Gopal SRS Document - dimple

Software Engineering (Lovely Professional University)

ONLINE TUTOR BUDDY SCHOOL

(Software Requirements Specification)

SOFTWARE ENGINEERING

CSE320

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1. Introduction

This section gives a scope description and overview of everything included in this SRS document. Also, the purpose for this document is described and a list of abbreviations and definitions is provided.

1.1 Purpose

The purpose of this document is to give a detailed description of the requirements for the "Query to ER diagram converter" software. It will illustrate the purpose and complete declaration for the development of system. It will also explain system constraints, interface and interactions with other external applications. This document is primarily intended to be proposed to a customer for its approval and a reference for developing the first version of the system for the development team.

1.2 Scope

SQL to ER diagram converter leads to a scope of creating the whole entity relationship diagram of the large databases by just importing it into a notepad file

And then directly converting the whole database into its corresponding ER diagram.

1.3 Definitions, acronyms, and abbreviations

- **USER**: Someone who interacts with the mobile phone applicaltion.
- **ER Diagram:** Entity Relationship diagram that shows the relationship between various entity through diagram
- **Admin/Administrator:** System administrator who is given specific permission for managing and controlling the system.
- **Stakeholder:** Any person who has interaction with the system who is not a developer.

- JAVA: It is a high level language used to code a program.

1.4 References

The references I used for my software requirements specification include the followings:

- Consulting through various clients.
- Books: Database Management System Navathe , My SQL, etc.
- Miscellaneous references.

1.5 Overview

This whole SRS (system requirement specification) documentation includes the general description such as product perspective, product function, assumptions, constraints etc and the specific requirements such as functional requirements performance requirements, attributes, external interface requirements and certain other requirements.

2. GENERAL DESCRIPTION:

2.1 Product Perspective:

The Perspective of this project is to take in input a query from the user and convert it into an ER Diagram using respective software . It has some built in queries to help user to get an overlook of the show query is created.

2.2 Product Functionalities:

The user will write his queries, the system will validate upon those queries, that whether the query entered is correct or not. If the query entered is correct then the system will recognize the name of table, names of fields (attributes), and their datatypes. Thus the procedure to draw an ER-Diagram is iterative rather than linear or sequential. It is based on repetition of process or procedures.

2.3 User Characteristics:

The user who is using the software must have the thorough knowledge of the SQL to create a query. The product have all the necessary functionalities . It is recommended that the user must understand the Basic English and computer relations.

2.4 General Constraints:

The Notepad is a constraint for the software, since the software takes in input a query. The constraint is that user must have knowledge about SQL to create a query.

2.5 Assumption & dependencies:

The basic assumption is that the data which is to be given as input is available and the user have the knowledge of operating the system. We are also assuming that user is having the knowledge of creating an query .

3. THE SPECIFIC REQUIREMENTS:

3.1 External Interface Requirements:

3.1.1 User interface:

The software we provide to the users is the user interface and the user operator is bound to use the software only.

3.1.2 Hardware Interface:

Since our software is not hardware specific, it does not require any specific hardware to run. A simple computer machine which has operating system with configuration of Windows XP or above version is able to run the software.

3.1.3 Software Interface:

Our website is fully designed on JAVA language and SQL which is supported in almost every computer with minimum configuration.

3.1.4 Communication Interface:

The communication between the different parts of the system is important since they depend on each other. However, in what way the communication is achieved is not important for the system and is therefore handled by the underlying operating systems for both the user and the system so as to convert a query/database to respective ER Diagram.

3.2 Functional Requirements:

This section includes the requirements that specify all the fundamental actions of the software system.

3.2.1 Functional Requirement – USERS

3.2.1.1 INTRODUCTION:

The user has access of the software to create or edit a database . It can create a database only if he has a valid id and password . The user has following functional requirements

- *About us:* - A user can create and edit database.
- *Inbuilt query/database:* It contains example of database for the user to make them use to the software.
- *Database:* Can create or edit or import a database which is already saved in the memory.

3.2.1.2 INPUT:

User can give as input various queries that gets converted to ER Diagram.

3.2.1.3 PROCESSING:

Depending upon the user's choice or the response the software automatically creates a database and corresponding diagram will be shown to user.

3.2.1.4 OUTPUT:

The output for the user is the corresponding ER Diagram.

