**Software Requirements** **Specification**

Any Time Medicine

Alok Asok

Kapil Sharma

Sagar Dhamija

Varun Khandelwal

Ramanpreet Singh Khinda

**Version History**

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**Document Approvals**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Role | Signature | Date |
| Nikhil Londhe | Stakeholder |  |  |
| Rathin Radhakrishnan Nair | Stakeholder |  |  |
| To Be Decided | Quality Assurance |  |  |

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# Introduction

The purpose of this section is to give an overview of everything included in this SRS document. Also, the document provides a list of abbreviations and definitions.

## Purpose

The document’s chief purpose is to provide a detailed description of the requirements for “Any Time Medicine” (ATM) application software. It elaborates the purpose and features of the application software, what the application does, the constraints under which it operates and the motivation behind the development of the application. The document is primarily intended for the stakeholders, developers and quality assurance team and will be proposed to the instructor, teaching assstant and quality assurance team for approval.

## Project Scope

The “Any Time Medicine” is an android based mobile application that provides one stop medical solution to user’s health concerns/ medical issues by recommending Over the Counter (OTC) medicines and home remedies without having to visit the physician. The application would be free to download from Google Play Store (Application Store).

With “ATM” installed in their mobile devices the users can easily get medicinal recommendations or home remedies by selecting a body part and the issues associated with that body part. In addition to the above mentioned functionality the user can also locate healthcare centres covered under his insurance policy closest to his present location in case of an emergency. That is, the application would be using GPS to track user’s location and then provide him/her with the nearest healthcare centre.

Moreover, the application also allows user to calculate his/her Body Mass Index (BMI) and help him/her get the diet plan as per his BMI.

## 1.3 Document Convention

|  |  |
| --- | --- |
| **TERM** | **DEFINITION** |
| SRS | Software Requirements Specification |
| ATM | Any Time Medicine |
| User | Someone who interacts with the mobile phone application |
| GPS | Global Positioning System |
| Application Store | An installed application on mobile phone which helps user to find new compatible applications with mobile phone platform and download them from Internet |
| Stakeholder | Any person who has interaction with the system who is not a developer |
| OTC | Over-the-counter (OTC) drugs are medicines sold directly to a consumer without a prescription, from a healthcare professional, as compared to prescription drugs, which may be sold only to consumers possessing a valid prescription |
| BMI | BMI stands for Body Mass Index. It is a person's weight in kilograms (kg) divided by his or her height in meters squared. |
| USR\_XXX | It acts as a unique id for representing different use cases for the user |
| REQ\_FXXX | It acts a unique id for representing unique functional requirements |
| REQ\_NXXX | It acts a unique id for representing unique non-functional requirements |
| P1 | Refers to the highest level of priority given to any requirement |
| P2 | Refers to moderate level of priority given to any requirement |

## 1.4 References

* [IEEE Recommended Practice for Software Requirements Specifications](http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=720574)
* [OTC definition](https://en.wikipedia.org/wiki/Over-the-counter_drug)
* [BMI definition](http://www.medicinenet.com/script/main/art.asp?articlekey=16125)
* [Wikipedia: SRS](https://en.wikipedia.org/wiki/Software_requirements_specification)
* [SRS Template](http://www.jaysonjc.com/dl/srs/J2Lite%20SRS%20Template.pdf)

# Background and Motivation

## 2.1 Problem Statement

In today’s fast paced world - stress, headache, body aches, nausea, obesity, joint pains, anxiety, depression etc. are some of the many mundane health issues that everyone faces. Due to paucity of time and the hectic lifestyles that we are into, many of us tend to avoid visiting a physician; thereby exacerbating the problem. Over a period of time these health concerns become so trivial that they affect our personal, professional and social lives greatly.

Thus in order to prevent any petty health concern from becoming a grave medical issue, we are designing an android based mobile application that aims at providing one stop medical solution to the user by recommending Over-The-Counter medicines and home remedies that are not just easy to access but will also rule out the need to visit a doctor. The application in addition to above should also help an individual keep track of his/her diet by recommending diet plans on the basis of his/her BMI( Body Mass Index). In case of an emergency the application should also locate healthcare centres closest to user’s location covered under his/her health insurance.

