

NGO EDU-NEXUSM  
SOFTWARE REQUIREMENTS SPECIFICATION  
Version 0.2 | 15-03-2018



***SOFTWARE REQUIREMENT  
SPECIFICATION***

VERSION: [0.1]	REVISION DATE: [10.03.2018]
VERSION: [0.2]	REVISION DATE: [17.03.2018]

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## 1. Product Description

### 1.1 Purpose

It is very burdensome & difficult for volunteers to maintain teaching schedule with NGOs. There is no centralized discussion portal or educational resource bank for NGOs to access. Moreover, volunteers need to be physically present at the venues which is demanding & hectic.

### 1.2 Scope

The main scope of this project is to provide an alternative solution to the NGOs in the process of imparting education to their fellow students even in the physical absence of the trainer or teacher. Students can be taught through video tutorials with the help of this website.

### 1.3 Stakeholders and users

- i. **System Owner:** NGO
- ii. **System Users:**
  - a. Administrator (Manager of the NGOs): Administrators will manage privileges of the NGO's.
  - b. NGOs: Provision of course material and education resources.
  - c. NGO volunteer: They are responsible for displaying study materials and managing students. They act on behalf of the students to access the discussion portals.
    - Discussion portal to air queries and difficulties regarding course material.
    - Content providers to deliver course materials.
    - Verify course materials to display to the viewers.
  - d. Contributors (Teachers who provide study materials): They are responsible for uploading study materials, provide solutions to queries posted in discussion portal and teach without being physically present.

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### **1.4 Assumptions**

- The end user should have a basic knowledge of English and computer usage.
- NGO, NGO volunteers and contributors are sufficiently registered
- Contributors will provide regular study materials.
- NGO volunteers will facilitate viewing course materials and airing queries.
- Presence of a person who can operate the website.

### **1.5 Constraints**

- NGO volunteers should have basic knowledge of computer.
- Internet Connection is needed.
- Regular provision of study materials by contributors.
- There can be absence of sound systems, or may be malfunctioning.

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## 2. Functional Requirements

### 2.1 VIEW COURSE MATERIALS

- The NGO representative needs to open the study portal to be able to view the courses.
- The NGO representative searches for required topic through the basic courses appearing in the course main page.
- If required course is present in main page then it is accessed.
- If the course is not listed in main page then volunteer shall search it through the categories listed on the page on the basis of Class, Subject, and Board of education.
- The portal shall load the topic if it is present and Volunteer clicks the link given for that topic and plays content.
- NGO volunteer may download the Q&A bank. The questions can be solved for evaluating the viewers.

### 2.2 ACCESS DISCUSSION PORTAL

- The NGO volunteers may access discussion portal either via main page discussion tab or through the discussion page link in a particular topic.
- One question asked may have a pre-existing discussion on discussion portal.
- If there exists a discussion on the related query, the NGO volunteer will try and acquire solution from the discussion.
- In case, NGO volunteers are unable to deduce a solution, they may opt to post a query in form of a comment with a title describing the topic and a description of the question.
- Teachers can review the queries.

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- If the solution to a particular query is already present in the portal, the solution can be posted as a link. Else the teacher may opt to solve the query in the same discussion thread.

### 2.3 UPLOAD MATERIALS

- Teachers have the access to the upload material section provided in the main page of the portal.
- The portal shall load a form for uploading the materials when teacher wishes to upload new materials.
- The portal will require the teacher to fill up the form with video links, small description of the topic, curriculum standard, language etc.
- Teachers may upload Question-Answer bank for the related topic through the portal.
- The system requires verification of the uploaded materials by the NGO volunteers.

### 2.4 VERIFY MATERIALS

- Uploaded materials go through several quality checks by the NGO volunteers.
- The portal shall require the NGO volunteers to login and access the course materials.
- Portal shall provide option to scrutiny the study material uploaded by the teacher in relevance to their requirement.
- Once verified, NGO volunteers can make the study material available for the viewers.

### 2.5 MANAGE USERS

- The portal provides a manage volunteers section for the NGO administrator.
- The portal shall require the administrator login access for this section.
- The NGO administrator once logged in accesses the manage volunteers section.

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- This section of the portal shall provide the admin options, via which he can add a new volunteer, remove existing volunteer or update information for an existing volunteer.

