

# **Software Requirement Specification**

For

**SUST Online Community(SOC)**

**Version:1.0**

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# 1.Introduction

## 1.1 Purpose

To build a online community of SUST (**SOC**),providing all academic,co-curricular and current activities information of SUST for all Sustians.

## 1.2 Document Convention

- **SOC** : SUST Online Community.
- **Authentication** : Verified users by administrator.
- **CR** : Class Representative.
- **User** : Teachers and Students.
- **SRS** : Software Requirement Specification
- **UML**: Unified Modeling Language
- **ER**: Entity Relationship Diagram
- **DFD**: Data flow Diagram

## 1.3 Reading Suggestion

This is a prototype for an online based system that will serve all needed information about SUST to all Sustians. Some recommended topic for readers:

- **Developers**: Product feature, User characteristics,

Operating environment, System features.

- **Designers:** Project scope, User characteristics, System features, External interface requirements.
- **Domain:** Product perspective, Product features, User characteristics, System features,
- **Students/Public:** Project scope, Product features, System features.

## 1.4 Project Scope

Goal of **SOC** is to access all necessary informations of SUST more easily and precisely to it's users. **SOC** is an online based system, based on relational database and the data shared by it's users.

## 1.5 References

For more information visit-

- <https://sust.edu/iict>
- [https://en.wikipedia.org/wiki/Software\\_requirements\\_specification](https://en.wikipedia.org/wiki/Software_requirements_specification)

Survey Link:

- [https://docs.google.com/forms/d/1iqMlcL2HoggSgvhxzTu2Zy94FSgZVmEHMpQXwrTMqGM/viewform?fbclid=IwAR1EM38TX2udch9HuLmyRFVaovTU-cllmGsJiQO\\_gK0N-M9pHRCiqwWTrb0&edit\\_requested=true#responses](https://docs.google.com/forms/d/1iqMlcL2HoggSgvhxzTu2Zy94FSgZVmEHMpQXwrTMqGM/viewform?fbclid=IwAR1EM38TX2udch9HuLmyRFVaovTU-cllmGsJiQO_gK0N-M9pHRCiqwWTrb0&edit_requested=true#responses)

## 2.Overall Description

### 2.1 Product Perspective

**SUST Online Community** is a new online based system for providing information and facilities for all Sustian:

- **Newsfeed:** **SOC** will provide a newsfeed with all latest news related to academic,co-curricular and current activities of SUST.
- **Information:** Store all needed information about teachers,current students, academic calender,alumni and organizations.
- **Share and Feedback:** **SOC** is a social based online application,so user can share news or information and also can give feedbacks.

### 2.2 Product Features

**SUST Online Community (SOC)** will provide:

- **Basic Information of Student**
  - Name
  - Department Name
  - Blood Group
  - Registration No
  - Email and Contacts
  - Address
- **Basic Information of Teacher**
  - Name
  - Department Name
  - Qualifications
  - Achievements
  - Email and Contacts

- Blood Group
- **Basic Information of Alumni**
  - Name
  - Department
  - Batch
  - Current Status
  - Email and Contacts
  - Blood Group
- **News Feed**
  - 1. All SUSTian News**
    - 1.1 Daily Affairs
      - Academic News
      - Cultural Events
      - Organizational News
      - Festivals
    - 1.2 Emergency Post
      - Blood Related
      - Fire Related
      - Erratic Situation
  - 2. Departmental News**
    - Daily Class Updates
    - Exam Dates
    - Exam Results
    - Departmental Activities

## 2.3 User Classes & Characteristics

<b>Super Admin</b>	<ul style="list-style-type: none"> <li>● Add,delete Admin</li> <li>● Suspend user</li> <li>● Activate user</li> <li>● Create user privilege</li> <li>● Assign user to a privilege</li> </ul>
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	<ul style="list-style-type: none"> <li>● Update Profile</li> </ul>
<b>Admin</b>	<p><b><u>1.System Manage:</u></b></p> <ul style="list-style-type: none"> <li>● Add,delete user</li> <li>● Approve CR request</li> <li>● Suspend user</li> <li>● Activate user</li> <li>● Create user prlvilege</li> <li>● Assign user to a privilege</li> <li>● Update Profile</li> </ul> <p><b><u>2.Dashboard Manage:</u></b></p> <ul style="list-style-type: none"> <li>● Approve post</li> <li>● Delete offensive post</li> <li>● Response to reports</li> <li>● Delete offensive Comment</li> </ul>
<b>CR</b>	<ul style="list-style-type: none"> <li>● Create Profile</li> <li>● Edit Profile</li> <li>● Request to be CR</li> <li>● Post</li> <li>● Share a post</li> <li>● edit,delete his post</li> <li>● Create Departmental Group</li> </ul> <p><b><u>2.In Departmental Group:</u></b></p> <ul style="list-style-type: none"> <li>● Add,suspend group member</li> <li>● Post Class Update</li> <li>● Post result</li> <li>● Approve post of group members</li> <li>● Suspend Offensive Posts</li> <li>● Suspend offensive comment</li> <li>● Share,edit,delete a post</li> <li>● Rating a post</li> </ul>

