

Software Requirements Specification

Any Time Medicine

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Document Approvals

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1. 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.

1.1 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 assistant and quality assurance team for approval.

1.2 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](#)
- [OTC definition](#)
- [BMI definition](#)
- [Wikipedia: SRS](#)
- [SRS Template](#)

2. 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\(Application store\)](#)

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](#)

The website/application is complicated for a layman.

3. 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.

4. Stake Holders

- Nikhil Londhe
- Rathin Radhakrishnan Nair

5. 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

6. Use Cases

6.1.1 Use Case Diagram

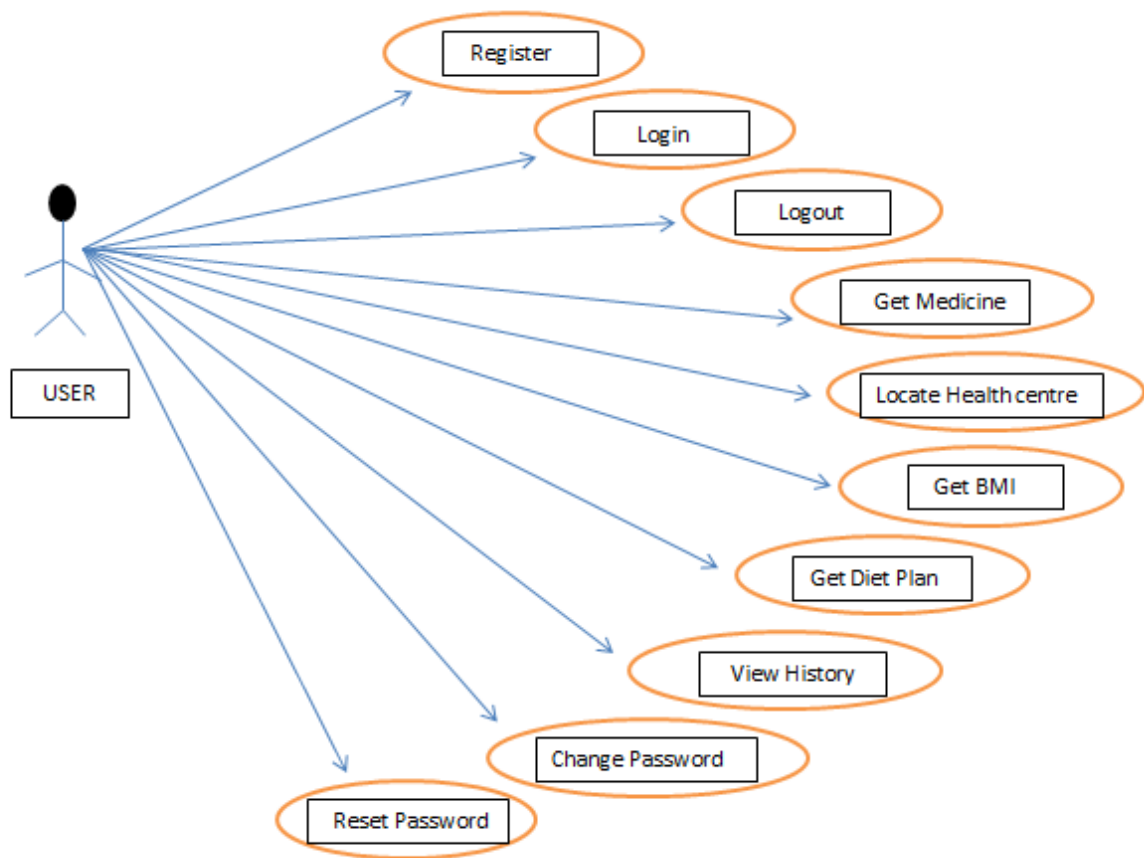


Fig.1 Use Case diagram

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
Related Information/Use cases	2	Prompt the user to enter email id again
	USR_001	
	High	
	5 seconds	
	100	
	User knows his email id	

7. 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