**SRS(SOFTWARE REQUIREMENT SPECIFICATIONS)**

1. Introduction:
   1. Purpose:

To provide the user the facility to learn how to play different musical instruments, and to record voice combined with instrument music.

* 1. Scope:

It can be used as a means to teach people who are unfamiliar with instruments how to play them. They can also save their work along with their voice. It gives the user the ability to play while learning at any place.

* 1. Definition and Abbreviations:
     1. Definitions: A software requirements specification (SRS) is a comprehensive description of the intended purpose and environment for software under development. The SRSfully describes what the software will do and how it will be expected to perform.
     2. Abbreviations:

The abbreviations used are:

* + - 1. Inst: Instruments
      2. Mus: Music
      3. Rec: Record
      4. DBM: Database Manager
      5. Admin: Administrator
  1. References:
     1. www.w3schools.com
     2. www.sql.com
     3. www.instrument.com
     4. [www.google.com](http://www.google.com)
  2. Overview:

It provides the general view that the user when wishes to play the instrument and unable to play due to some reasons then the user can just open the website and play the instruments which he wants.

1. Overall Description:

The product is supposed to be an open source. It is a web based system implementing client-server model. The InstruMix System provides simple mechanism for users to learn, create and record music with voice.

* 1. Product Perspective:
     1. System Interfaces:

This is a web based system and hence will require the operating environment for a client and server GUI.

* + 1. Interfaces:

This system is provisioned to be built on the HTML framework which is highly flexible. Decision regarding which database to use should be taken considering the fact that data being exchanged or stored is large, and the appropriate data management system will yield efficient performance.

* + 1. Hardware Interfaces:

The user’s device should be enabled with internet.

* + 1. Software Interfaces:

The user’s browser should be HTML5 compatible, and have JavaScript enabled for a satisfactory user experience.

* + 1. Interfaces Communication:

Internet, whether Local Area Network or Wireless can be used.

* + 1. Memory constraints:

The memory requirements are not very high as it is a web based system which would operate smoothly on a browser with internet.

* + 1. Operations:
       1. Learn Instruments
       2. Play Instruments
       3. Record Songs
    2. Site adaptation requirements:

The device should be enabled with internet, and should have JavaScript enabled.

1. SPECIFIC REQUIREMENTS:
   1. External interfaces: "External interface requirements specify hardware, software, or database elements with which a system or component must interface." This section provides information to ensure that the system will communicate properly with external components.
   2. Functions:

The functions being provided are:

* + 1. Learn Instruments
    2. Play Instruments
    3. Record Songs
  1. Performance requirements:

The user’s device should have HTML5 and JavaScript enabled.

* 1. Logical database requirements:

Decision regarding which database to use should be taken considering the fact that data being exchanged or stored is large, and the appropriate data management system will yield efficient performance.

* 1. Design constraints:

It has software fault tolerance, Limit module size and initiate memory.

* 1. Software system:
     1. Reliability:

The software system will allow authorized users to restore the data from an existing backup.

* + 1. Availability:

The software system could provide automatically generated backup containing all the stored information at the time backup is taken.

* + 1. Security:

The user must first authenticate themselves by name and password. The system will not allow if the user fails to provide correct log in information.

* + 1. Maintainability:

The repair actions will be taken in case of any failures within some time.

* + 1. Portability:

The user just need a good internet connection and will be able to open the

Software as it is completely potable.

* 1. System mode:
     1. System mode:

Some systems behave quite differently depending on the mode of operation. When organizing by mode there are two possible outlines. The choice depends on whether interfaces and performance are dependent on mode.

* + 1. User class:

Some systems provide different sets of functions to different classes of users.

* + 1. Objects:

Objects are real-world entities that have a counterpart within the system. Associated with each object is a set of attributes and functions. These functions are also called services, methods, or processes*.*

* + 1. Features:

A feature is an externally desired service by the system that may require a sequence of inputs to effect the desired result. Each feature is generally described in as sequence of stimulus-response pairs.

* + 1. Stimulus:

Some systems can be best organized by describing their functions in terms of stimuli.

* + 1. Response:

Some systems can be best organized by describing their functions in support of the generation of a response.

* + 1. Functional hierarchy:

When none of the above organizational schemes prove helpful, the overall functionality can be organized into a hierarchy of functions organized by either common inputs, common outputs, or common internal data access. Data flow diagrams and data dictionaries can be use dot show the relationships between and among the functions and data.

* + 1. Additional comments:

Three are many notations, methods, and automated support tools available to aid in the documentation of requirements. For the most part, their usefulness is a function of organization. For example, when organizing by mode, finite state machines or state charts may prove helpful; when organizing by object, object-oriented analysis may prove helpful; when organizing by feature, stimulus-response sequences may prove helpful; when organizing by functional hierarchy, data flow diagrams and data dictionaries may prove helpful.

1. Change management process:

The requirement change management process, in a sense, tries to ensure that a project succeeds despite requirement changes. Specialized music stores that sell only guitars, only basses or only drums are more likely to be found in major cities. Requirement change management process defines the set of activities that need to be performed when there are some new requirements or changes to existing requirements. Change management also requires making the customer fully aware of the impact of the changes on the project so that changes in the negotiated terms can be done amicably.

1. Document approvals:

Identify the approvers of the SRS document. Approver name, signature, and date should be used.

1. Supporting information:

In order to use certain features of the system, users must first authenticate themselves by name and password. The system shall not allow access if the user fails to provide correct log in information. When Appendices are included, the SRS should explicitly state whether or not the Appendices are to be considered part of the requirements.