	<ul style="list-style-type: none"><li>• Comment on a post</li></ul>
<b>Student</b>	<ul style="list-style-type: none"><li>• Create Profile</li><li>• Edit Profile</li><li>• Post</li><li>• Share a post</li><li>• edit,delete his post</li><li>• Rating a post</li><li>• Comment on a post</li></ul>
<b>Teacher</b>	<ul style="list-style-type: none"><li>• Create Profile</li><li>• Edit Profile</li><li>• Post</li><li>• Share a post</li><li>• edit,delete his post</li><li>• Rating a post</li><li>• Comment on a post</li></ul>
<b>Alumni</b>	<ul style="list-style-type: none"><li>• Create Profile</li><li>• Edit Profile</li><li>• Post</li><li>• Share a post</li><li>• edit,delete his post</li><li>• Rating a post</li><li>• Comment on a post</li></ul>

## 2.4 Operating Environment

- **Operating System:** Windows, Linux , macOS, iOS and Android.
- **Database:** Oracle Database and Google Cloud.
- **Platform:** Java, Python, Net framework, PHP, JavaScript.



## 2.5 Hardware Requirement

- Android version 4.4 KITKAT (minimum, android user's)
- 2GB ram
- 1.2 GHz processor
- Intel i5Q 2400
- Windows 7/8/8.1/10

## 2.6 Design and Implementation Constraints

This system will provide most of all necessary information about teachers,current students,alumni.**SOC** also will provide all latest news related to SUST which requires efficient data processing and management.No offensive or sensitive activities will be added in services of the system.

### 3. External Interface Requirements

We put on a survey in SUST to gather requirements to make our system elegant and more user friendly. Here are some of them:

What type of Social apps do you use daily?

44 responses

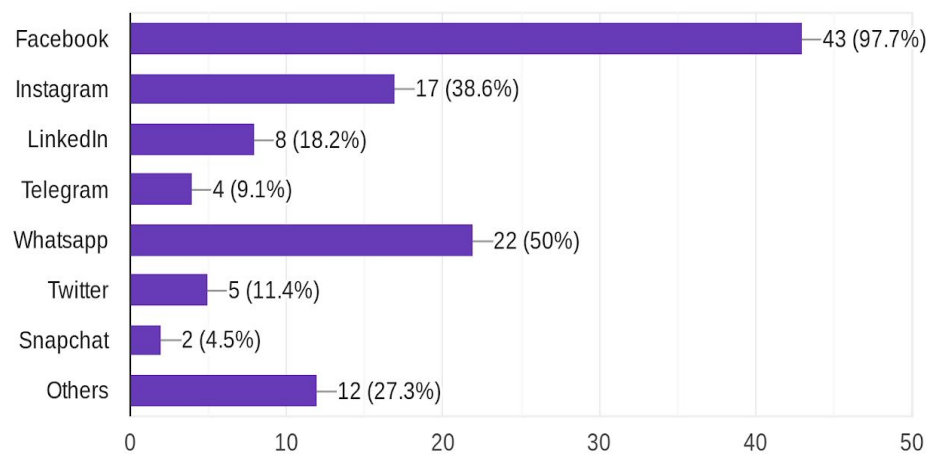


Figure : 3.0.1 Daily Usage of Social apps

What is your expectation from an online community like SOC(SUST Online Community)?

44 responses

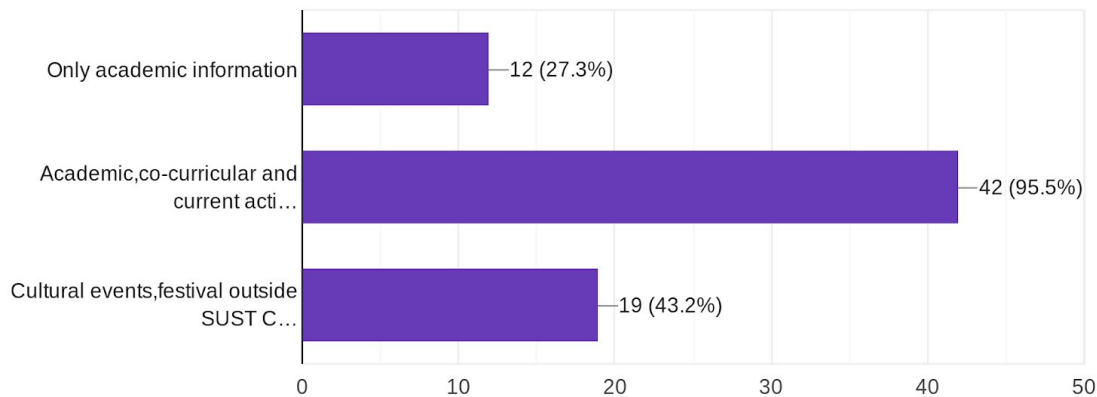


Figure : 3.0.2 Expectation for an online Community

### 3.1 User Interface :

- **Log In:** Login page is the first page of this system. User needs to give his email account and password to log inside the system. A new user will select the create account option to create an account of the system.
- **Newsfeed:** Newsfeed is the homepage of the system after logging in. It will be automatically generated based on most recent post. User can filter his newsfeed as he wants.
- **Profile:** An user can update his profile as he wanted. He can also see his shared post, response of his shared post, todo list.
- **Search Bar:** User can search any profile , department , organization etc by typing the content he is looking for.
- **Toolbar:**
  - **Info:** Here an user can see profile of other students, alumni, teachers , blood donors and also of the organization of SUST.

