There are 4 sections in this main page:

+ Title of the page: **“Track My Health > Sleep monitoring”** with Print link and Help links

+ Report area shows: Graph report and Table report

+ **“Diagnosis & Recommendations”** area shows: result or recommendations

+ Bottom buttons: There are 2 buttons: “**Settings**” and “**Back to Track My Health**”

Buttons actions:

|  |  |
| --- | --- |
| **Buttons** | **Requirement/Actions** |
| Settings | Click to go to Setting page for Sleep Monitoring feature |
| Back to Track My Health | Click to go back to Track My Health home page |

* 1. Graph Report
     1. Sleep monitoring/Graph Report page

Test objective:

Check Graph Report for Sleep monitoring feature

Test procedure:

On Sleep monitoring page, click GRAPH buttons

Expected outcomes:

There are 2 options to view Graph report:

+ Report with Date/Time (Daily/Weekly/Monthly)

+ Report with Raw data

The default view is: Date view

If there is no data to display, a notification shows: **“You have no data to graph”**

* + 1. Sleep monitoring/ View Graph report by Date/Time

Test objective:

Check Graph Report for in Date/Time view

Test procedure:

From Sleep monitoring page, click GRAPH buttons

Click drop-down list, select Date/Time view

Expected outcome:

A 2D Stack bar chart with x-axis and y-axis shows.

Y-axis: shows different parameter of different categories in colors

|  |  |  |
| --- | --- | --- |
| **Categories** | **Description** | **Requirements** |
| Sleep duration | Orange | sleep duration and deep sleep duration will be measured in hours |
| Deep sleep duration | Blue | sleep duration and deep sleep duration will be measured in hours |
| Wake up # | Purple | The number of times the user wakes up will be reflected by the actual numbers |
| Sleep quality | Green | Sleep quality will be measured using a scale from 1 to 10 |

X-axis: shows the date/time for y-axis values.

Label: **“DateTime”** withHyperlink: Click to open a Date/Time selection popup

|  |  |
| --- | --- |
| **daily** | for daily tracking, the system will display just one bar that reflects the raw data parameters and associated colors |
| **weekly** | for weekly/monthly tracking, the graph will show two bars that represent the mean (left bar) and the standard deviation (right bar) for the data parameters and associated colors. |
| **monthly** | for weekly/monthly tracking, the graph will show two bars that represent the mean (left bar) and the standard deviation (right bar) for the data parameters and associated colors. |

* + 1. Heart rate/View Graph report with Raw data

Test objective:

Check Graph Report in Raw data view

Test procedure:

From Sleep monitoring page, click GRAPH buttons

Click drop-down list, select Raw data view

Expected outcome:

A 2D line chart with x-axis and y-axis shows.

Y-axis: shows parameters of different categories

|  |  |  |
| --- | --- | --- |
| **Categories** | **Colors** | **Requirements** |
| HR | Light red line |  |
| Skin temp | Yellow line |  |
| GSR | Black line |  |
| G-value X | Green line |  |
| G-value Y | Red line |  |
| G-value Z | Blue line |  |
| Activity level | Dark blue line |  |

X-axis: shows the date/time for y-axis values.

Label: **“DateTime”**

Hyperlink: Click to open a Date/Time selection popup

* 1. Table Report
     1. Sleep monitoring /Table Report home page

Test objective:

Check Table Report for Sleep monitoring feature

Test procedure:

On Sleep monitoring page, click TABLE button

Expected outcomes:

There are 2 options to view Table report:

+ Report with Date/Time data

+ Report with Raw data

The default view is: Date/Time data view

* + 1. Sleep monitoring /View Table report with Date/Time data

Test objective:

Test Stress report when viewing in table view with heart rate data

Test procedure:

On Sleep monitoring page, click TABLE button

Click drop-down list and select Date/Time data

Click Date/Time to select Track mode

|  |  |
| --- | --- |
| **Track mode** | **Requirements** |
| Monthly | weekly/monthly tracking, the system will display two columns per parameter to show the mean and standard deviation for each parameter |
| Weekly | weekly/monthly tracking, the system will display two columns per parameter to show the mean and standard deviation for each parameter |
| Daily | With daily tracking, the table will display only one column per parameter to reflect the raw data. |

Expected outcomes:

A table shows data:

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Sleep duration |  |
| Deep sleep |  |
| Wake up number  (Wake up #) |  |
| Sleep quality |  |

* + 1. Sleep monitoring /View Table report with Raw data

Test objective:

Test Stress monitoring report when viewing in table view with Raw data

Test procedure:

On Stress monitoring page, click TABLE button

Click drop down list and select Raw data

Expected outcomes:

A table shows data:

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Date/time | Column header is a link. Click the link to open Popup Calendar.  Use this popup calendar to filter the date/time for data to show in table |
| HR |  |
| HR voltage |  |
| GSR |  |
| G-value X |  |
| G-value Y |  |
| G-value Z |  |
| Diagnosis |  |

* 1. Settings
     1. Sleep monitoring feature/Settings

Test objective:

Test settings for Sleep monitoring feature

Test procedure:

At the bottom of Sleep monitoring Graph/Table Report

Click Settings button to go to Sleep monitoring settings page

View or make change the settings

Click Save settings to save

Click Cancel to discard

Expected outcomes:

The Sleep monitoring settings include 2 setting groups

Feature Settings and Alarm Setting

**Feature Settings:**

|  |  |
| --- | --- |
| **Settings** | **Requirements** |
| Heart rate sample rate | Enter a number.  Click dropdown list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour)  For example, the user can select a ten millisecond interval for Heart rate sample rate |
| GSR sample rate | Enter a number.  Click dropdown list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour)  For example, the user can select a ten millisecond interval for Heart rate sample rate |
| Accelerometer sample rate | Enter a number.  Click dropdown list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour)  For example, the user can select a ten millisecond interval for Heart rate sample rate |
| Skin temperature sample rate | Enter a number.  Click dropdown list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour)  For example, the user can select a ten millisecond interval for Heart rate sample rate |

**Alarm setting:**

|  |  |
| --- | --- |
| **Setting** | **Requirement** |
| Auto | sleep duration parameter  For example, the user can set it to 8 hours |
| Manual | The user can do this by selecting a desired Weekday and Time via clicking on the respective fields.  Add button> more file: weekday + Time |

* + 1. Sleep monitoring/Settings/Set Alarm to Auto

Test objective:

Test Auto Alarm setting for Sleep monitoring feature

Test procedure:

From Sleep monitoring setting page, Select Radio button to Auto

Enter a number

Click Save settings to save

Click Cancel to discard

Expected outcomes:

Alarm is set to Auto

User will be notified after the time entered has passed.

* + 1. Sleep monitoring/Settings/Set Alarm to Manual

Test objective:

Test Manual Alarm setting for Sleep monitoring feature

Test procedure:

From Sleep monitoring setting page, Select Radio button to Manual

Enter a number

Click Save settings to save

Click Cancel to discard

Expected outcomes:

Alarm setting is set to Manual

User will be notified after the time entered has passed in each alarm.

1. Feature 08: Position Monitoring
   1. Position monitoring page
      1. Elements in Position monitoring page

Test objective:

Test elements in Position monitoring page

Expected outcomes:

There are 4 sections in this main page:

+ Title of the page: **“Track My Health > Position monitoring”** with Print link and Help links

+ Report area shows: Graph report and Table report

+ **“Diagnosis & Recommendations”** area shows: result or recommendations

+ Bottom buttons: There are 2 buttons: “**Settings**” and “**Back to Track My Health**”

Buttons actions:

|  |  |
| --- | --- |
| **Buttons** | **Requirement/Actions** |
| Settings | Click to go to Setting page for Position Monitoring feature |
| Back to Track My Health | Click to go back to Track My Health home page |

* 1. Graph Report
     1. Position monitoring/Graph Report page

Test objective:

Check Graph Report for Position monitoring feature

Test procedure:

On Position monitoring page, click GRAPH buttons

Expected outcomes:

There are 2 options to view Graph report:

+ Report with Position

+ Report with Raw data

The default view is: Position view

If there is no data to display, a notification shows: **“You have no data to graph”**

* + 1. Position monitoring/ View Graph report by Date/Time

Test objective:

Check Graph Report for in Date/Time view

Test procedure:

From Sleep monitoring page, click GRAPH buttons

Click drop-down list, select Date/Time view

Expected outcome:

A 2D chart with x-axis and y-axis shows.

Y-axis: shows dots of different positions in colors

|  |  |  |
| --- | --- | --- |
| **Postion** | **Description** | **Requirements** |
| Supine | Blue | Lying with face up |
| Prone | Red | Lying with face down |
| Left | Purple | The number of times the user wakes up will be reflected by the actual numbers |
| Right | Orange | Sleep quality will be measured using a scale from 1 to 10 |
| Up | Green |  |
| Down | Turquoise green |  |

X-axis: shows

+ Horizontal scroll bar, use it to show more data

+ The date/time for y-axis values.

