Software Requirements Specification

For

Practical Database Management System

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1. Introduction

1.1 Purpose

The main purpose of this SRS document is to illustrate the requirements of the Project Practice Database Management System to help consultants in institutions maintain and manage subject and practice data.

1.2 Document Conventions

The document is prepared using Microsoft Word 2011 and has used the font type 'Times New Roman'. The fixed font size that has been used to type this document is 12pt with 1.5 line spacing. It has used the bold property to set the headings of the document. All pages except the cover page are numbered, the numbers appear on the lower right-hand corner of the page.

1.3 Product Scope

In this project Practical Database Management system used to manage practical activities related to subjects.

Practical Database Management System will organize work inside institute and proposed system will do the following tasks:

- Insert /delete/edit subjects' information
- Insert/delete/edit practical activities information
- View practical activities related to the subject.

2. Overall Description

2.1 Product Perspective

After selecting one subject from among several subjects, Practical activities related to that selected subject are displayed. Instructors can add, remove, and change new subjects and related practical activities. Students will be able to look after the subjects and the activities and the activities related to the subject. Furthermore, this system will allow time management, the ability to update, add and remove data, and the accuracy of the practical activities related to the subject will be confirmed.

2.2 Product Functions

Instructor

- Insert /delete/update subjects' information
- Insert/delete/update practical activities information
- Insert/delete/update date information
- View practical activities related to the subject.

2.3 User Classes and Characteristics

● Instructor

Admin has the full access to the system which means he can manage any activity regarding the system. He is the highest privileged user who can access to the system.

Key functions

✓ Manage subjects and practical's

2.4 Operating Environment

Software requirements

- Operating system: Windows XP/7/8/8.1/10
- Database: MySQL Server
- Language: Java
- Framework: Java framework

Hardware requirements

- Processor: Core i5
- RAM: 4GB
- Hard Drive:1GB or more

2.5 Project Documentation

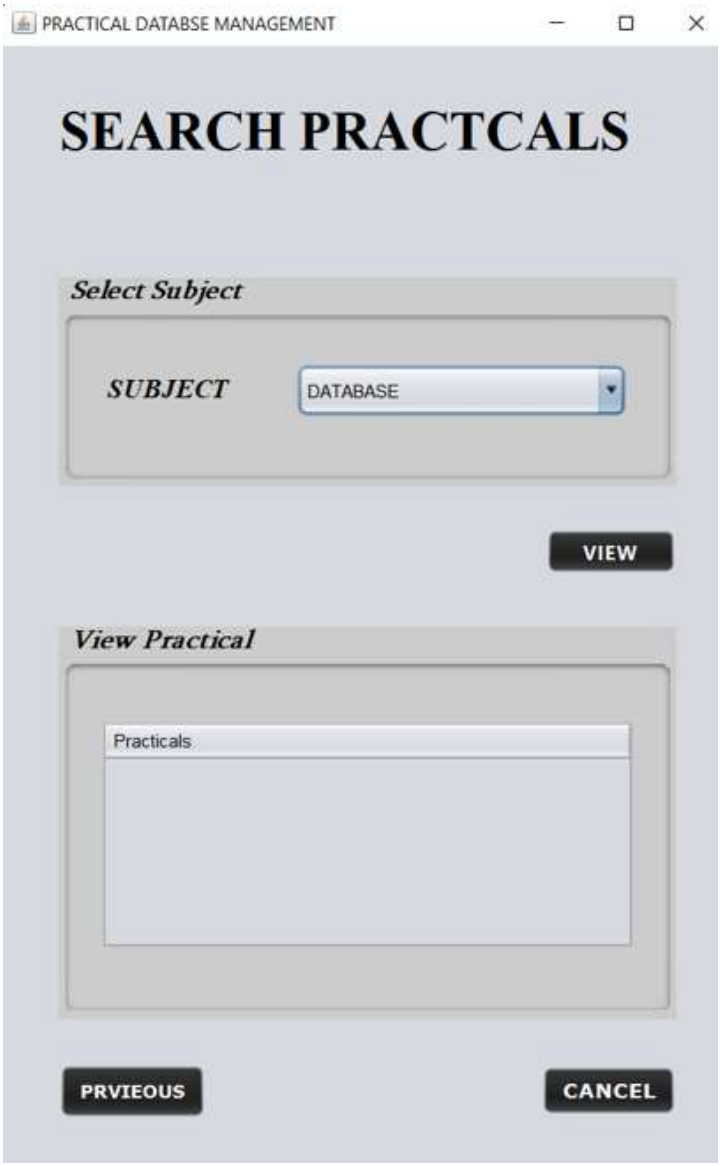
Software Life Cycle Phase	Documentation	Intended Activities
Requirement Gathering, Analysis and Specification	• Project proposal • Software Requirement and Specification (SRS) which includes - ER diagram - Context diagram - Data flow level 1 diagrams - Use case diagrams	Includes the customer expected software features, constraints, interfaces, and other attributes. Moreover, the objectives and the benefits gained through the system are clearly specified
Software Design	• Software Design Description (SDD)	Describes the logical basis of design decisions taken and how it will pave way in acquiring the requirements of the customer through the software
Implementation	• Technical Documentation	Contains information regarding the implementations of the system using the programming concepts
Software Testing	• Software Test Documentation (STD)	Includes information degrading testing procedures to validate and verify the software results. Main types of testing techniques are unit testing, integration testing, system testing and acceptance testing
Maintenance	• User Documentation	Includes manuals for the end users according to their position of access levels