- **Academics:** It's a key part of SOC. Blog, Class update , Exam schedule, Tutorials, Resources, Notes, Exam Questions will be available in this option.
- **Notifications:** An user will be notified recent activities, emergency post, Class Update, Departmental Tagged post, Achievements , Contests.
- **Current Activities:** Here buzz words, recent contest , carnival, Festivals, cultural activities, religious affairs, reception and special events will be shown to a user.
- **Other:**
  - **Blood Bank:** An user can see blood donors here.  
He can request a donor to donating blood in need or he can post for emergency if needed.
  - **Blog Entry:** An user can create a blog here.  
Or write or post something in a existing blog.
  - **Lost and Found:** If an user has lost something or found something he can post here.
  - **Buy And Sell:** Here an user can sell his used product to them who are interested to buy it.
  - **Photo Archive:** Photo archive is collection of photos posted by users. Mainly it's an option to represent beautiful campus of SUST.

### 3.2 Hardware Interface:

To browse all pages require a browser with proper internet connection.

### 3.3 Software Interface :

- Teachers and students database store all information in table formation.

- .Net framework will serve the information more precisely in a manner structure.
- Docker operating system will handle the client-server structure.
- Windows operating system will serve the best user friendly interface.

### 3.4 Communication Interface :

This system will use HTML5 with common functionality, so that application will support in all web browsers.

## 4.System Features

What features you prefer in a social app like SOC?

15 responses

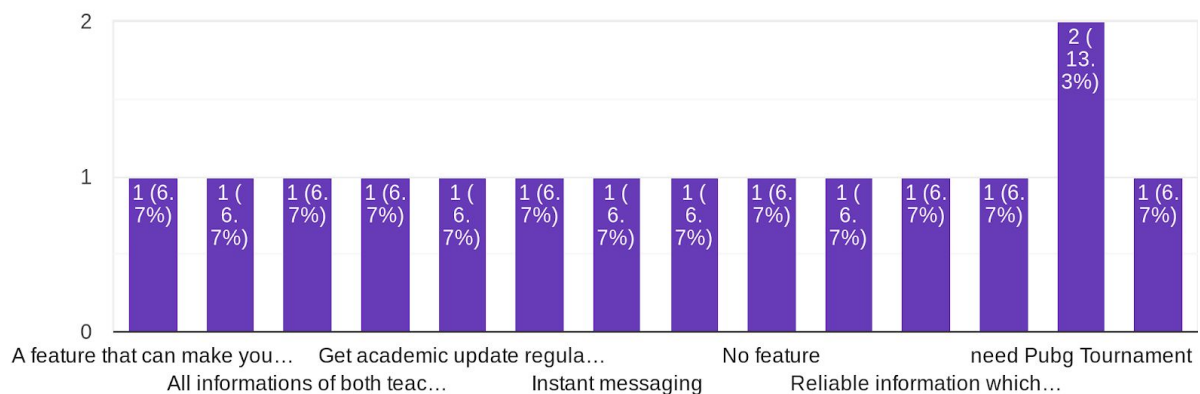


Figure (4.1.1) : Feature Requirements

**Required Features:**

- All informations of both teachers and students.
- Get Academic update regularly.
- Instant messaging.
- Reliable Information.
- Important events like concern happening.