## 2.2 Importance of Problem

Health issues often tend to hamper an individual’s quality of life. They not only degrade the productivity at work but also spoil an individual’s peace and tranquillity. Some of the most common effects of medical problems are:

* Lack of concentration
* Irritation/ frustration
* Lack of confidence
* Disrupted social life
* Declining financial status

Much of this can be avoided if concrete steps are taken at relevant times. Thus the application- ATM can act as the first point of contact to provide basic medical help.

## 2.3 Existing solutions

The existing solution to the problem includes the following:

* OTCplus: Over the counter drugs

[Link to application page on Google Play Store(Application store)](https://play.google.com/store/apps/details?id=com.aceinnovationgroup.otcplus&hl=en)

The application was last updated on 08/16/2012. Also, despite being 3 years old, it has a small user base of 1000-5000.

* WebMD

[Link to website](http://www.webmd.com/)

The website/application is complicated for a layman.

# Constraints

The mobile application is constrained by the availability of the internet connection. Since application would be fetching data from the database over the internet, it is mandate to have a secure internet connection for the application to function smoothly. The application also requires the user’s mobile device to have GPS enabled. Since the database server used is a free/low cost one there might be some load or latency issues in fetching the data. Moreover, as a single database server is used, limited number of users will be able to concurrently access the application.

# Stake Holders

* Nikhil Londhe
* Rathin Radhakrishnan Nair

# Requirements

## 5.1 Functional

|  |  |  |
| --- | --- | --- |
| **Requirement #** | **Priority** | **Description** |
| REQ\_F001 | P1 | The application should allow a user to register to the application. |
| REQ\_F002 | P1 | The application should allow a user to login |
| REQ\_F003 | P1 | The application should allow a user to logout |
| REQ\_F004 | P1 | The application should allow a user to select a body part, problem associated with that body part and view medicines and recommendations |
| REQ\_F005 | P1 | The application should allow a user to locate the nearest healthcare center covered under his/her insurance |
| REQ\_F006 | P1 | The application must allow a user to calculate his/her BMI |
| REQ\_F007 | P1 | On the basis of BMI, the application should allow a user to get a suitable diet plan |
| REQ\_F008 | P2 | The application must permit a user to view his/her history of remedy searches |
| REQ\_F009 | P2 | The application should allow a user to change password |
| REQ\_F010 | P2 | The application must permit a user to reset his/her password in the event of forgotten password |

## 5.2 Non-Functional

|  |  |  |
| --- | --- | --- |
| **Requirement #** | **Priority** | **Description** |
| REQ\_N001 | NA | Minimum android version: 4.1 |
| REQ\_N002 | NA | Minimum ram: 512MB |
| REQ\_N003 | NA | Minimum free installation space: 10MB |