3.2.1.5 ERROR HANDLING:

There is no possibility of coming error in respect of user except in case if there incorrect insertion of query or incorrect id or password. And this error can be handled by user itself by checking the queries inserted and correct ID and Password .

3.2.2 Functional Requirement – Administrator

3.2.2.1 INTRODUCTION:

Administrator is the head in charge of the software who can access all accounts and assign id and password to various users. Followings are the functional requirements for an Administrator

- *Profile:* **-** It contains basic information of administrator.
- *Add new members:* - The admin has right to add and remove a member .
- *Monitoring:* - Admin monitor the status of the software according to his project or individual task, and comes with an upgradation if needed.
- *Add query/database:* - If a member want to add a query he simply can write it according to his requirments.

3.2.2.2 INPUT:

The input for administrator is the database or query.

3.2.2.3 PROCESSING:

When administrator feed the name of any member the name is first check into the database and if the name is a valid name then the admin give the permission to access the software.

3.2.2.4 OUTPUT:

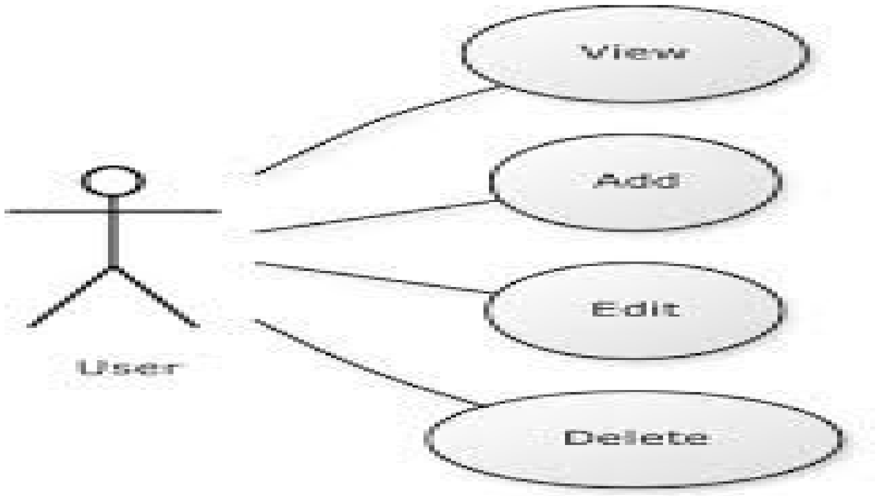
The output for the administrator is the required information or the query .