### 2.6 MANAGE COURSES

- This part of the portal shall require NGO administrator login access.
- The portal shall load a form with multiple required fields to manage a course.
- The NGO user with admin access fills the relevant information for the required study material like subject, preferred language, curriculum standard, board of education etc.
- Filled up form needs to be submitted and uploaded by the user.
- The teachers are notified of available for contribution.

### 2.7 MANAGE NGO

- The admin discusses the needs of the NGOs in order to get some knowledge about their requirements.
- The admin develops the page.
- The admin chooses some NGOs with whom they want to share this platform after coming to a common agreement with those NGOs.
- The admin gives the access to these NGOs.

## 3. Non-Functional Requirements

### 3.1 Performance Requirements

- The software is expected to have reasonably short response time.

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- It should be able to log-in and feed the records related to course materials, discussion portal and verifiable contributions.

### 3.2 Safety Requirements

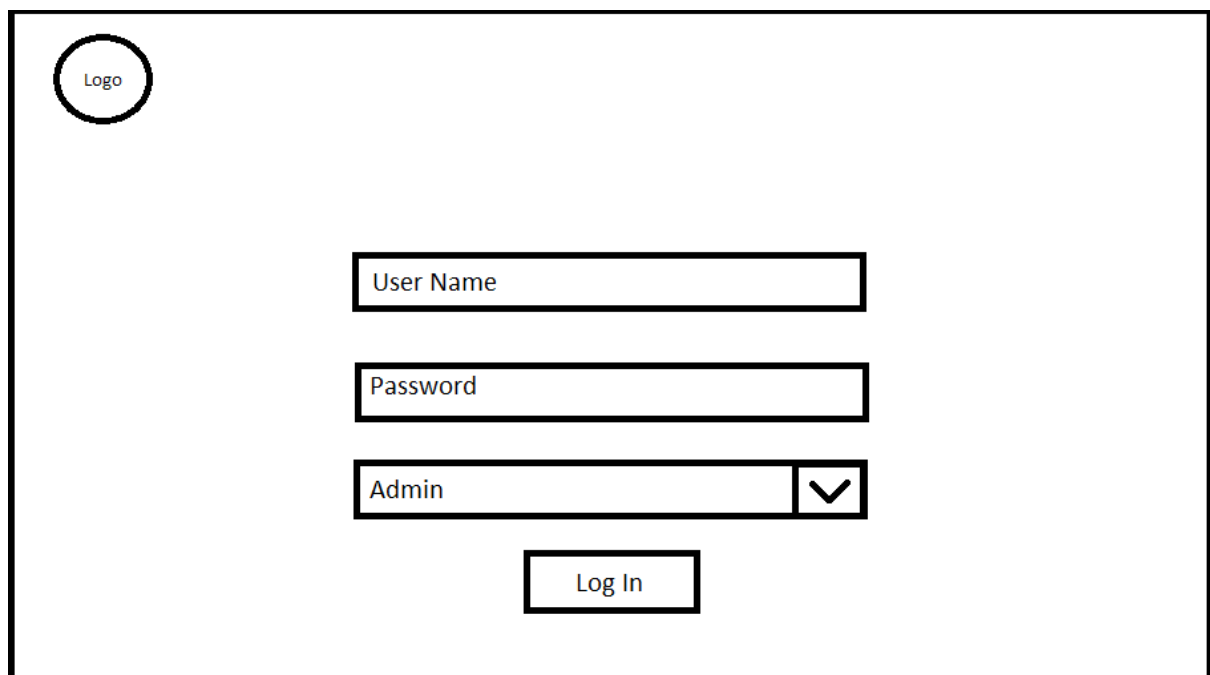
- The system should be capable of gracefully recovering from earlier crashes.

### 3.3 Security Requirements

- The system shall provide unique id to all the users so that they can do their own work without intervening into another manger's work.
- Possible encryption technologies shall be deployed for client-server communication.

## 4. Interface Requirements

### Login:



The diagram illustrates a login interface within a rectangular frame. In the top-left corner, there is a circular placeholder labeled "Logo". Centered in the frame are three input fields stacked vertically. The first field is labeled "User Name", the second is labeled "Password", and the third is labeled "Admin" with a checkmark icon to its right. Below these fields is a "Log In" button.

