**Software Requirement Specification**

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**1.** **Project Description**

This project’s overall view is to help physicians and providers have the ability to view and manage patients’ data to help further diagnosis. This software will collect various data such as blood pressure, heart rate, blood oxygen, and more. It will graph and interpret data that will highlight abnormalities. The physician will be able to access data for each patient as well as alert the patient. The provider will also be able to edit a status that displays either normal, abnormal, a final diagnosis, or the need for further testing. This software will help physicians and medical professionals have an organized overall view of a patient’s symptoms.

**2.** **Functional Requirements**

| **FR01** | The software must enable the customer to track and view the data collected |
| --- | --- |
| **FR02** | The software must enable users to create profiles |
|  | The software must enable users to access data with the patient’s name |
|  | The software must allow users to have specialized logins |
|  | Users must be able to view their data compared to healthy statistics |
|  | The software must be able to allow providers to edit, view, and track patient data |
|  | The software must be able to provide patients with resources |
|  | The software must allow users to view graph of data overtime |
|  | The software must allow users to request change in the provider |
|  |  |
|  |  |
|  |  |
| **FRN** |  |
|  |  |
|  |  |

**3.** **Non-Functional Requirements**

| **NFR01** | The system should respond and display data tracked in real-time |
| --- | --- |
| **NFR02** | The system should allow 1000 of users online at the same time |
| **NFR03** | The system must support these languages: English and Spanish |
| **NFR04** | The system must provide new resources in real time |
| **NFR05** | The system must be able to provide timely notifications to physicians(fast real-time calculations) |
| **FRN** | The system must create data table in real-time |

**4.** **Use Case Specification**

*<<* *Select* ***three*** *functional requirements and describe them in detail using use cases.>>*

| **UC01 Name:** | Patients Access, tracking, and editing of data |
| --- | --- |
| **Description:** | The software allows the user to access, track, and edit data. (graph and table) |
| **Actor:** | Customer |
| **Entry condition:** | The actor enters the home screen |
| **Basic path:** | 1. The system presents the actor with tabs containing **[PRO01] [E02]**   * Profile/Overview * Monitoring sheet * Search * Support   2. The actor selects the option Profile/overview **[A01] [A02] [A04]**  3.The system presents a screen containing**[PRO02] [A03]**   * [LEGAL NAME] (request for change) * [SSN] (request for change) * [PHYSICIAN] (blank if empty) (request for change) |
| **Alternative paths:** | **[A01] The actor selects monitoring sheet**  1. The system presents the customer with a screen containing **[PRO03]**  -[Medication] (editable)  -[LAST 14 DAYS of–]   * + Blood pressure (graph next to data)   + Heart rate (graph next to data)   + Blood Oxygen (graph next to data)   + Hours of sleep (graph next to data)   **[A02] The actor selects search**  1. The system presents the customer with a list of options related to their entry **[E01]**  2. The customer selects one of the available options and is presented with the proper page **[PRO01] [PRO02] [PRO03]**  **[A03]** The actor selects request for change   1. The system presents a form in the format of an email 2. Identifier (SSN) of patient included in message automatically 3. The system provides the actor with options with checkboxes    1. LEGAL NAME    2. SSN    3. PHYSICIAN 4. Customer checkboxes one or multiple. Require text for what to be changed   **[A04] The actor selects Support**   1. The system provides the user with a list of FAQ and an email for inquires. |
| **Exception paths:** | **[E01] Invalid search**   1. The system presents the customer with a list of valid searches   **[E02] Network Failure**   1. The system displays message indicating it is unable to load the profile/Data |
| **Business Rules:** | **[BR01]** . All attributes in profile is mandatory except physician  **[BR02]** .The SSN must be unique for each customer |
| **Data description** | | **Name** | **Type** | **Length** | **Mask** | | --- | --- | --- | --- | | LEGAL NAME | String | 50 | -John Doe | | SSN | String | 14 | XXX.XX.XXXX | | Physician | String | 50 | -Melon Eusk | | Medication | String | 50 | - | | Blood pressure | String | 7 | —/– | | Heart rate | Integer | 3 | — | | Blood oxygen | Integer | 3 | — | | Hours of sleep | Integer | 2 | – | |
| **Prototype:** | **[PRO01]**    **[PRO02]**    **[PRO03]** |

