Software Requirements Specification

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1. **Introduction**

Today dancers of all ages and levels of expertise regularly use mental imagery to better the outcome of their performance. However, the trainees do not receive feedback on their results. Dr. Amit Abraham (Department of Physical Therapy, Ariel University) approached the department of Computer Science to build a software that will indeed give feedback.

* 1. **Purpose**

The purpose of this project is to build a software system that provides trainees with accurate feedback and that quantitatively assess their level of precision in timing during the mental imagery process (aka chronometry), which is a key element for assessment of the mental imagery skill, and training’s beneficial effect.

* 1. **Intended Audience**

This document is intended for Dr. Amit Abraham and Prof. Boaz Ben Moshe. Everyone mentioned will be able to read this document. The coders will be able to prepare and edit it.

**1.3 Intended Use**

Goals of the document:

* Describe the system
* Present the system’s requirements: Functional and non-functional
* Present the needs that the system meets
* Present the system’s users

**1.4 Project Scope**

The system answers the need to measure and save the outcome of the mental imagery process in regard to timing and precision.

The system grants a simple way to manage the practices and more.

Choice of user, number of users, body position, number of points, exercise mode, folder for each user and show a log of user history.

Goals and Advantages:

* Gather information on users
* Friendly user interface
* Grants independent practice

**1.5 Definitions and Acronyms**

System’s faults

* Inaccurate data entry
* If there are two users – Unsynchronized playback audio
* Malfunction of clicker

1. **Overall Description**

We are building a new product for the Israeli Olympic rhythmic gymnastic team.

The software development team will build a web application that will help the team train through mental imagery. The product will give results covering the exercise and gather the information.

* 1. **User Needs**

The main users of the system are the gymnast and their coaches

* Entry of user information
* Entry of exercise details
* Program the specified time points of the tones
* Ability to hear the tone on the agreed upon time point
* Ability to press a clicker on a certain agreed upon time point
* Ability to record the timing of the click
* Performance of real time computational and data analyzes
* Store exercise results
* Quick search for user history
* Extraction of user history to and excel sheet
* Graph of trainee’s improvement
* Audio file of training cues
  1. **Assumptions and Dependencies**

Factors that may impair system requirements

* Fault in the clicker device
* Insecure database
* Inaccurate type of audio file

1. **System Features and Requirements** 
   1. **Functional and External Interface Requirements**

* Integration with the clicker device
* Storage of the data in the database that will allow for quick retrieval
* Integration with the database that enables a quick search
* Extract a history of users’ exercise (specific user or all)
  1. **System Features**
* Personal folder for each user that will include their personal details
* Joined folder for multiple user use
* Clicker used to communicate between user and computer
* Editing and Adding time points manually
* Affiliation of results to the trainee in practice
* Display of exercise results
* Audio file of training cues

**3.3 Nonfunctional Requirements**

* Option for body position
* Option for exercise mode
* Real-time feedback on each time point
* Simple user Interface