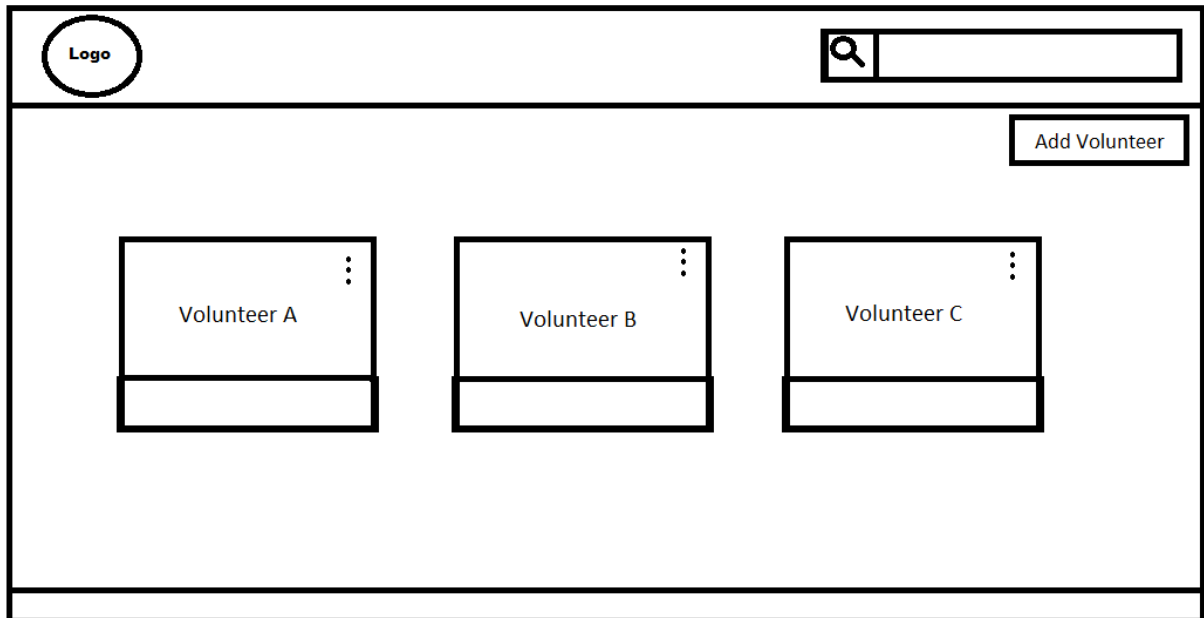


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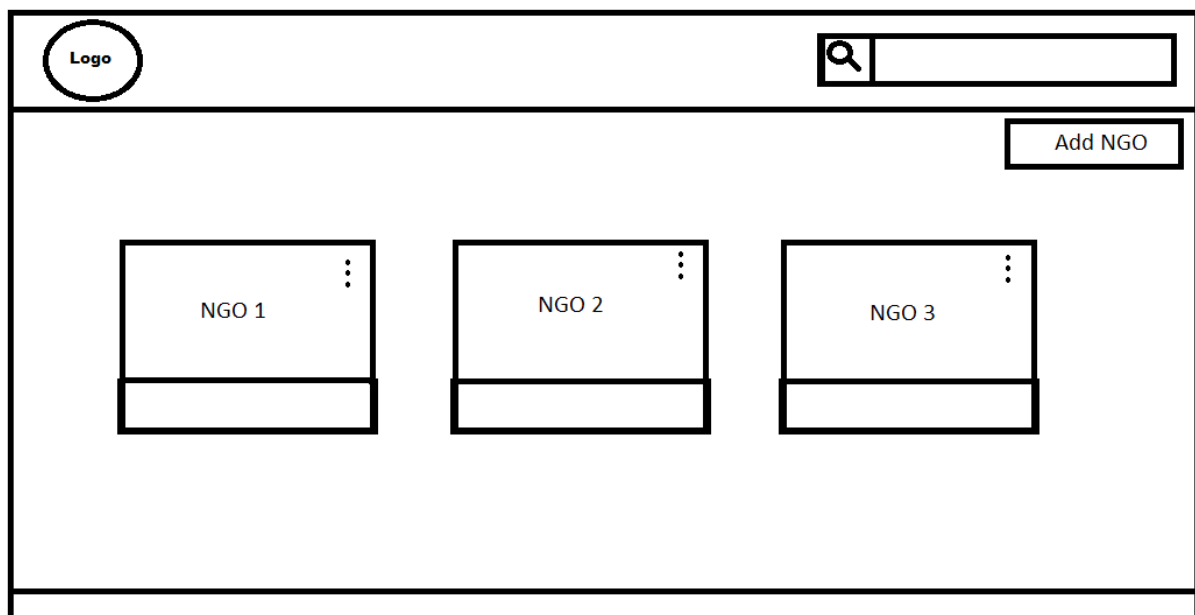
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### Manage Volunteer:



The 'Manage Volunteer' interface features a top navigation bar with a circular 'Logo' placeholder on the left and a search bar with a magnifying glass icon on the right. Below the navigation bar, a rectangular button labeled 'Add Volunteer' is positioned in the top right corner. The main content area displays three volunteer cards arranged horizontally. Each card contains a name ('Volunteer A', 'Volunteer B', and 'Volunteer C' respectively), a vertical ellipsis menu icon in the top right corner, and a small rectangular input field at the bottom. The entire interface is enclosed in a thin black border.

### Manage NGO:





The 'Manage NGO' interface is structurally identical to the 'Manage Volunteer' page. It includes a top navigation bar with a 'Logo' placeholder and a search bar. A button labeled 'Add NGO' is located in the top right of the main content area. Below the navigation bar, three NGO cards are displayed horizontally, labeled 'NGO 1', 'NGO 2', and 'NGO 3'. Each card features a vertical ellipsis menu icon in the top right corner and a small rectangular input field at the bottom. The interface is framed by a thin black border.

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### Course Portal:

	 <input type="text"/>	
<div><div>Upload</div><div>Discussion Portal</div><div>Courses</div></div>		
<div>Course</div> <div></div>	<div>Course</div> <div></div>	<div>Course</div> <div></div>

### Video links:

	 <input type="text"/>
<div>Differentiation</div>	
<div>Video Link</div>	
<div>Description</div>	
<div>Access Discussion Portal</div>	

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### Discussion Portal:

Logo

Search

Question

Question Description

Reply 1

Reply 2

Reply 3

668

44

## 4.2 Hardware Interfaces

4.2.1 Desktop with sound system and internet connection.

4.2.2 Server.

- Processor: i3 5<sup>th</sup> Generation.
- RAM: 4GB DDR4.
- Hard Disk: 500 GB, expandable as required.

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### 4.3 Software Interfaces

#### Web Browsers

- iii.** Chrome
- iv.** Firefox

#### API

- MySQL
- JavaScript
- PHP
- AJAX

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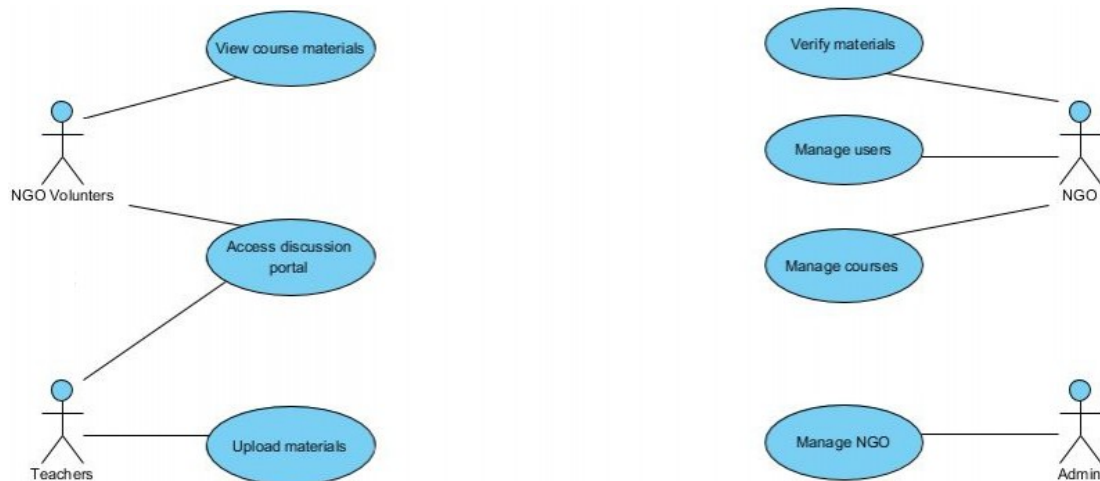
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### 5. Use Case Model

The Use Case Model provides the top-level use case diagram which will provide a brief view of the project from the aspect of all the actors associated in the process, followed by the use case description for each use case describing the details about them, preconditions, post conditions necessary to trigger the event and the flow of events.