3.2.2.5 ERROR HANDLING:

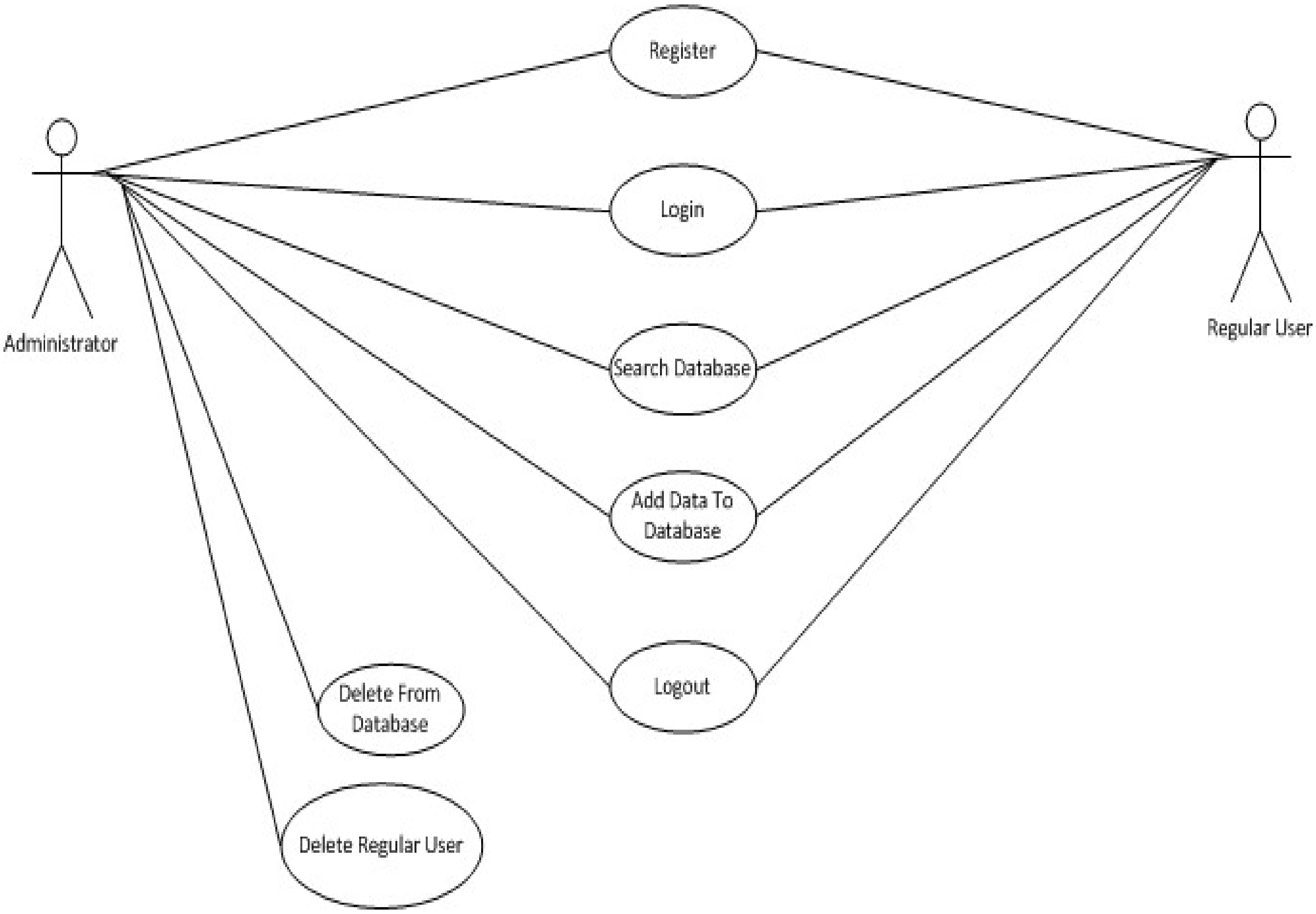
The possibility of error in respect of Administrator is come only when particular requirement of administrator is not fulfilled or if wrong query is submitted. And this error can be handled by administrator itself by performing strict action on the corresponding member.

3.3 USE CASES:

3.3.1 Use Case-1 : USER



3.3.1 Use Case-2 : ADMINISTRATOR



3.4 Non Functional Requirement

3.4.1 Performance:

This is successfully satisfying the users of the basis requirement. The tools and application software are used in this project are very popular and easily available across the world. The software is build using **JAVA**, which is freely available. Thus the problem of non-availability of software is eradicates. The backend of the system is **SQL**, which is freeware database application.

3.4.2 Reliability:

The software is a very reliable, one because there is no chance of system failure as there are only limited user which can access the database that are registered members and the Administrator and the software have enough capability to maintain its performance over time.

3.4.3 Availability:

The availability of the database is as long as you have it stored in your computer . As and when you delete the submitted query, it gets deleted.

3.4.4 Security:

The software we have created is very secured as it can be accessed only through validated member who have valid id and password. No other person can access the database.

3.4.5 Portability:

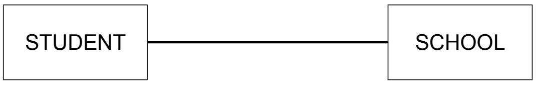
The major advantage of this system is that a client doesn’t need to access it on a particular machine due to its portability feature the software can be accessed from any device with configuration above windows xp.

3.5 Logical Database Requirements:

We are using My SQL for creating our database which is a Popular open source software based on SQL (Structured Query language) and hence the database is very easily accessed through the simple queries. The Database must be in connected state with the application every time.

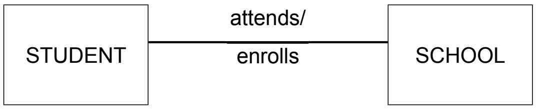
4. ANALYSIS MODELS:

Relationships

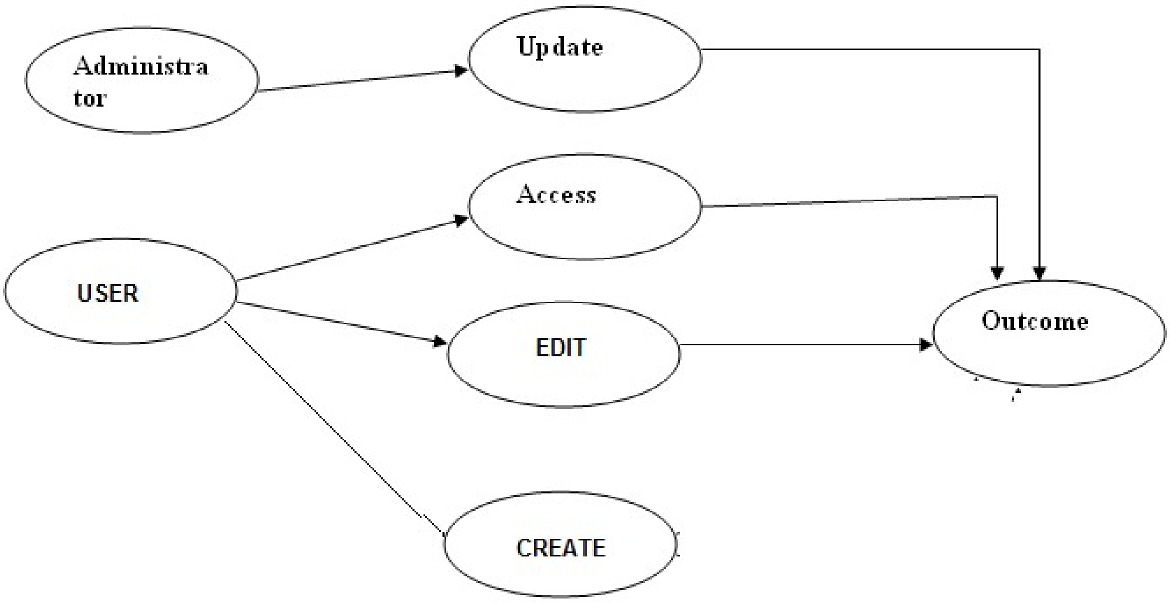


The diagram above now indicates that students may have some relationship with schools. More specifically, there may be a relationship between a particular student (an instance of the student entity) and a particular school (an instance of the school entity).

If necessary, a relationship line may be labeled to define the relationship. In this case, one can infer that a student may attend a school, or that a school may enroll students. But if necessary, this relationship could be labeled for clarification:

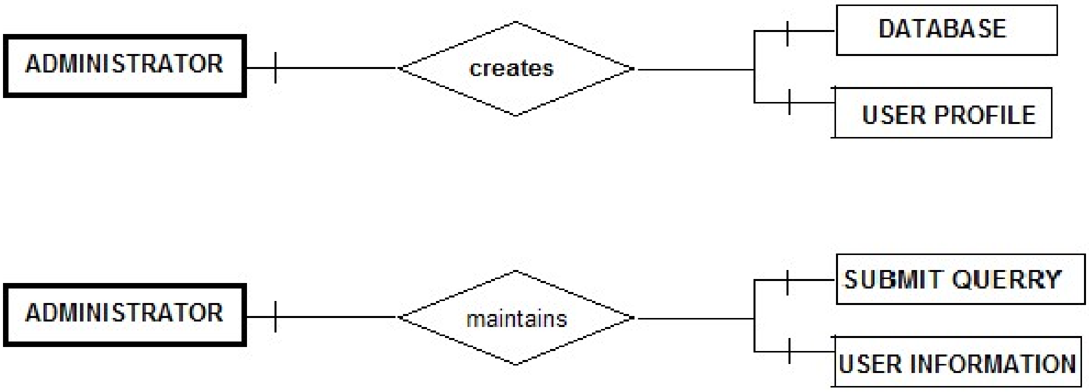


4.2.DFD

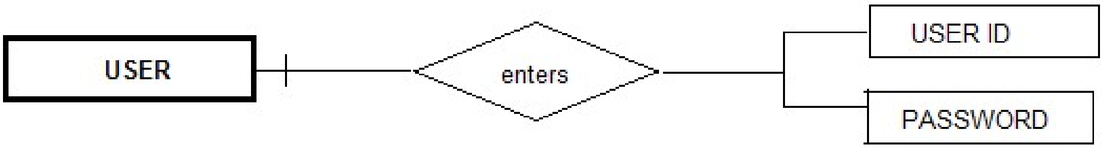


4.2.ER- Diagrams

ADMINISTRATOR



USER


USER
enters
USER ID
PASSWORD