SOFTWARE REQUIREMENT SPECIFICATION

1.1 Introduction

A Software Requirements Specification (SRS) is a detailed description of a software system to be developed with its functional and non-functional requirements. SRS is a document that captures complete description about how the system is expected to perform. The following subsections of the Software Requirements Specifications (SRS) document provide an overview of the entire SRS.

1.1.1 Purpose

This document is developed for the project “Tech-Mate” that is designed to create a platform that empowers people to share and grow the world’s knowledge. Here people can ask anything about computer language, programming queries or anything related to technology. They can read high quality information that’s personalized and relevant to them and share their knowledge with others. The Software Requirements Specification (SRS) will provide a detailed description of the requirements of the “Tech-Mate” system. SRS is the medium through which the client and user needs are accurately specified to the developer. Through SRS, the client clearly describes what it expects from the proposed system and the developer clearly understands what capabilities to build in the software. SRS helps the client determine if the software meets the requirements.

1.1.2 Scope

The Central objective of the project ‘Tech-Mate’ system is to provide online platform for connecting people to share the knowledge to whoever needs it. This software project solves all the problems experienced in the present system. The proposed system provides the following features:

- It enables people to ask anything about computer language, programming queries or anything related to technology.
- It enables companies to visit our website to find potential candidates and offer

them a job.

- It enables the users to view the information posted by the people.

1.1.3 Definition, Acronyms, Abbreviation

GUI - Graphical User Interface

DBMS - Database Management System

RDBMS - Relational Database Management System

SRS - Software Requirement Specification

ADMIN -The Administrator.

CPU -Central processing unit

PHP -Hypertext Preprocessor.

SQL -Structured Query Language.

HTML -Hyper Text Markup Language.

CSS -Cascading style sheet

1.1.4 References

www.w3schools.com

www.geeksforgeeks.com

www.tutorialsapoint.com

1.1.5 Overview

The project "**Tech-Mate**" is developed to provide a platform that empowers people to share and grow the world's knowledge. The admin controls and coordinates the application and its functions. The user is able to ask questions. Here user can also answer the questions asked by other users.

2.2Overall Description

This section will give an overview of the whole system. The system will be explained in its context to show how the system interacts with other systems and introduce the basic functionality of it. It will also describe what type of users will use the system and what functionality is available for each type.

At last, the constraints and assumptions for the system will be presented.

2.2.1 Product Perspective

The techmate.com software is a fully independent product and not a part of any other system. The users of the system are categorized as admin, company, and user. This system brings people together with different perspectives so they can understand each other better and empower everyone to share their knowledge. It provides simple database rather than complex ones for high requirements and it provides good and easy graphical user interface (GUI) to both new as well as experienced users of the computers.

2.2.2 Product Functions

- The project "**Tech-Mate**" is developed to provide an interactive platform for the users to share their knowledge with others.
- It enables people to ask questions anything about computer language, programming queries or anything related to technology.
- It enables companies to visit our website to find potential candidates and offer them job.
- It enables the users to view the information posted by the people.
- It enlarges the flexibilities in the existing system with web-based user interactive interface.
- It enables user to comment on anyone's answer to make sure that their answer is correct or not.
- It enables the user to get notifications, if anyone post question on their specialized area.
- This system is designed with an intension to provide user friendly interface to various users of the system.

2.2.3 User Classes and Characteristics

The system has three user levels.

1. **ADMIN:**

   Login gives option to login by entering username and password. The admin can manage users, company, and manages question/answer.

- Login
- Manage user.
- Manage question/answer.
- Manage company
- View feedback

2. **USER:**

   User can register through email-id and password. The user can ask questions, answer the questions and search for the topics.

- Register
- Login
- Manage profile
- Question/answer
- Search for topics
- Voting
- Comment
- Score counts
- Notification
- Badges
- Inbox
- Feedback

3. **COMPANY:**

   Company can register through email-id and password.

- Register
- Login
- Search
- View badges
- View user profile

2.2.4 General Constraints:

General constraints include the following:

- This application requires an internet connection.
- Users must register and get confirmation from admin to access the website for the first time.
- Only admin manages the system.
- No one has rights to change the information of someone else account on this website.
- The end system should also allow for seamless recovery, without data loss, from individual device failure.

2.2.5 Assumptions and Dependencies:

- It is assumed that this system has three types of users, i.e., admin, company and user.
- The admin should be careful in modifying or deleting any data which will cause inconsistency in the database. The customers can only perform the functions specified for them.
- It is assumed that all the software and hardware requirements are fulfilled.
- All the data entered will be correct and up to date.
- It is assumed that the needed changes, to collect and store the data, will be made within the current application and database.