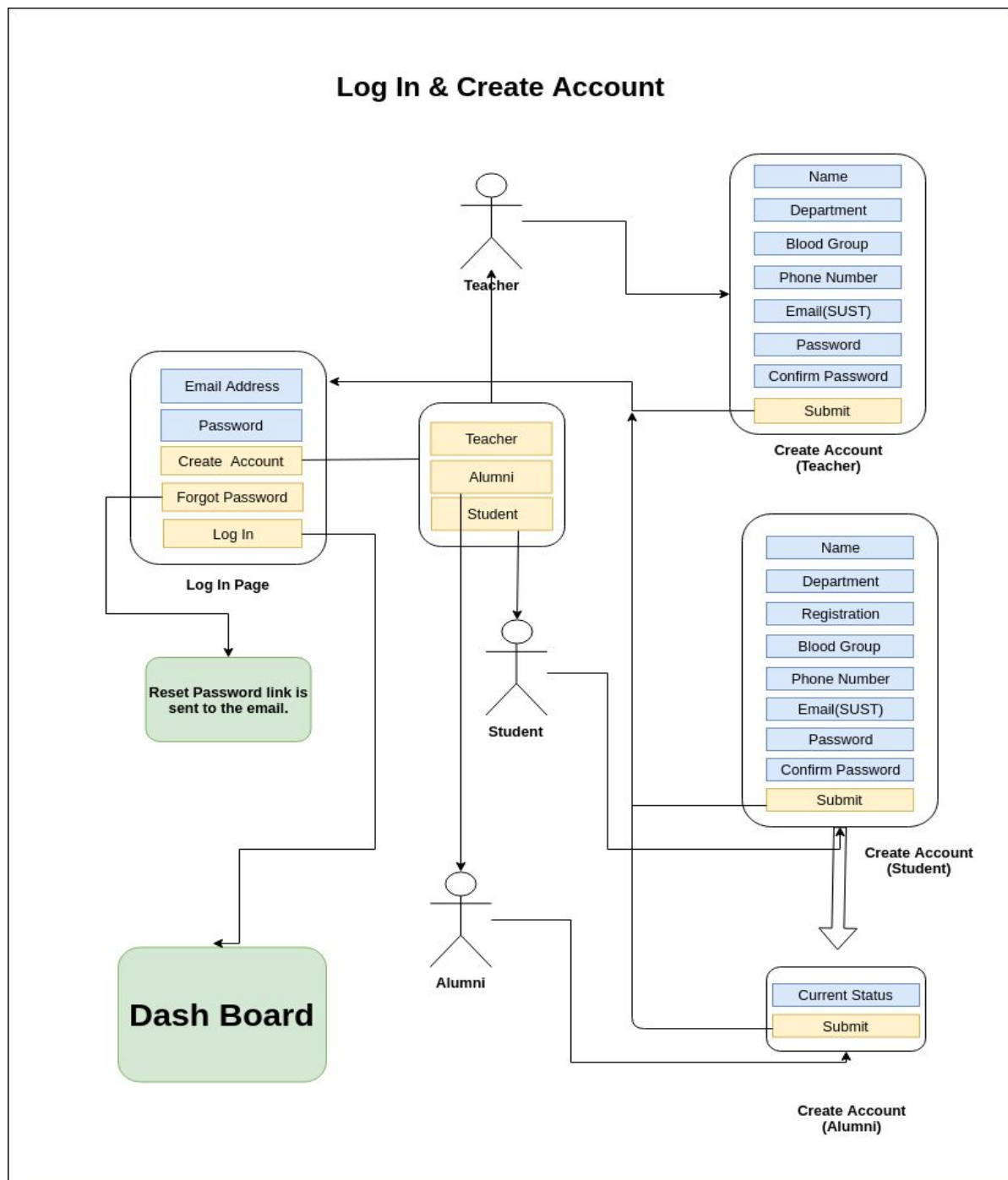


Figure (4.1.2) : Activity Diagram of Login &amp; Create Acc.