# Use Cases

## 6.1.1 Use Case Diagram

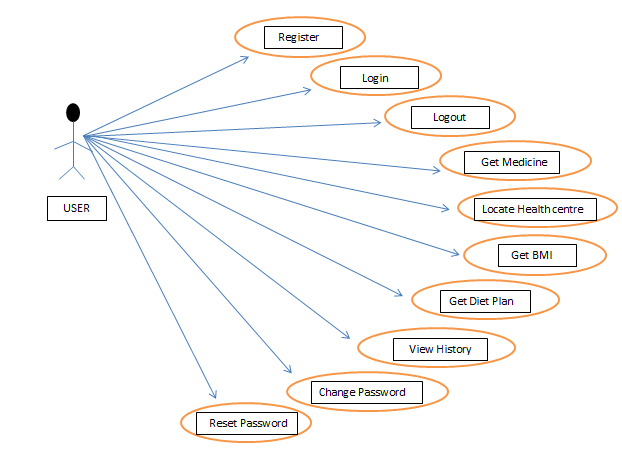


Fig.1 Use Case diagram

## 6.1.2 Use case 1

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_001 | |
| **Goal** | The user should be able to register into the application | |
| **Preconditions** | The user should download the application | |
| **Success End Condition** | The user should be intimated upon successful registration | |
| **Failed End Condition** | An error message is displayed saying registration failed | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to register with the system | |
| **Description** | **Step** | **Action** |
| **1** | Go to the registration page |
| **2** | Enter details: Last Name, First Name, Email id, Password |
| **3** | Click on the register button |
| **4** | The user is redirected to the home page |
| **Step** | **Branching Action** |
| **1** | Display an error message on the same registration page |
| **2** | Prompt the user to enter the details again. |
| **Related Information/Use cases** | Nil | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User has downloaded the application | |

## 6.1.3 Use case 2

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_002 | |
| **Goal** | The user should be able to login to the application | |
| **Preconditions** | The user should register with the application | |
| **Success End Condition** | The user should be intimated upon successful login | |
| **Failed End Condition** | An error message is displayed saying login failed | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to login into the application. | |
| **Description** | **Step** | **Action** |
| **1** | Go to the login page |
| **2** | Enter email id and password |
| **3** | Click on the login button |
| **4** | The user is redirected to the home page |
| **Step** | **Branching Action** |
| **1** | Display an error message on the same login page |
| **2** | Prompt the user to enter correct credentials |
| **Related Information/Use cases** | USR\_001 | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User knows his email id and password | |

## 6.1.4 Use case 3

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_003 | |
| **Goal** | The user should be able to logout of the application | |
| **Preconditions** | The user should login to the application | |
| **Success End Condition** | The user should be intimated upon successful logout | |
| **Failed End Condition** | An error message is displayed saying logout failed due to some internal error | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to logout of the application. | |
| **Description** | **Step** | **Action** |
| **1** | Click on the logout button |
| **2** | The user is redirected to the login page |
| **Step** | **Branching Action** |
| **1** | Display an error message on the same page |
| **Related Information/Use cases** | USR\_001, USR\_002 | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User has registered and logged into the application | |

## 6.1.5 Use Case 4

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_004 | |
| **Goal** | The user should be able to select a body part and problems associated with that body part and view medicines/remedies as per the selection. | |
| **Preconditions** | The user should be logged into the application | |
| **Success End Condition** | The user is able to select a body parts and problems associated with that body part and view medicines/ remedies as per the selection | |
| **Failed End Condition** | An error message is displayed saying “Please select all fields” | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to select a body part and problems associated with that body part and view medicines/ remedies as per the selection | |
| **Description** | **Step** | **Action** |
| **1** | Click on ‘Medicine/ Remedy’ button |
| **2** | Select the ‘Body part’ |
| **3** | Select the ‘Problem’ associated with that body part |
| **4** | Click on ‘Get Medicine/ Remedy’ |
| **Step** | **Branching Action** |
| **1** | Display an error message whenever all fields are not selected |
| **Related Information/Use cases** | USR\_001, USR\_002 | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User knows his/her email id and password | |

## 6.1.6 Use case 5

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_005 | |
| **Goal** | The user should be able to locate the nearest healthcare center covered under his insurance policy | |
| **Preconditions** | The user should be logged into the application | |
| **Success End Condition** | The user is able to locate the nearest healthcare center covered under his insurance policy | |
| **Failed End Condition** | An error message is displayed saying healthcare center not found | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to locate the nearest healthcare center | |
| **Description** | **Step** | **Action** |
| **1** | Click on ‘Locate Healthcare Center’ |
| **2** | Select the ‘Insurance Provider’ |
| **3** | Click on ‘Get Healthcare Centers’ |
| **Step** | **Branching Action** |
| **1** | Display an error message whenever a healthcare center is not found |
| **Related Information/Use cases** | USR\_001, USR\_002 | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User knows his/her email id and password | |

