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Dopa – Memory Trainer
Software Requirements Specification
For Memory Trainer Application

Version 1.0

Revision History

Date	Version	Description	Author
12/07/2015	1.0	Initial creation	Linganesan

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Software Requirements Specification

1. Introduction

1.1 Purpose

The purpose of this document is to fully describe the external behaviour of the memory trainer application. This document also includes non-functional requirements, design constraints, and other factors related with the application to provide a complete and comprehensive description of the requirements for the software.

1.2 Scope

This is a memory trainer application. As the name implies this application is designed for the purpose of enhance the memory power by applying ingrain Method of loci strategy as a mnemonic technique. User can create their own mind palace and it will be saved in a database. User will able to practice with his/her mind palace and also can view his/her specific profiling to know their improvements.

Definitions, Acronyms, and Abbreviations

Android application	Mobile software application developed for use on devices powered by Google's Android platform
Interface	A shared boundary across which information is passed.
User	Someone who uses the system
MTBF	Mean Time Between Failures
MTTR	Mean Time To Repair
RUP	Rational Unified Process
SRS	Software Requirements Specification

1.3 References

[1] http://en.wikipedia.org/wiki/Rational_Unified_Process

[2] http://en.wikipedia.org/wiki/Software_requirements_specification

1.4 Overview

This document is created according to the Rational Unified Process standard format. Chapter two gives the overall description. This section describes the general factors that affect the product and its requirements. It provides the background of the requirements. Product perspective, product functions, user characteristics, constraints, assumptions and dependencies and requirements subsets. Chapter three provides the details about the specific functional requirements and non-functional requirements. It also includes design constraints, interfaces, licensing and copyrights. Final chapter includes the justification for the SRS template selection.

2. Overall Description

2.1 Product Perspective

This is an android based mobile application. This application will asked the users to build their own mind palace or use the default one. These details will be saved in a database. Users can practice with their mind palace and able view their improvements through a specific profiling. This app will contain a theory section (study hall) to get to know the techniques and also users can customize the difficulty level of training that means number of words asked to the users for remember can be customizable.

User can used this app for his/her general purpose like remember notes for exams, speech, presentation, phone numbers, lists, in fact anything. In further developments this application will contains some Interesting memory games like strategies that to enrich indirect/passive learning.

2.2 Product Functions

With this android application, user are allowed to create their own mind palace. In each phone there will be one user stats are maintained. Users can practice various games with the help of their mind palaces. Also user can keep their important notes according his/her mind palace.

2.3 User Characteristics

This application has no limited targeted customer in focus, from children to elders anyone can use this app.

2.4 Constraints

The application is being developed for the Android operating system and as such should be compatible with at least the majority of the current versions of Android which are 1.1, 1.5, 1.6, 2.0, and 2.0.1. The application must be designed to display correctly on the wide range of mobile phones which run the Android operating system. The overall application and its individual parts must be designed to run smoothly and quickly on the relatively limited processing power of mobile devises.

2.5 Requirements Subsets

Core Requirements

- Users should be able to create a mind palace in the system
- Users should test their memory power through a practice session
- Specific profiles about users progress will be kept

Non-core Requirements

- Play other various mind training games

3. Specific Requirements

3.1 Functionality

The main functional requirements of this android mobile application are follows.

- Creation and maintenance of a mind palace
- Able to Practice using memory palace
- User specific profiling

3.1.1 Creation and maintenance of a memory palace

When application starts first time on a phone user will ask to create a new mind palace in the opening of the application. Then after each starts of the app will show the regular screen of t

3.1.2 Able to practice using memory palace

In practice session user asked to remember some number of words using his/her mind palace.

3.1.3 User specific profiling

Maintain overall progress of user according to his/her activities in practice session.

3.2 Usability

3.2.1 Time required learn about the application and initial configuration time

First time user should be easily learn about the application in few minutes. Guidelines to the new user should be given in start-up. Application should be able to use without any initial configuration, just downloading and should be suffice since most of the users are not computer experts.

3.2.2 Graphical User Interface

User interface should be attractive. So that users will be able to use this application with a specific interest.

3.3 Reliability

3.3.1 Availability

System should be available for 99% time, since this application will become useless if it is not available on a blood emergency.

3.3.2 Accuracy

This application should not be produce accurate results in user profiling progress since it can be approximately estimate.

3.4 Performance

3.4.1 Response time for a transaction

Average response time for a transaction is 1 minute and the maximum acceptable response time for a transaction is 2 minutes. As specified earlier, during an emergency, response time plays a critical role in changing user`s approach.

3.4.2 Resource Utilization

As this is mobile application, utilization of resources should be very much minimized.

3.5 Supportability

3.5.1 Supported Platforms

This mobile application is supported by android platform. In future this application will support other mobile platforms too.

3.6 Design Constraints

3.6.1 Software Languages

This application should be written in java language to support android platform.

3.6.2 Development Tools

I'm using Android studio. Android applications can be easily developed and debugged using the new version of Android studio. Also Android Studio has git plugin, which can help me to have a well version control on my project in github.

3.7 On-line User Documentation and Help System Requirements

3.7.1 Help

Providing an Animation example scenario that can make them to easily understand about the method of loci mnemonic technique.

3.8 Interfaces

3.8.1 User Interfaces

When the user clicks the application icon in the android mobile, the user will initially see the splash screen. After a few seconds the user will see a screen which have four buttons, one button is mind palace(can build or edit) and the second button is m-gym(practice session) third button is study hall(Theory section) and the fourth button is progress.

3.9 Licensing Requirements

As this is an android application, this application will be released under Apache 2 license. So this application should satisfy the requirements enforced by Apache 2 license.

3.10 Legal, Copyright, and Other Notices

Since this is an open source software, the necessary source codes will be provided under Apache 2 license. Redistribution and modification of the software should happen according to that license. Lifetime support and maintenance will be provided to the users of this system. Frequent updates will also be provided and there will be no charge for downloading this application and using it. It will be made available in Google play.

3.11 Applicable Standards

Software quality standard in accordance with ISO/IEC 9126:2001 and ISO/IEC 25010:2011.

4. Justification for the Selection of Template

I have selected the RUP (Rational Unified Process) template for SRS (Software Requirements Specification) among the other SRS templates because I am following RUS for this application development to adopt the changing requirements for this application easily and to keep the product in the android market for a longer period of time.