#### 5.1 Use Case Diagram



#### 5.2 Use Case Description

Use Case Name: Access materials

Actor: NGO Volunteer

Description: View course material.

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Preconditions:

- NGO has been granted access by admin.
- The course material has been approved by the NGO volunteer.

Post-conditions:

- Search and access study materials.
- Play the required video.
- Download Q&A bank.
- Can post query if any, related to the study material.

Trigger: The NGO volunteer opts to access the course resource portal

Flow of Event:

- The NGO Volunteer opens study tab.
- The NGO volunteer searches for required topic to display to the viewers.
- Volunteer clicks the link given for that topic and plays content.
- NGO volunteer may download the Q&A bank. The questions can be solved for evaluating the viewers.

Use Case Name: Access Discussion Portal

Actor: NGO Volunteer, Teacher

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### Description:

- NGO Volunteers can post new queries initiated by viewers.
- NGO Volunteers use this section for discussion on relatable queries.
- Teachers use this section to provide adequate solutions to the posted queries.

### Preconditions:

NGO Volunteers and Teachers have been authenticated by administrators.

### Post-conditions:

- NGO Volunteers and teachers may update any relatable question.
- In case of any update in the discussion portal the database system is synced accordingly.
- Teachers related to specific topic are notified of new queries if any.

### Trigger:

- NGO volunteer moves to this section when viewers have doubt regarding the course material.
- Teachers view this section when new queries have been posted.

### Flow of Event:

- The NGO volunteers access the related discussion by searching the discussion portal.
- If there exists a discussion on the related query, the NGO volunteer will try and acquire solution from the discussion.
- In case, NGO volunteers are unable to deduce a solution, they may opt to post a query in form of a comment.
- Teachers can review the queries.

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- If the solution to a particular query is already present in the portal, the solution can be posted as a link. Else the teacher may opt to solve the query in the same discussion thread.

Use Case Name: Upload material

Actor: Teacher

Description: Teachers upload new course materials via this section.

Preconditions: Teacher has been authenticated by admin and logged in.

Post-conditions: New course is uploaded.

Trigger:

Flow of Event:

- Teachers access the upload material section.
- They fill up required form with video links, description, curriculum standard, language etc.
- They upload Q&A bank for the related topic.
- Initiate upload and await verification by NGO volunteers.

Use Case Name: Verify course material



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Actor: NGO

Description: Verify course material

Preconditions: NGO has been authenticated by admin and logged in

Post-conditions: Syllabus and course curriculum has been updated.

Trigger: When a relevant content is available for the NGO volunteers to judge and approve

Flow of Event:

- The teacher has finished uploading study material from their portal.
- The NGO volunteers are logged in the application.
- They scrutinize the study material uploaded by the teacher in relevance to their requirement.
- Once verified NGO volunteers can avail the study material for the viewers.

Use Case Name: Manage users

Actor: NGO

Description: Manage users

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Preconditions: NGO has been authenticated by admin and logged in.

Post-conditions: The volunteers in association with NGO can be managed, like addition, deletion, updating information etc.

Trigger: Click to manage volunteers from NGO's portal.

Flow of Event:

- The NGO administrator accesses the manage volunteers section.
- They can either add a new volunteer, or remove existing volunteer or update information for an existing volunteer.

Use Case Name: Manage course.

Actor: NGO

Description: Manage course.

Preconditions: NGO has been authenticated by admin and logged in.

Post-conditions: Relevant information about required course and study material are uploaded. The database is modified accordingly. The teachers are notified of the new requirements

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Trigger: The NGO administrator accesses manage course section.

Flow of Event:

- The NGO administrator is logged in to the portal.
- The NGO fills the relevant information for the required study material like, subject, preferred language, curriculum standard, board of education etc.
- Submits and uploads the completed form.
- The teachers are notified of available for contribution.

Use Case Name: Manage NGO

Actor: Admin

Description: Manage NGO

Preconditions: Admin has completed developing its page and wants to transfer it to some NGO.