## Dashboard For Students

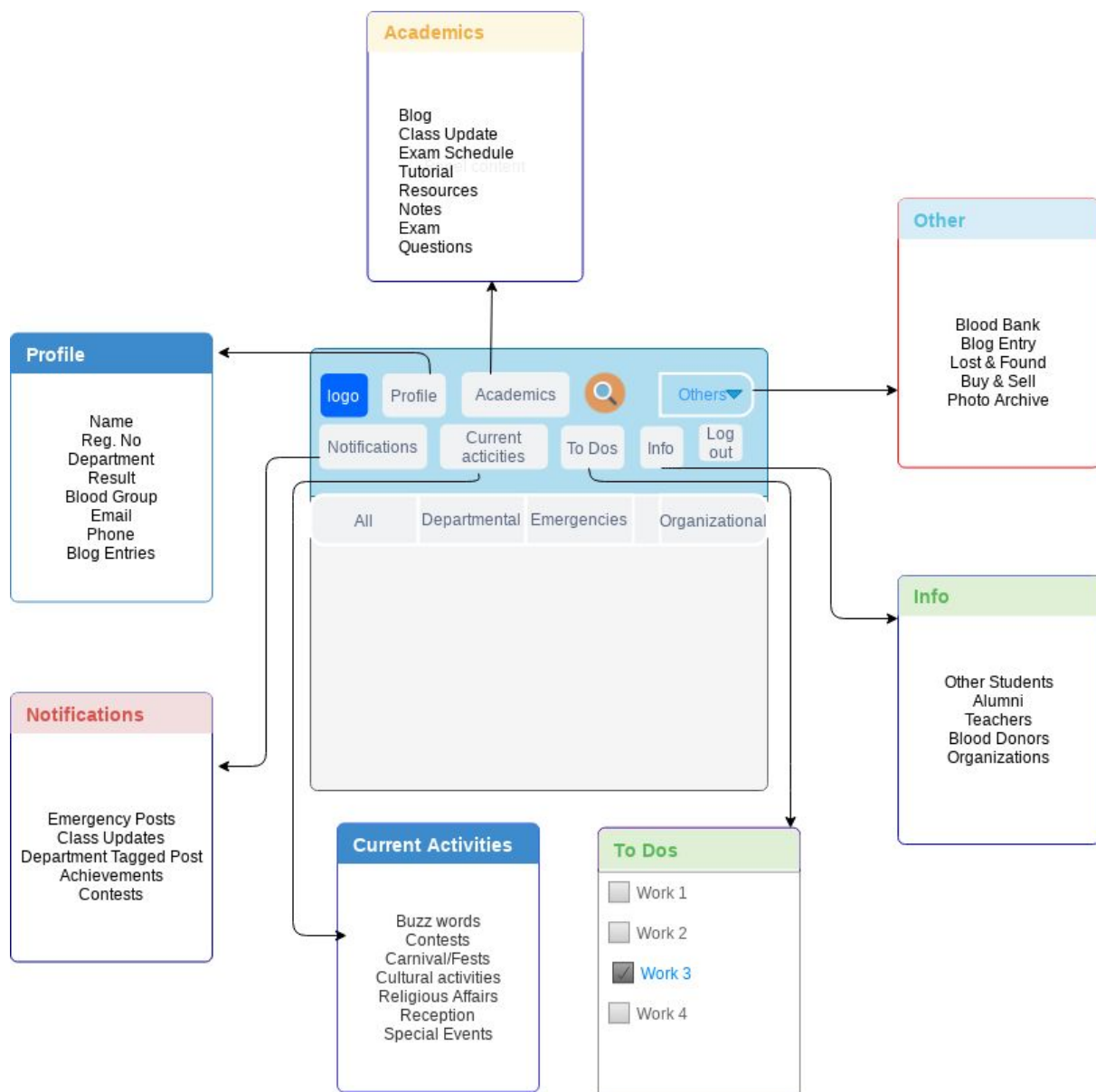


Figure (4.1.3) : ER Diagram of student & system



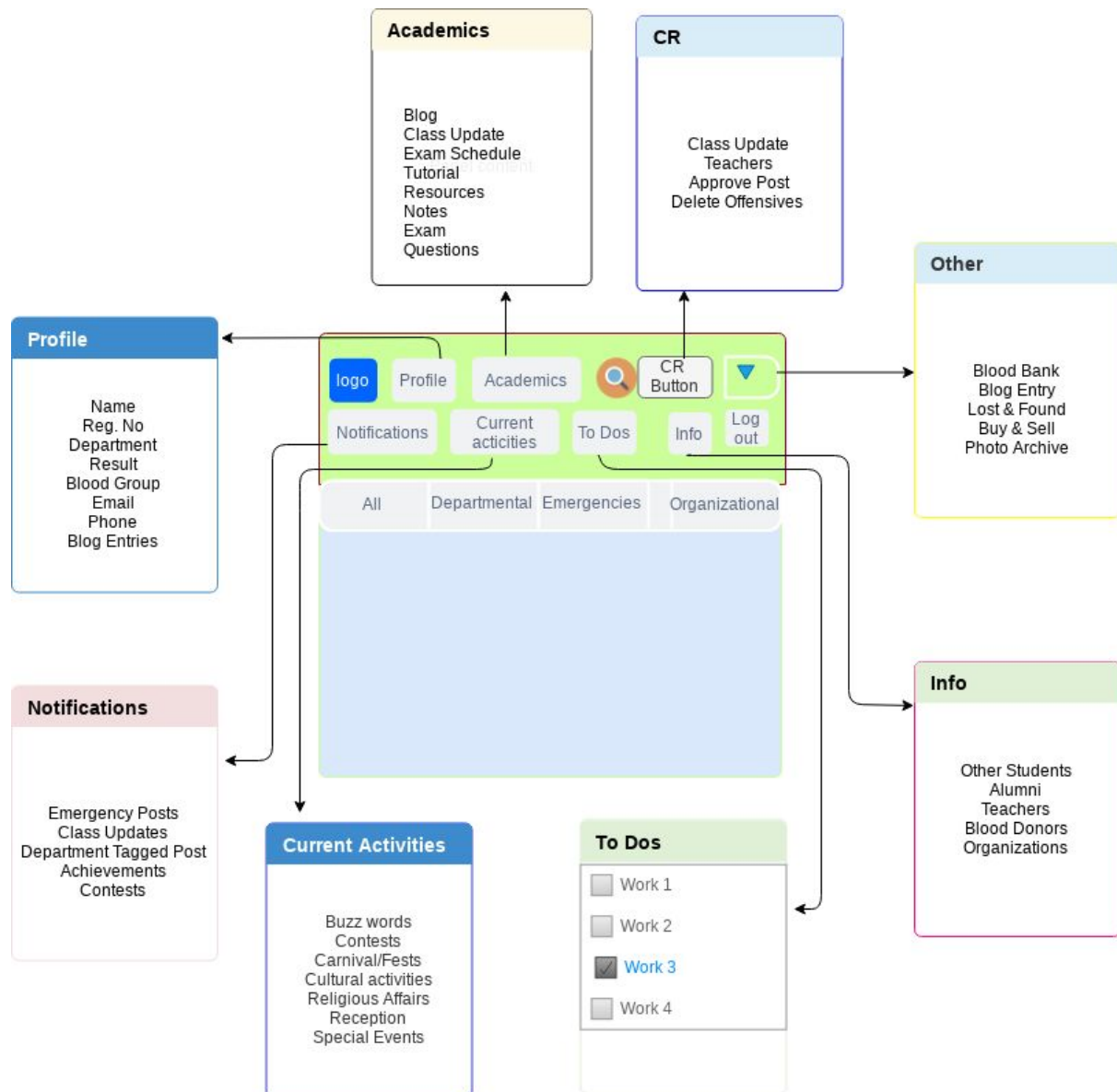


Figure (4.1.4) : ER Diagram of CR and System

## Dashboard For Teacher

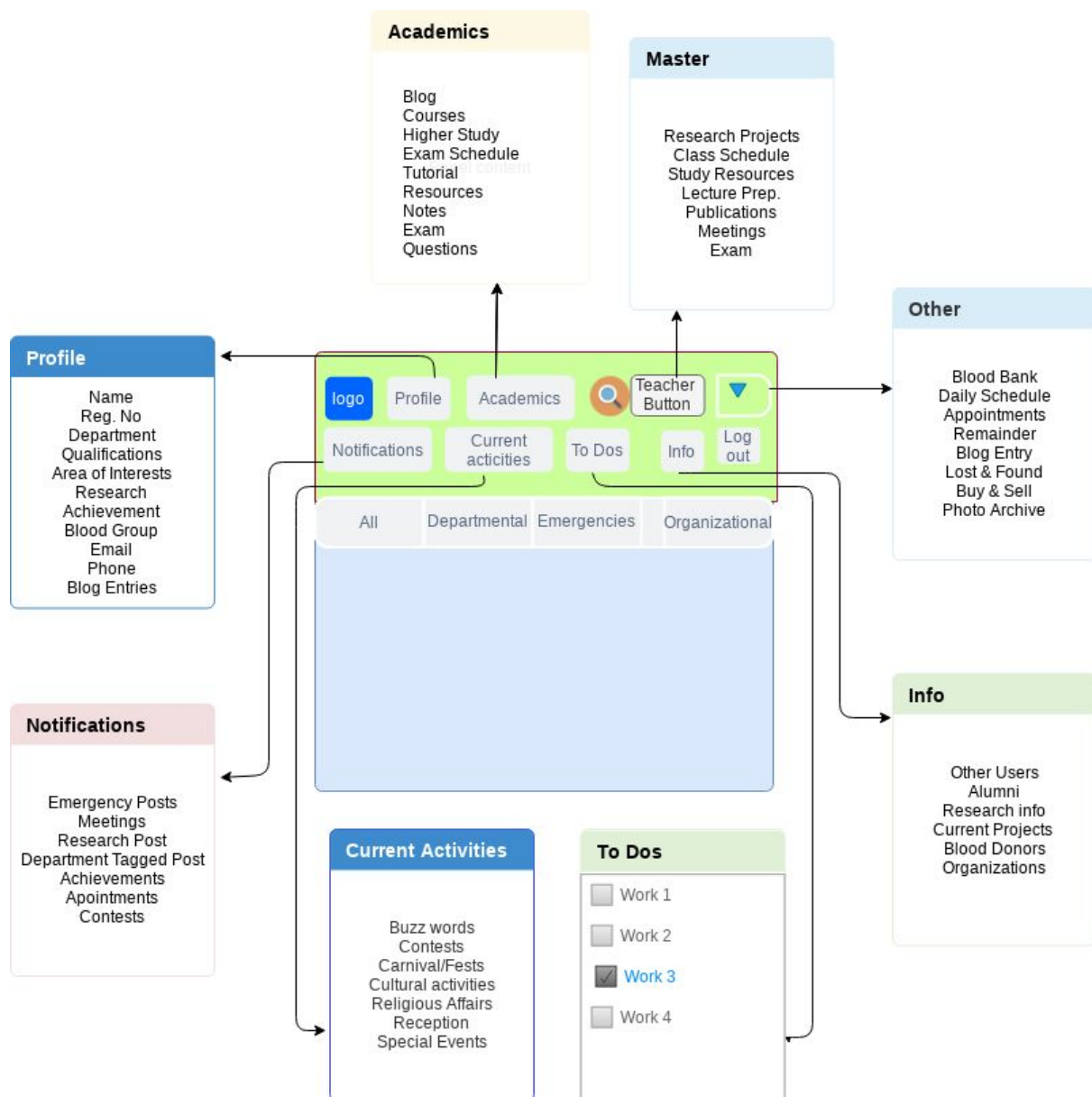


Figure (4.1.5) : ER Diagram Teacher & System

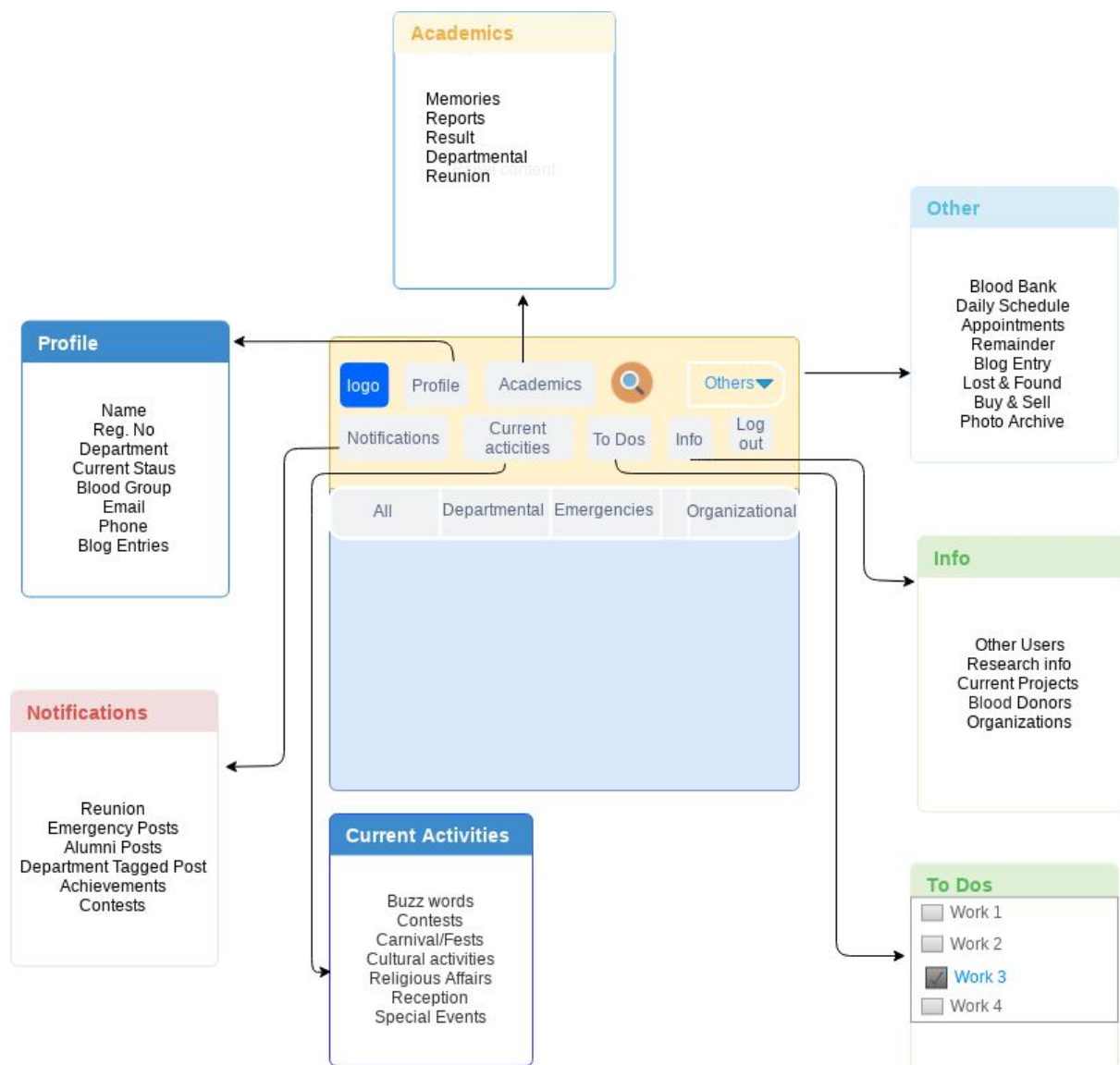