2.6 Assumptions and Dependencies

- The Users should have sufficient knowledge of Computer & of English language Because the user interface will be provided in English.
- The members should be part of the institute where this software will be implemented.

3. External Interface Requirements

3.1 User Interfaces



3.2 Hardware Interfaces

- Laptop/Desktop PC
  - Core i5 processor
  - 4GB RAM
  - 500GB HDD

The purpose of this computer is to provide information when asked about practical activities related to a particular subject among the subjects. An efficient computer is required to perform such an action.

3.3 Software Interfaces

Developing end

- Java
- Front end: Java Net Beans
- Back end: PHP my admin
- MySQL server: database connectivity and management

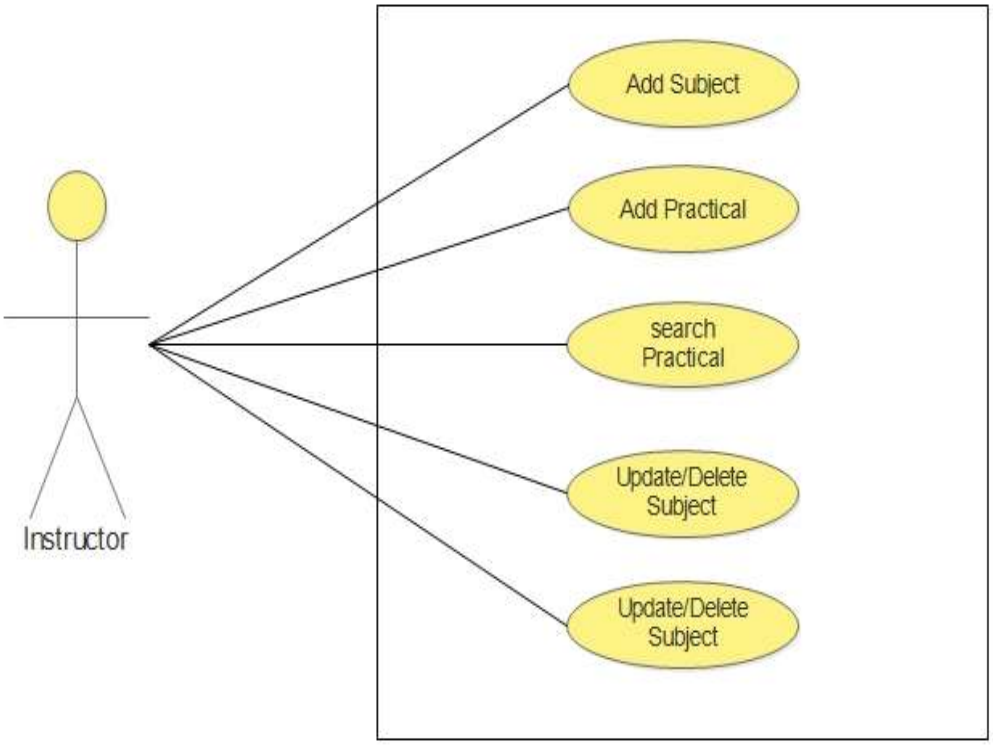
Instructor end

- Windows – OS

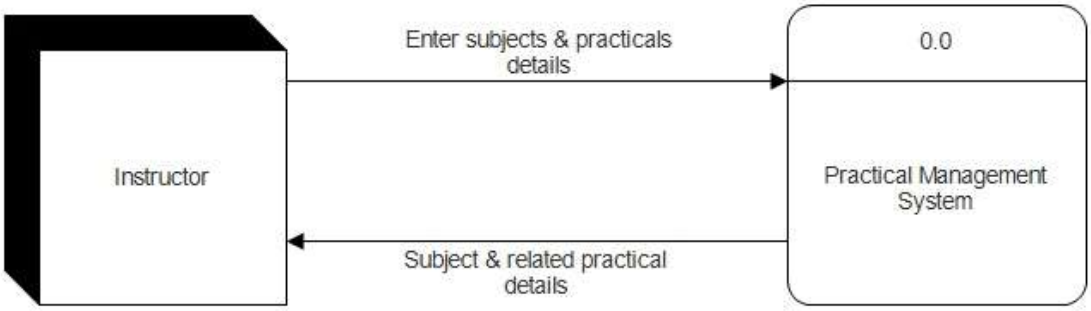
3.4 Communication Interfaces

4 System Features

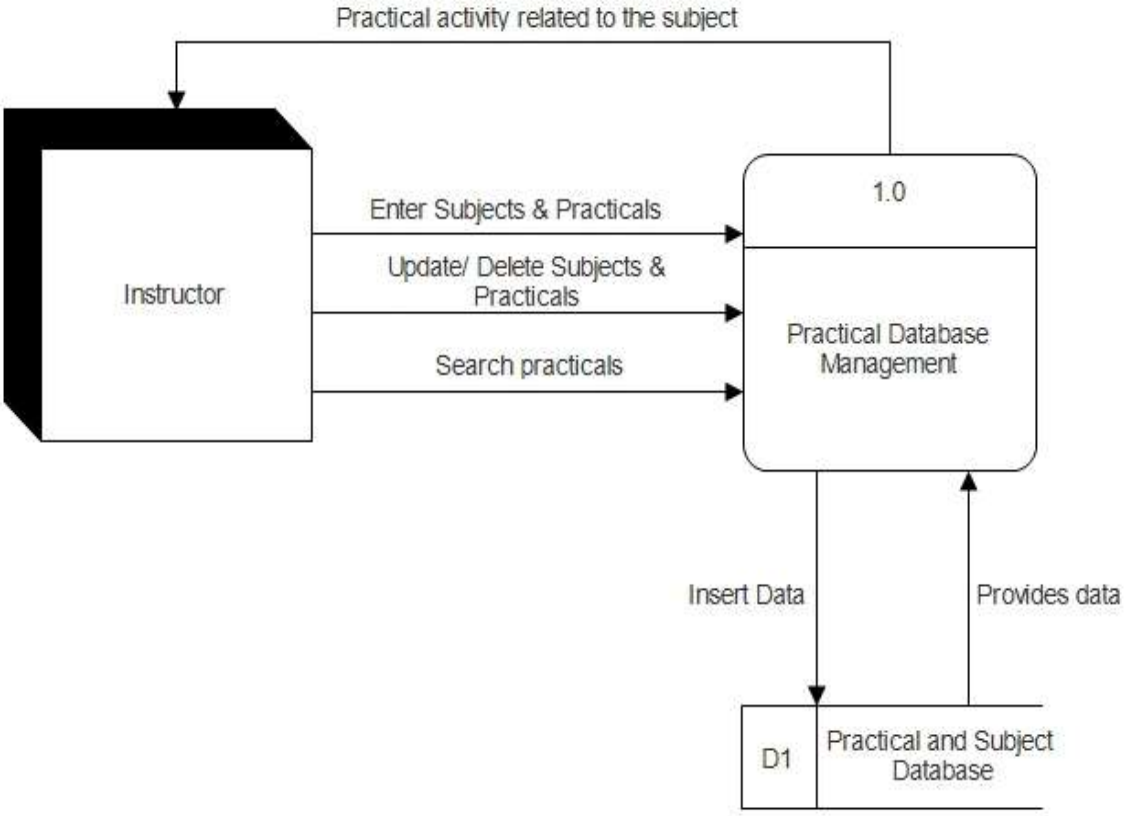
Use case diagram



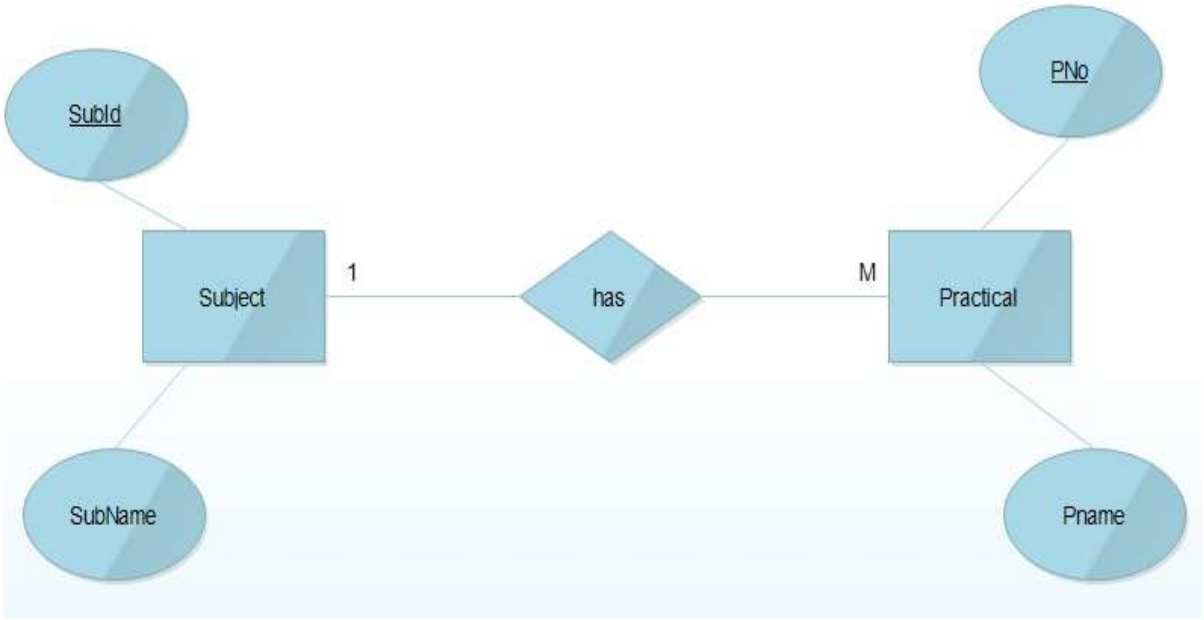
Context diagram



DFD level 1



ER Diagram



5 Other Non-functional Requirements

5.1 Performance Requirements

Response time: Once a subject is selected the system will respond within 1second.

User Interface: User interface screen will response within 5 seconds.

5.2 Software Quality Attributes

- AVAILABILITY: The system shall be available all the time.
- CORRECTNESS: A bug free software which fulfil the correct need/requirements of the client.
- MAINTAINABILITY: The ability to maintain, modify information and update fix problems of the system
- USABILITY: software can be used again and again without distortion.
- ACCESSIBILITY: only instructor can access the system.

- ACCURACY: The reliability on the information/output. Can depend/be sure of the outcome.
- STABILITY: The system outcome/output won’t change time to time. Same output will be given always for a given input.