Post-conditions: The selected NGOs get access to the page and proceed for the further processes.

Trigger:

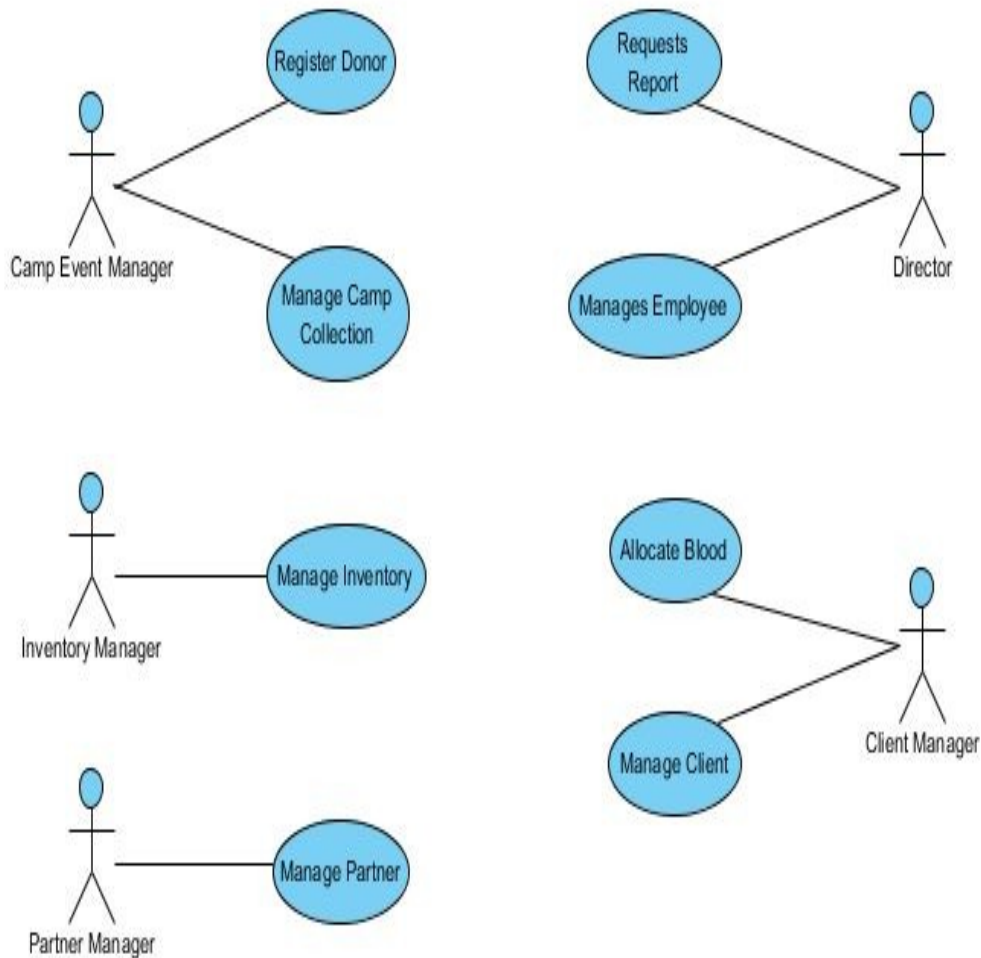
Flow of Event:

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- The admin discusses the needs of the NGOs in order to get some knowledge about their requirements.
- The admin develops the page.
- The admin chooses some NGOs with whom they want to share this platform after coming to a common agreement with those NGOs.
- **The admin gives the access to these NGOs.**



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### 7. Glossary

Term	Description
Discussion Portal	A webpage that allows posting and answering of queries.
NGO volunteer	An operator who manages the students, solves queries and accesses discussion portal on the behalf of students.

### 7. References

Document No.	Document Title	Date	Author
1.	Bhoruka Blood Bank	26/03/2017	Bhoruka Public Welfare Trust ( <a href="http://bpwt.org/">http://bpwt.org/</a> )

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### 8. Revision History

Version	Date	Name	Description
0.1	10/03/2017	SRS_CodeStars	Detailed Specification of all requirements along with a rough draft of the GUI
0.2	17/03/2017	SRS_CodeStars	Addition of Hardware and Software Specification. Updated references and non functional requirements.