**1. INTRODUCTION:**

The Software product to be developed is the Score Management System (SMS).

1. **PURPOSE :** 
   * The purpose of the document is to outline the requirements of the system both functional and non-functional also to present a detailed description of score management system.
   * The document acts as a medium between the stakeholders and developers.
   * The document lists all the functionalities of the system, interface requirements etc.
   * The system developed eventually will adhere to all the requirements mentioned in the document.
2. **SCOPE :** 
   * The software developed is a score management system.
   * In any school / college, report card is to be obtained from office while this software generates report card of a student online, which can be printed.
   * The software is designed so that professors could upload student marks and students can view their marks. Students can calculate the percentage obtained.
   * Workload of administration will reduce to some extent after development of this system. All data is secured in binary data file, thus enabling adminstration for anytime view result of a particular student.

**1.3 OVERVIEW:**

* + Definitions of some terms used in the document has been mentioned.
  + The document is divided into three sections viz. Introduction, General Description and Specific Requirements.
  + General description section gives a general overview of the system before moving into the technical details of the system.
  + Specific requirements section include functional, non- functional and external requirements of the system.
  + All needs of the system were properly analyzed before preparing this document.

1. **DEFINITIONS :** 
   * **DATABASE**:Collection of information, organized in such a way thatit can be easily accessed, managed and updated.
   * **USER INTERFACE:** The means by which the user and system interactsin particular the use of input devices and software.

**2. GENERAL DESCRIPTION:**

1. **PRODUCT PERSPECTIVE :** 
   * SMS will be a C++ interface based system and will replace the existing paper based system.
   * Teachers update the scores of student which gets added into the database and students can generate their report card.
2. **PRODUCT DESCRIPTION :** 
   * SMS maintains users at three levels viz. Teacher, Student and Admin.
   * Teacher level user can upload student marks.
   * Student level user can generate their report card which mentions marks obtained in all subjects and percentage obtained.
   * Admin can add teachers and students.
   * All data is secured in the database and teachers need to update marks incase of any change.
3. **USER CHARACTERISTICS :** 
   * User should be internet literate i.e must have basic knowledge of using computer and internet.
   * User must have teacher id/roll number to login to the system.
   * User must have access to the data files.

1. **ABBREVIATIONS :** 
   * **SMS**: Score Management System.
   * **OS**: Operating System.
   * **RAM**: Random Access Memory.
   * **viz** : which is
   * **i.e.** : that is

**3. SYSTEM FEATURES:**

**3.1 FUNCTIONAL REQUIREMENTS:**

**3.1.1 ADD USERS**

**INTRODUCTION:** This module is used at the admin level

**INPUT**: Type, Name of user, Teacher/Student number and theirdetails

**PROCESSING:** On submission, data is stored in the database

**OUTPUT:** Success status of entry is displayed

**3.1.2 UPDATE MARKS:**

**INTRODUCTION:** This module is used by the user at teacher level.

**INPUT:** All student marks obtained will be taken as input.

**PROCESSING:** On submit button click, database is opened andmarks is updated.

**OUTPUT:** Message is shown indicating success or failure.

**3.1.3 CHECK MARKS:**

**INTRODUCTION:** This module is used by the user at student level.

**INPUT:** No input required.

**PROCESSING:** Percentage of marks is calculated.

**OUTPUT:** Marks obtained in all subjects is displayed along with thepercentage.

**4. EXTERNAL INTERFACE:**

**4.1 USER INTERFACE:**

• The software provides a very intuitive and easy to use interface which can be used by anyone having basic computer knowledge.

**4.2 HARDWARE INTERFACE:**

• **OS:** Windows/Linux.

• **RAM:** 2 GB minimum

• **Hard disk:** 1 GB for database.

**4.3 SOFTWARE INTERFACE:**

• C++ application with g++ compiler pre-installed

• Database: C++ binary data files

**4.4 COMMUNICATION:**

• Access to data files must be available 24 X 7.

**5. NON-FUNCTIONAL REQUIREMENTS**

**5.1 PERFORMANCE:**

• Time taken by the system in accessing or updating database shall be less than 2 seconds.

**5.2 RELIABILITY:**

* SMS will be 24 X 7 available.
* Software will be frequently updated.
* Backup of database is available thereby securing data.