| **UC02 Name:** | Providers Viewing, Access, and editing |
| --- | --- |
| **Description:** | The Software allows providers to view and access patient data |
| **Actor:** | Provider |
| **Entry condition:** | The actor logins to the provider login |
| **Basic path:** | 1. The system presents the actor with tabs containing **[PRO01]**  - Profile/Information  - Patients  -Support  -Search  -HIPAA information   1. The actor selects Patients **[A01] [A02][A03] [A04]** 2. The system presents the actor with a screen presenting all their patients alphabetically (last name). **[PR02]** 3. The actor selects a patient 4. The system presents the actor with a screen presenting all patient health monitoring data    1. Request to remove patient    2. -[Medication] (editable)    3. -[LAST 14 DAYS of–]   -Blood pressure (graph next to data)  -Heart rate (graph next to data)  -Blood Oxygen (graph next to data)  -Hours of sleep (graph next to data) |
| **Alternative paths:** | **[A01] The actor selects Profile/Information**  1. The system presents the actor with a screen presenting provider information. **[PRO01]**   * 1. LEGAL NAME   2. SSN   3. Address of office   **[A02] The actor selects Search**  1. The system presents the customer with a list of options related to their entry **[E01]**  2. The customer selects one of the available options and is presented with the proper page **[PRO01] [PRO02]**  **[A03] The actor selects Support**   1. The system provides the user with a list of FAQ and an email for inquires. **[PRO04]**   **[A04] The actor selects HIPAA information**   1. The system provides the actor of the HIPAA agreement contract that they signed when they made their profile. |
| **Exception paths:** | **[E01] Restricted Data Access**   1. When the Provider selects a profile/overview for a patient.    1. The system detects that the providers does not have the necessary permission from the patient or from the administrator to access/view the data    2. This case returns to the step 5 to request access or request to remove   **[E02] Networking Failure**   1. The system/application fails to load the patients health data    1. retry (try to reload the page)    2. Notify the support (send message to tech support to investigate the problem with the network) |
| **Business Rules:** | **[BR01]** . Provider must sign HIPAA contract before creating a profile  **[BR02]** SSN must be unique for every provider |
| **Data description** | | **Name** | **Type** | **Length** | **Mask** | | --- | --- | --- | --- | | LEGAL NAME | String | 50 | -John Doe | | SSN | String | 14 | XXX.XX.XXXX | | Physician | String | 50 | -Melon Eusk | | Medication | String | 50 | - | | Blood pressure | String | 7 | —/– | | Heart rate | Integer | 3 | — | | Blood oxygen | Integer | 3 | — | | Hours of sleep | Integer | 2 | – | | Patients | String | 100 | – , —-- | |
| **Prototype:** | **[PRO01]**      **[PRO02]** |

| **UC03 Name:** | System must be able to compare user data with healthy statistics. |
| --- | --- |
| **Description:** | The software will allow the customer to view and access “healthy” statistics. In addition, they will be able to compare their current data with the “healthy” statistics and provide health resources |
| **Actor:** | Customer |
| **Entry condition:** | Customer selects the option “View healthy statistics” |
| **Basic path:** | 1. The system calls software to pull healthy statistics from the internet    1. Check to see internet connection **[E01]** 2. The system presents healthy statisticbased on patient information **[PRO01] [A02]**  * Blood pressure * Sleep * Heart rate * Blood oxygen * Along with options   + “Compare, share, print”  1. Actor selects “compare statistics” option 2. The actor may choose a statistics to compare    1. selects data       1. Blood Pressure       2. Heart Rate       3. Blood Oxygen 3. Compares user data statistic with the optimal “healthy” statistic **[PRO02][A03]**    * Only data and their details will be secured and anonymous |
| **Alternative paths:** | **[A01]** The actor selects option “back”   1. User returns step 4 of basic path   **[A02]** The actor selects the option “print” or “share”   1. The system returns a pdf consisting only of customer data **[BR01]** 2. **Share [BRO2]** |
| **Exception paths:** | **[E01] Network Issues**   1. The system displays a message indicating network issues loading data |
| **Business Rules:** | **[BR01]**. Restrictions on Customer Data  **[BR02]**. The actor can share online with only one person(other than the Producer) |
| **Data description** | | **User Data Name** | **Type** | **User Data** | **“Healthy” Data Name** | **Type** | **“Healthy” Data** | | --- | --- | --- | --- | --- | --- | | Blood Pressure | String | —/– | Blood Pressure | String | —/– | | Blood Oxygen | Integer | — | Blood Oxygen | Integer | — | | Hours of sleep | Integer | — | Hours of sleep | Integer | — | | Heart Rate | Integer | — | Heart Rate | Integer | — | |
| **Prototype:** | **[PRO01]**      **[PRO02]** |