Label: **“DateTime”** withHyperlink: Click to open a Date/Time selection popup

* + 1. Position monitoring /View Graph report with Raw data

Test objective:

Check Graph Report in Raw data view

Test procedure:

From Position monitoring page, click GRAPH buttons

Click drop-down list, select Raw data view

Expected outcome:

A 2D line chart with x-axis and y-axis shows.

Y-axis: shows parameters of raw g-value over time

|  |  |  |
| --- | --- | --- |
| **Categories** | **Colors** | **Requirements** |
| G-value X | Green line |  |
| G-value Y | Red line |  |
| G-value Z | Blue line |  |

X-axis: shows

+ Horizontal scroll bar, use it to show more data

+ The date/time for y-axis values.

Label: **“DateTime”** withHyperlink: Click to open a Date/Time selection popup

* 1. Table Report
     1. Position monitoring /Table Report home page

Test objective:

Check Table Report for Postion monitoring feature

Test procedure:

On Position monitoring page, click TABLE button

Expected outcomes:

There are 2 options to view Table report:

+ Report with Position data

+ Report with Raw data

The default view is: Position data view

* + 1. Position monitoring /View Table report with Position data

Test objective:

Test Stress report when viewing in table view with heart rate data

Test procedure:

On Sleep monitoring page, click TABLE button

Click drop-down list and select Position data

Expected outcomes:

A table shows data:

|  |  |
| --- | --- |
| **Columns** | **Requirements** |
| Date/Time | Column header is a link. Click the link to open Popup Calendar.  Use this popup calendar to filter the date/time for data to show in table |
| Position |  |
| Alarm |  |

* + 1. Position monitoring /View Table report with Raw data

Test objective:

Test Position monitoring report when viewing in table view with Raw data

Test procedure:

On Position monitoring page, click TABLE button

Click drop down list and select Raw data

Expected outcomes:

A table shows data:

|  |  |
| --- | --- |
| **Categories** | **Requirements** |
| Date/Time | Column header is a link. Click the link to open Popup Calendar.  Use this popup calendar to filter the date/time for data to show in table |
| G-value X | variables |
| G-value Y | variables |
| G-value Z | variables |

* 1. Settings
     1. Position monitoring feature/Settings

Test objective:

Test setting page for Stress monitoring feature

Test procedure:

At the bottom of Position monitoring Graph/Table Report

Click Settings button to go to Position monitoring settings page

View or make change the settings

Click Save settings to save

Click Cancel to discard

Expected outcomes:

The Position monitoring settings include:

|  |  |
| --- | --- |
| **Settings** | **Requirements** |
| Sample rate | Enter a number.  Click drop-down list to select type of time: ms(millisecond)/sec(second)/min(minute)/hr(hour)  For example, the user can select a five minute interval for Sample rate |
| Alarm position | Select check box for positions user wishes to be alerted for  Supine  Prone  Left Lateral  Right Lateral  Up  DownSupine  Prone  Left Lateral  Right Lateral  Up  Down |

1. Feature 09: Fertility Monitoring
   1. Fertility monitoring page
      1. Elements in Fertility monitoring page

Test objective:

Test elements in Fertility monitoring page

Expected outcomes:

There are 4 sections in this main page:

+ Title of the page: **“Track My Health > Fertility monitoring”** with Print link and Help links

+ Report area shows: Graph report and Table report

+ **“Diagnosis & Recommendations”** area shows: result or recommendations

+ Bottom buttons: There are 2 buttons: “**Settings**” and “**Back to Track My Health**”

Buttons actions:

|  |  |
| --- | --- |
| **Buttons** | **Requirement/Actions** |
| Settings | Click to go to Setting page for Fertility monitoring feature |
| Back to Track My Health | Click to go back to Track My Health home page |

* 1. Graph Report
  2. Table Report
  3. Settings
     1. Settings for Fertility monitoring feature

Test objective:

Test setting page for Fertility monitoring feature

Test procedure:

At the bottom of Fertility monitoring Graph/Table Report

Click Settings button to go to Fertility monitoring settings page

View or make change the settings

Click Save settings to save

Click Cancel to discard

Expected outcomes:

The Fertility monitoring settings include:

|  |  |
| --- | --- |
| **Settings** | **Requirements** |
| Input temperature | Click drop down list to select: Auto or Manual |