**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING - CSE**

Practical Record

**On**

Software Engineering Laboratory (19PC1CS06)

**Submitted to**

V N R V i g n a n a J y o t h i I n s t i t u t e o f E n g i n e e r i n g & T e c h n o l o g y

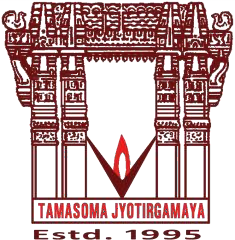
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## Bachelor of Technology In

## Computer Science Engineering

(B.Tech II Year IV Sem)



***Submitted By***

***Team no:13***

VNR Vignana Jyothi Institute of Engineering & Technology Bachupally, Nizampet (S.O), Hyderabad–90

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## VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

#### Bachupally(v), Hyderabad, Telangana, India.



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VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

#### Bachupally(v), Hyderabad, Telangana, India



***CERTIFICATE***

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Signature of the Examiners

Internal examiner External Examiner

**Software Requirements Specification (SRS):**

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#### DEFINITION:

A software requirements specification (SRS) is a document that describes what the software will do and how it will be expected to perform. It also describes the functionality the product needs to fulfill all stakeholders (business, users) needs.

#### PURPOSE:

The purpose of this SRS document is to provide a detailed overview of our software product,

its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It lays out the functional and non-functional requirements of a system that is used for describing the user interactions.

**Template of SRS:**

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# SRS For Online Forum:

**1. Introduction**

An online forum is a great place to discuss any particular topic with the like-minded people. These forums are internet-based group communities where you can start a discussion, or get an answer to your query or even search for new business prospects. These forums allow you to register with them and after that you can look into the answers to various questions written by others or you yourself can answer the questions. Almost every website these days has a small forum integrated in their own websites.

An online forum, or a message board, is a public place where you can drop any message, or discuss any particular topic. In this article, we are going to discuss more about the public forums which are quite common and high in popularity.

**1.1 Purpose**

This document is intended for the following group of people:-

• Students who want a platform to learn and discuss their queries with other students or mentors.

• Teachers who are interested to teach can use this as a teaching tool .

• For the techies to discuss about new technologies and developers to help the geeks in programming.

• Online forums are used for doubt clarification. User answers the queries of other users.

• Anyone who are interested to share some news and business analysis of a company.

**1.2 Scope**

This document applies to online forums. This software offers benefits such as clearing doubts, posting questions for learners and developers. Online discussion forums have benefits at individual and society level.

The user need not to login to participate in the discussion, but it differs from one to another platform. The user can invite others for discussion and submit a query. It can also be used as a common tool in the online classroom. From enhancing engagement to making thinking visible and helping build community.

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**1.3 Definitions, Acronyms, and Abbreviations**

**AAS**: All About Scratch forum

**AT**: Advanced Topics forum, also Art Trade

**BBCode**: Markup language for forums

**Collab**: Abbreviation for Collaboration

**Ceebs/CB**: Ceebee (Scratch Team member)

**FPS**: Frames Per Second, when rendering something with the pen, such as a raycaster

**FPC**: Front page curator

**FAQ**: Frequently asked question(s)

**HWS**: Help With Scripts forum

**OP**: Original post/poster

**WIP**: Work in progress, draft

**TBD**: To Be Determined/Decided

**TBC**: To Be Continued

**P2See/P2S/P2C/Paddle**: Paddle2See (Scratch Team member)

**SRS**:Software Requirements Specification.

**1.4 References**

The references for the above software are as follows: -

i. www.google.co.in

ii. www.wikipedia.com

**1.5 Overview**

Section 1.0 discusses the purpose and scope of the software.

Section 2.0 describes the overall functionalities and constraints of the software and user characteristics.

Section 3.0 and 4.0 details all the requirements needed to design the software.

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**2.The Overall Description**

**2.1 Product Perspective**

Forums prefer a premise of open and free discussion. Most common topics on forums include questions, comparisons, polls of opinion, as well as debates.. The Forum provides a simple mechanism for users to share and acquire knowledge.

Online forums are usually organized into a number of categories, in which members can post their questions or discussion prompts and reply to each other. Many forums allow members to share multimedia content as well as text, and forum posts are often longer than those on social media sites or in chat rooms.

This software allows us to perform many functions apart from participating in discussions.Some of the functions are to give opinion on the comments,to mention the users etc.

**2.2 Product Functions**

* **Login/Signup** - Registered users can Login and New Users can sign up or they can login as a guest.Username should be unique.
* **Forgot Password** - In case if any user forgets the password he can retrieve his account using his Email Id. A link will be sent to the registered Email id on clicking on the link the user can reset a new password and can login to his account.
* **Add Question** - Enables a logged in user to ask questions. User can add a question to his account so that it appears to the public user and he can get an answer.
* **Answer** - Enable a logged in user to post answers.Query submitted by another user appears. On Clicking to question, the user can answer the query.
* **Post** - Enables a user to post news and some random topic for discussion.User can post other website links,reference links and images to ease the doubt explanation for .
* **Upvote/Downvote** - Logged in users can upvote or downvote any answer.User can upvote and downvote Answer given by user in context of satisfied and not satisfied with the answer provided.
* **Chat** - The Users can chat privately.Registered users can discuss with the other user privately. When the user wants more explanation he can personally ping the other user who has answered the query so that his doubt gets clarified without affecting the question post.

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* **User Mention** - A user can mention other users with the username to look into the question. Mentioned users get notification about the question.
* **Spaces** - It is a platform that allows people to create communities based on shared interests, allowing people to search within these communities. Users can join spaces with the approval of moderators.