## 6.1.7 Use case 6

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_006 | |
| **Goal** | The user should be able to calculate his/her BMI (Body Mass Index) | |
| **Preconditions** | The user should be logged into the application | |
| **Success End Condition** | The user is able to calculate his/her BMI (Body Mass Index) | |
| **Failed End Condition** | An error message is displayed saying couldn’t calculate BMI | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to calculate his/her BMI (Body Mass Index) | |
| **Description** | **Step** | **Action** |
| **1** | Click on ‘BMI & Diet Plan’ button |
| **2** | Enter the required details |
| **3** | Click on ‘Get BMI’ button |
| **Step** | **Branching Action** |
| **1** | Display an error message whenever BMI is not calculated |
| **Related Information/Use cases** | USR\_001, USR\_002 | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User knows his/her email id and password | |

## 6.1.8 Use case 7

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_007 | |
| **Goal** | The user should be able to get the diet plan as per his/her BMI (Body Mass Index) | |
| **Preconditions** | The user should be logged into the application | |
| **Success End Condition** | The user is able to get the diet plan as per his/her BMI (Body Mass Index) | |
| **Failed End Condition** | An error message is displayed saying no diet plan found | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to have a diet plan as per his/her BMI (Body Mass Index) | |
| **Description** | **Step** | **Action** |
| **1** | Click on ‘Get Diet Plan’ |
| **Step** | **Branching Action** |
| **1** | Display an error message whenever a diet plan is not found |
| **Related Information/Use cases** | USR\_001, USR\_002, USR\_006 | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User knows his/her email id and password | |

## 6.1.9 Use case 8

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_008 | |
| **Goal** | The user should be able to view his/her history of remedy searches | |
| **Preconditions** | The user should be logged into the application | |
| **Success End Condition** | The user is able to view his/her history of remedy searches | |
| **Failed End Condition** | An error message is displayed saying no history found | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to view his/her history of searches | |
| **Description** | **Step** | **Action** |
| **1** | Click on ‘History’ button |
| **Step** | **Branching Action** |
| **1** | Display an error message whenever history is not found |
| **Related Information/Use cases** | USR\_001, USR\_002, USR\_008 | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User knows his/her email id and password | |

## 6.1.10 Use case 9

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_009 | |
| **Goal** | The user should be able to change password | |
| **Preconditions** | The user should register with the application | |
| **Success End Condition** | The user should be intimated upon successful change of password | |
| **Failed End Condition** | An error message is displayed saying change of password failed | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to change his/her password | |
| **Description** | **Step** | **Action** |
| **1** | Click on change password |
| **2** | Enter old password |
| **3** | Enter new password |
| **4** | Click on save |
| **Step** | **Branching Action** |
| **1** | Display an error message on the same change password page |
| **2** | Prompt the user to enter credentials again |
| **Related Information/Use cases** | USR\_001, USR\_002 | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User knows his/her email id and password | |

## 6.1.11 Use case 10

|  |  |  |
| --- | --- | --- |
| **USE CASE #** | USR\_010 | |
| **Goal** | The user should be able to reset password | |
| **Preconditions** | The user should register with the application | |
| **Success End Condition** | The user should be intimated upon successful resetting of password | |
| **Failed End Condition** | An error message is displayed saying reset of password failed | |
| **Primary, Secondary Actors** | Primary - User  Secondary - System/Server | |
| **Trigger** | When the user needs to reset his/her password | |
| **Description** | **Step** | **Action** |
| **1** | Click on ‘Forgot’ password |
| **2** | Enter email id |
| **3** | Click on ‘Submit’ |
| **Step** | **Branching Action** |
| **1** | Display an error message on the same reset password page |
| **2** | Prompt the user to enter email id again |
| **Related Information/Use cases** | USR\_001 | |
| **Priority** | High | |
| **Performance** | 5 seconds | |
| **Frequency** | 100 | |
| **Assumptions** | User knows his email id | |

# Success Criteria

1) User is able to search medicines/remedies for his symptoms

2) User is able to calculate his BMI and obtain corresponding diet plan

3) User is able to locate nearest healthcare centres covered under his insurance