3 SPECIFIC REQUIREMENTS

3.1 External Interface Requirements:

3.1.1 User Interface

The software provides good graphical interface for the front end of the database so that naïve users can make use of the system with ease.

We have taken following requirements during design,

- Textboxes to enter details.
- Buttons to add, delete, update and search.
- Labels to display the information.
- Checkboxes.
- Combo boxes and list boxes.
- Grid box to display the information.

3.1.2 Software Requirements

- Operating system: Windows 7 or above.
- Language: PHP
- User interface: HTML, CSS, JavaScript
- Database: MySQL
- Sublime text 3
- Browser: Chrome, Mozilla Firefox or any other browsing application.

3.1.3 Hardware Requirements

- Processor: Intel dual core or above
- Processor Speed: 1 GHZ or more
- RAM – 2 GB or above
- Hard Disk – Minimum 1TB or more

3.1.4 Communication Interface

The communications functions required by this product is HTTP protocol, and internet communication is through TCP/IP protocol.

3.2 Functional Requirements

3.2.1 Functional Requirements

Admin:

- Login: Admin will enter to the website using username and password.
- Manage user: He/she can delete an account if he finds out that the particular account is violating any rule (i.e. giving wrong information, bullying, spreading hate etc.). Admin can also view their profile and their points.
- Manage question/answer: Admin also has the power to delete a question, answer or comment if it's inappropriate.
- Manage company: The admin can manage company details registered to the system.

User:

- Register: User has to register by providing the primary details.
- Manage profile: User can change profile picture, username after creating the account.

- Question/answer: The user can ask questions, answer them, and answer any other question asked by another user. They can also attach pictures for better explanation.
- Search for topics: The user can use search box to find the topic of their interest.
- Voting: The user can support the answer using up votes and down votes.
- Comment: The user can comment on anyone's answer to make sure that their answer is correct or not.
- Score counts: Here user gets points for the questions/answers according to how many up votes it has. This will help them get badges.
- Notification: The registered user get notification if anyone post question on their specialized area. So that they can answer the question without searching for the question.
- Badges: Badges are in different colours denoting how good/active you are in the site.
- Inbox: In this module user can privately chat with one user about a certain topic to clear doubts.

Company:

- Register: Company has to register by providing primary details.
- Search: Company can search for users who have answered a lot about one certain topic or who have answered many questions.
- View badges: The Company can view the sorted list of users who has an elite badge.
- View user profile: The Company can view the user profile who has good score and contact them for further procedure.

3.3 Performance Requirements:

- The server shall be capable of supporting an arbitrary number of active users.
- Should have a good memory space.
- 1mb file should upload in 60 sec.
- Should be error-free.
- Should handle large amount of data.
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3.4 Design Constraints:

- While user registering to the system, mandatory fields must be checked for validation whether the user has filled appropriate data in these mandatory fields. If not, proper error message should be displayed or else the data is to be stored in database for later retrieval.
- All the inputs should be checked for validation and messages should be given for the improper data. The invalid data are to be ignored and error messages should be given.

- The system must be designed in such a way that will be easy to use and visible on most of the browsers.

3.5 System Attributes

The Quality of the database is maintained in such a way so that it can be very user friendly to users of the database.

- Performance: System should be able to handle all the user at a time using any of the web browsers.
- Accessibility: Administrator and many other users can access the system but the access level is controlled for each user according to their work scope.
- Usability: The Software can be used again and again without any distortion.
- Availability The system shall be available all the time.
- Correctness: A bug free software which full fill the correct need/requirements of the client.
- Maintainability: The ability to maintain, modify information and update fix problems of the system.
- Security: login will be provided for the administrator with unique username and password to avoid usage of the system from other users.

3.6 Other Requirements

3.6.1 Safety Requirements:

- There are three user levels in Semicolon.com, Access to the various subsystems will be protected by a user log in screen that requires a username and password. This gives different views and accessible functions of user levels through the system.
- Maintaining backups ensure the system database security. System can be restored in any case of emergency.
- In case the user forgets or loses Password, the repair functionality helps by choosing “forgot password” option in the main login window.
- Consistency: Checking the fact that all clients must be attached to one server, so there is an appropriate control of the information.

3.6.2 Security Requirements:

- The server on which the 'Semicolon.com' resides will have its own security to prevent unauthorized write/delete access. There is no restriction on read access.
- The proposed website will be secure. There are different categories of users they are admin, company and users.
- Depending upon the category of user the access rights are decided.
- Admin has the maximum privilege to all subsystems.