**2.3 User Characteristics**

1. **Registered users:** Registered users of the forum can automatically be promoted to a more privileged user group based on criteria set by the administrator.They will have to login with the valid credentials before opening the forum.
2. **Unregistered Users:** An unregistered user of the site is commonly known as a guest or visitor. Guests are typically granted access to all functions that do not require database alterations or breach privacy. A guest can usually view the contents of the forum or use such features as read marking, but occasionally an administrator will disallow visitors to read their forum as an incentive to become a registered member.
3. **Moderators:** The moderators are users of the forum who are granted access to the posts and threads of all members for the purpose of moderating discussion and also keeping the forum clean. Moderators also answer users' concerns about the forum, general questions, as well as respond to specific complaints.
4. **Administrators:** The administratormanages the technical details required for running the site. As such, they may promote members to moderators, manage the rules, create sections and subsections, as well as perform any database operations. Admin can generate reports which contain all the posts and their corresponding replies.

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**2.4 Constraints**

* Every user must have a unique username.
* A Registered user must be signed in if their credentials are correct.
* System should be capable of handling concurrent users.
* Registered Users can post any number of queries.
* This system is provisioned to be built on the Angular framework which is highly flexible.Decision regarding which database to use should be taken considering the fact that data being exchanged or stored is large, and the appropriate data management system will yield efficient performance.

**2.5 Assumptions and Dependencies**

It is considered that the user has the basic knowledge of operating the internet and to have access to it. The administrator is expected to be familiar with the interface of the tech support system.

**3. System Features**

**3.1 Functional requirements**

At the start, the user is provided with a login screen and he is required to enter his login credentials later which will be verified by the database. In case of an unsuccessful attempt the user is asked again for his credentials.

After a log in, the user is presented with a list of options like Answer, add question. The user can select any one in the list for interaction with the software.

We can also find a separate section for discussion here the user can post their questions. Before it is visible to all the users, it is verified by moderators.

**Validity Checks**

Prior validity checks like login credentials, comments verifying etc are done by the software for better performing.

**Sequencing Information**

The information about the users and their account should be entered into the database .

**Error Handling/ Response to Abnormal Situations**

If the internet service gets disrupted while sending information to the server, appropriate error messages will be prompted to the user.

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**4.External Interface Requirements**

**4.1.1 User Interface Requirements**

1. A login screen is provided in the beginning for entering the required username/email and password.
2. An unsuccessful login leads to a reattempt screen for again entering the same information.
3. The successful login leads to a screen displaying a list of activities and functionalities.
4. In case of administrator, a screen will be shown having options to monitor comments,posts and disable any service.
5. After the login, a screen with a number of options is then shown to the user. It contains all the options along with their brief description to enable the user to understand their functioning. There we also have a separate section allotted for discussion and select the proper option.
6. A screen will be provided for the user to check his required topic to discuss.
7. The user according to his interest ,to post the questions or answer the questions.
8. The user can chat with anyone privately.

**4.1.2 Hardware Interface Requirements**

|  |  |  |
| --- | --- | --- |
|  | **Google Chrome** | **Internet Explorer** |
| Min **RAM** | 512 MB | 64 MB(XP) |
| Recommended **RAM** |  | 512MB |
| Min Disk Space |  | 150 MB (XP), 70 (Vista) |

**4.1.3 Software Interface Requirements**

This is a web based system and hence will require the operating environment for a client and server GUI. The user’s browser should be HTML5 compatible for a satisfactory user experience.

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**4.1.4 Communication Interface Requirements**

The communication protocol used shall be TCP/IP and Protocol used for data transfer shall be File Transfer Protocol.(FTP).

**5. Other Non-functional Requirements**

**5.1 Performance Requirements**

The following list provides a brief summary of the performance requirements for the software:

**5.1.1 Capacity**

The Forum shall be operational 24 hours a day and 365 days of the year.

**5.1.2 Dynamic requirements**

The account verification time must not exceed 2 sec. under normal server workload and 4sec. under peak server workload. The password verification time must not exceed 1 sec. under normal server workload and 3 sec. under peak server workload. Post and answer upload must not exceed 0.8sec under normal server load and 3sec under peak workload. Chat send and receive must not exceed 0.5sec under normal server 1sec under peak server workload.

**5.1.3 Quality**

The primary objective is to produce quality software. As the quality of a piece of software is difficult to measure quantitatively, the following guidelines will be used when judging the quality of the software:

1. Consistency – All code will be consistent with respect to the style. (This is implied when adhering to the standard).

2. Test cases – All functionality will be thoroughly tested

**5.2 Software System Attributes**

**5.2.1 Reliability**

As the system provides the right tools for discussion, problem solving it must be made sure that the system is reliable in its operations and for securing the sensitive details.

Performance reports on response time, down/up time will be gathered. The website will be able to effectively handle lots of faulty data coming either purposefully or accidently entered.

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**5.2.2 Availability**

If the internet service gets disrupted while sending information to the server, the information can be sent again for verification.

* Failure of one component does not immediately bring down the entire website.
* A Load balancer, which distributes the traffic in peak situations across the different servers will be used.

**5.2.3 Security**

* The Website will use a Security Socket Layer (SSL) Protocol. ("https://" is to be used for HTTP urls with SSL)
* Information of the users should not be accessible to an unauthorized person. It should not be intercepted during the transmission.

**5.2.4 Usability**

As the system is easy to handle and navigates in the most expected way with no delays. In that case the system program reacts accordingly and transverses quickly between its states.