Figure (4.1.6) : ER Diagram Alumni &amp; System

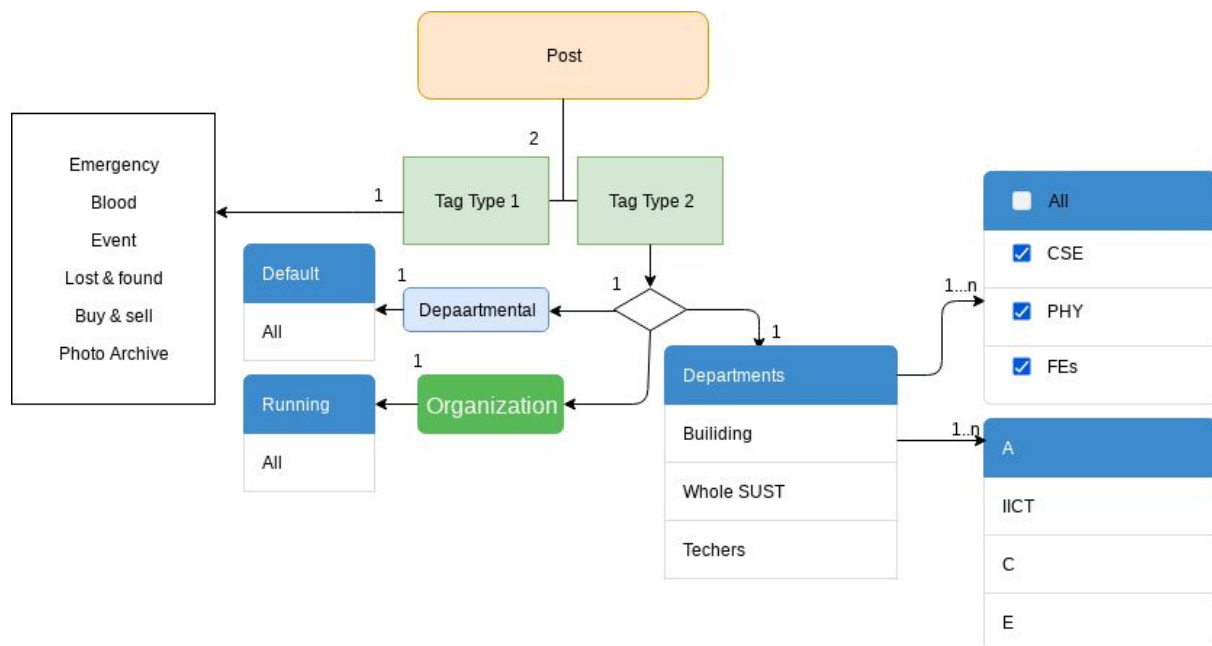


Figure (4.1.7) : Activity Diagram of Posting

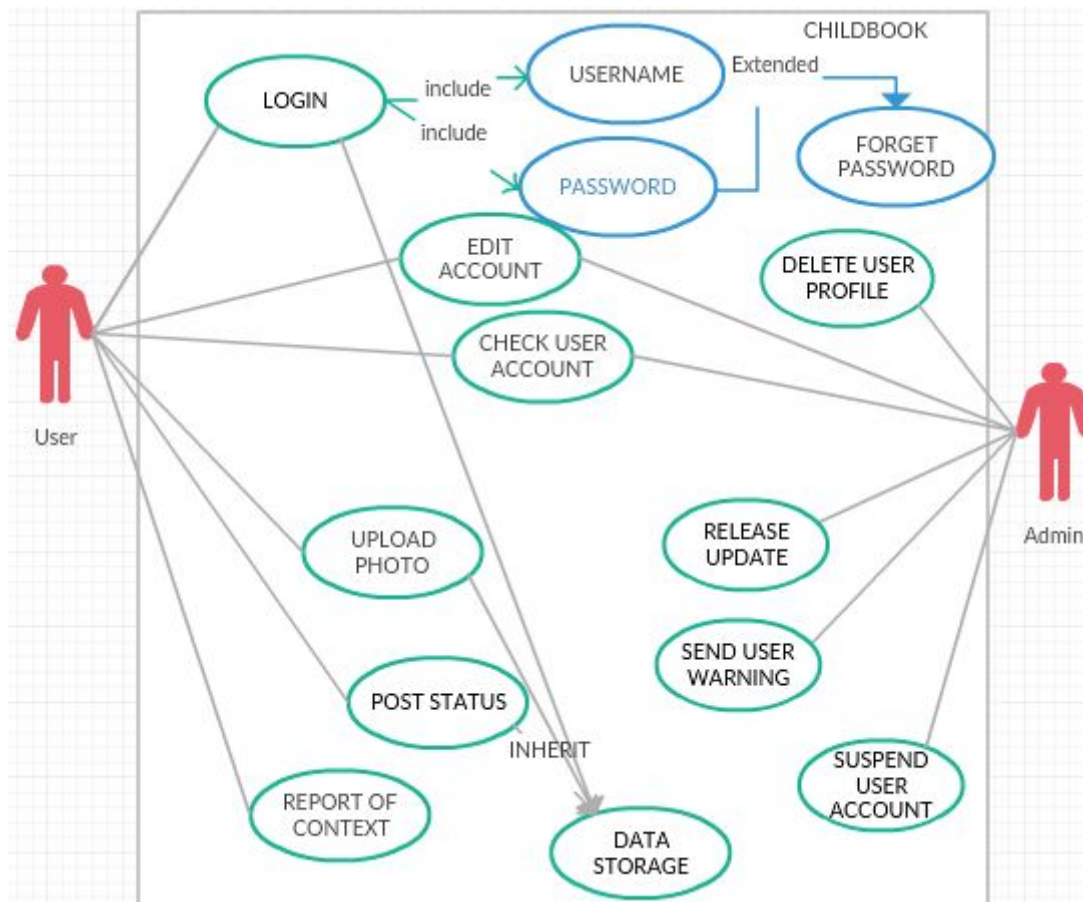


Figure (4.1.8) : Use Case Diagram.

## 5. Other Nonfunctional Requirements

### 5.1 Performance Requirements

Serve all the needed information correctly.

### 5.2 Safety Requirements

If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the

recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

### 5.3 Security Requirements

Security systems need database storage just like many other applications. However, the special requirements of the security market mean that vendors must choose their database partner carefully.

### 5.4 Software Quality Attributes

- **AVAILABILITY:** The systems should be available all time.
- **CORRECTNESS:** The systems should reach start from correct start terminal and should reach the correct destination.
- **MAINTAINABILITY:** The administrators and database of chargers should maintain correct schedules of connection.
- **USABILITY:** It should provide a usable interface for every class of user.