

A Database for resource management for MoraSpirit Software Requirements Specification For Resource Management

Version 1.0

<Project Name>	Version: 1.0
Software Requirements Specification	Date: 10/10/2015
CS3042- Database Systems- Mini Project (Group)	

Revision History

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<dd/mm/yy>	<x.x>	<details>	<name>

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Software Requirements Specification

1. Introduction

1.1 Purpose

The purpose of this source is to present a detailed description of the database system for resource management in MoraSpirit (15Oc). This will explain the functional and non-functional requirements of the system, the interfaces of the system and the constraints under which the system must operate. This document is intended for the designer, developer, and maintainer of the resource management system.

This will only contain the higher level requirement specification for the system. Any changes to requirements or detailed software requirements identified during implementation of the project will be updated periodically.

1.2 Scope

This software system will be a database system for MoraSpirit designed mainly to provide a tool to assist in automating the management of resources of MoraSpirit.

The system is intended to store information on

- All the sports equipment MoraSpirit owns
- Details of the students who are involved in sports within University of Moratuwa

Furthermore the system will be supportive on managing

- The supplies of sports equipment to the students
- Managing the student resource allocation schedule
- Managing the practice schedule

1.3 Definitions, Acronyms, and Abbreviations

<i>Acronym / Abbreviation</i>	<i>Expanded Term</i>
GUI	Graphical User Interface

1.4 References

- *Software Requirements Specification for Sport Event Management Framework (SEMF) Version 1.0.* (2006, September 26). Retrieved from <http://lms.uom.lk/sf/shantha/Project-web-sites/2006-07/Group-05-semf/site/files/project%20group%2005-%20SEMFv1.doc>
- Somerville, I. (2004). *Software Engineering*. New Delhi: Pearson Education.

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1.5 Overview

The next section, the Overall Description section, of this document describes the general factors that affect the product and its requirements. This is used to establish a context for the requirement specification in the third section of the document.

The third section, the Specific Requirement section, of this document is written primarily for the designers and testers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences

2. Overall Description

2.1 Product Perspective

The scope is to provide a tool to assist in automating the management of resources of MoraSpirit. Both the students and administrators can use the system.

2.2 Product Functions

We mainly focus on students engaging in sport activities and sport equipment. We hope to include two main interfaces for administrators and students.

Administrators are able to,

- Manage the details of sport equipment
- Manage the practice schedule
- Add, view and remove students from the database

Students are able to,

- Add, view and remove their details and get confirmation
- Reserve sport equipment
- View practice schedule

2.3 Product Characteristics

We hope that many students may get a chance to participate in sport activities by using our system. It would be very efficient and useful in keeping track of students who engage in group sports as well as individual sports.

We look forward to design a reliable, secure and good performing database for resource management including student details and equipment details.

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2.4 Constraints

- The users have to be online to interact with the system, a Web browser and any Operating System as long as it supports the appropriate web browser.
- The students can only view their details but no other student's.
- The students cannot change the practice schedule
- Students cannot reserve the sport equipment except the allowed time period.

2.5 Assumptions and Dependencies

- We assume that all students who engage in sports will use the system, enter details and view details about equipment and practice schedule.
- We assume that the practice schedule does not change except in cases such as competitions and tournaments.
- We assume that the administrators would use the system to get details about students for special situations such as colors night.
- The reservations of sport equipment depend on the time and availability.

3. Specific Requirements

3.1 Functionality

MoraSpirit requires a database system for managing their sports equipment. As they requested, the system also needs to manage the student details who are involved in sports within the university. In addition it should be capable of managing the supplies of sports equipment to the students, managing the student resource allocation schedule and managing the practice schedule.

The functional requirements of the MoraSpirit sports equipment management system can be grouped into four main parts:

3.1.1 Student interface

Student interface is designed for Students who are involved in sports activities within the university. Students who are involved in sports must register as a member. A registration page will be displayed for students, where they will enter information about themselves, like name, surname, age, birth date, e-mail address, involved sports etc. Student will also be able to search the database for a specific sports equipment, which is characterized by the sports activity using this interface.

The database, which will contain student's information, will be the one of the main part of this system.

Students can lookup sports equipment's availability and can reserve in advance if sports equipment are available.

If Mora Spirit buy any new sports equipment, Details of that equipment and availability of that equipment should be show in student interface.

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3.1.2 Administrator Interface

Administrator interface is designed for administrator of MoraSpirit sports equipment management section where he/she has the control of the service of this system. He/she will be able to manually add, change or delete sports equipment information and student information. Administrator will also be able to search the database for a specific sports equipment, which is characterized by the sports activity using this interface.

The database, which will contain sports equipment information, will be a key part of this system.

Administrator keeps the record of sports equipment details and availability and add details of newly bought sports equipment.

3.1.3 Practice schedule management

Administrator should keep the record of time schedule for sports practices. He/She is able to manually prepare time schedule for a particular sport activity.

The database should keep the time slot of every sports activities which are available for students.

3.1.4 Sports Equipment management

System's database should maintain important information of sports equipment and availability of that equipment. It also should keep record of the students who borrowed and lent sport equipment and date and time.

3.2 Non Functional Requirements

3.2.1 Usability

Administrator will be asked to receive a basic training in order to achieve an efficient system handling. They will also be educated on the importance of the data for the correct operation of the system, since they will be the ones dealing with the data.

As most of the users are not experts in computer programs, it is essential to have GUI.

3.2.2 Security

The system is password protected, so the unauthorized access to the data and the database is not allowed. So the security of the systems is preserved.

3.2.3 Reliability

This system should be available 24 hours per day, 7 days per week. Maintenance access period is a month. Database is backed up

3.2.4 Performance

- The information retrieval should be as fast as possible.
- Data handling and data processing would definitely improve the overall system.
- The larger the primary memory, moreover the size of the secondary storage should be sufficient for data swapping, recovery and backup procedures.

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3.2.5 Supportability

- Compatible with Java Virtual Machines
- Compatible with database

3.3 Design Constraints

- Only administrator can add or delete data about sports equipment manually.
- The project should be finished within deadline period.
- The users should have a Web browser and any Operating System as long as it supports the appropriate web browser.

3.4 Assumptions

- We assume that only administrators can decide the practice schedule and it is persistent.
- Students can practice on weekends ahead of the schedule.
- We assume that all the sport equipment are lent to the students on practice days.

3.5 Technologies

- Design Tool to be used : Visio
- Software Language to be used: HTML and php
- Software development tools: Dreamviewer and Notepad++

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