

# CSEDU - Onusondhan

## Software Requirement Specification Document

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## Description of Contents

- 1. Introduction
  - 1.1 Purpose

*The main purpose of this project is to known user's all about CSEDU. By this project any type of question about CSEDU will get it's clients/users. As a result they can learn his/her questions answer easily and in short*

*time. Questions like where is CSEDU located? / How many teacher now in CSEDU ? / What are the courses that are taken here for undergraduate? Etc. The main objectives of this project to answer these type questions to it's client. By accepting membership client also can answer these type of questions. Finally admin check the answer and mark it true. It's goal is to represent CSEDU properly to the people. CSEDU – Onusondhan will be a Web app built for the Web using the Flask Framework. It will be platform independent and accessible on all devices with a web browser supporting Flask .*

## 1.2 Scope

*The SRS specifies the requirements of the CSEDU - Onusondhan product.*

*The product gives the clients/users different types of questions answer about CSEDU. Question like What is the number of faculty member in CSEDU currently? / What are the courses that are teaches in CSEDU for undergraduate students. / What are the best / favourite courses in CSEDU?. Etc. The goal of the project is to create a full right consciousness about CSEDU. By using this all the users can know all about CSEDU and also it's goal is to do that.*

## 1.3 Overview

*This document contains all of the software requirement specifications. It contains a general description of the types of users who will be using our application, how it is going to work, and what technologies we are using to make it work. An outline and description of specific components of the projects will also be given.*

## 1.4 Reference Material

*1.4.1 Functional Requirements Document on CSEDU - Onusondhan written*

*by Golam Mourshid and Sree Sowmik Kumar Sarker.*

*1.4.2 Non Functional Requirements Document on CSEDU - Onusondhan written by Golam Mourshid and Sree Sowmik Kumar Sarker.*

## 1.5 Definitions and Acronyms

*Flask - a micro-framework for Python based on Werkzeug, Jinja 2 and good intentions. It is classified as a micro-framework because it does not require particular tools or libraries. It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions.*

- 1.6 Glossary  
None.

## 2. Overall Description

### 2.1 Product perspective

*This is a open source website. Any student of CSEDU can create an account and contribute with any kind of questions and answers. If one has no account then, can only view the questions and the answers. The question is only relate to the CSEDU. Here also added the teacher's information, Alumni information faculty information etc. Anyone can access this type of information. For this no need to sign up or sign in.*

### 2.2 Product functions

*The functions of the product are:*

*2.2.1. The program will allow the verified users to enter new questions, reply with correct answer of any questions, and access any other information about CSEDU..*

*2.2.2. The program will allow the user to reply with the answer of the specific questions, and any of the other user can argue with that in the comment section.*

*2.2.3. The program will allow the user to ask or see reply of different type of questions by selecting the 'ask type' section.*

### 2.3 User Profiles

*Any kind of CSEDU Teachers , students ,researchers are the users of the product. There are the option of the user of the guest user that means the user is not relate to CSEDU. For signing in the user give the gmail addresses and name, that will show in the profile section of the user.*

### 2.4 Constraints

*The constraints of the program are:*

*2.4.1. The program will not be able to evaluate the problems properly if any of the user reply with a wrong answer of any question. In this case the only option is the argument of other user.*

*2.4.2. This program can't give any ask or reply interface of any question if*

*he/she can't sign in before.*

## 2.5 Assumptions and dependencies

*The assumptions of the program are:*

*2.5.1. This program is web based online program. Main priority is to make the software run on desktops.*

*2.5.2. The answer of any question depends on the verified user.*

*2.5.3. We assume that all the question will be CSEDU related.*

*2.5.4. It is intended to use firebase free tier to host the application.*

## 2.6 Use Cases

### *2.6.1 Account Creation:*

#### *2.6.1.1 Open Account*

*Use Case: Open Account*

*Goals in Context: To open an account*

*Scenario:*

*1. Goto Main Page and initiate open account*

*2. Provide name, and password.*

*Exception:*

*1. Ambiguous input*

*2. Account name used more than once*

*Priority: 1*

### *2.6.2 Login:*

#### *2.6.2.1 Sign in*

*Use case: Sign in*

*Goals in Context: To login into an account*

*Scenario:*

*1. Go to Main Page and sign in to access into the account*

*2. Provide username and password.*

*Exception:*

*1. Ambiguous Input*

*2. Account name does not exist*

*Priority: 1*

#### *2.6.2.2 Logout*

*Use case: Sign in*

*Goals in Context: To sign out*

Scenario:

1. Visit page
2. After finishing their tasks, the user can sign out

Exception:

1. User hasn't actually logged in

Priority: 1

### *2.6.3 Normal user functionalities:*

#### *2.6.3.1 ask or reply question successfully*

*Use case: ask question successfully*

*Primary Actor: Student or other public.*

*Goals in context: The student or any public will ask a question that relate to the CSEDU.*

Scenario:

1. User click the ask question button.
2. A page will be shown, where there will be shown the question type.
3. Then select the question type and write the question about CSEDU.
4. Then send it by clicking the send button.

Priority: 1

#### *2.6.3.1 reply question successfully*

*Use case: reply question successfully*

*Primary Actor: Student or other public.*

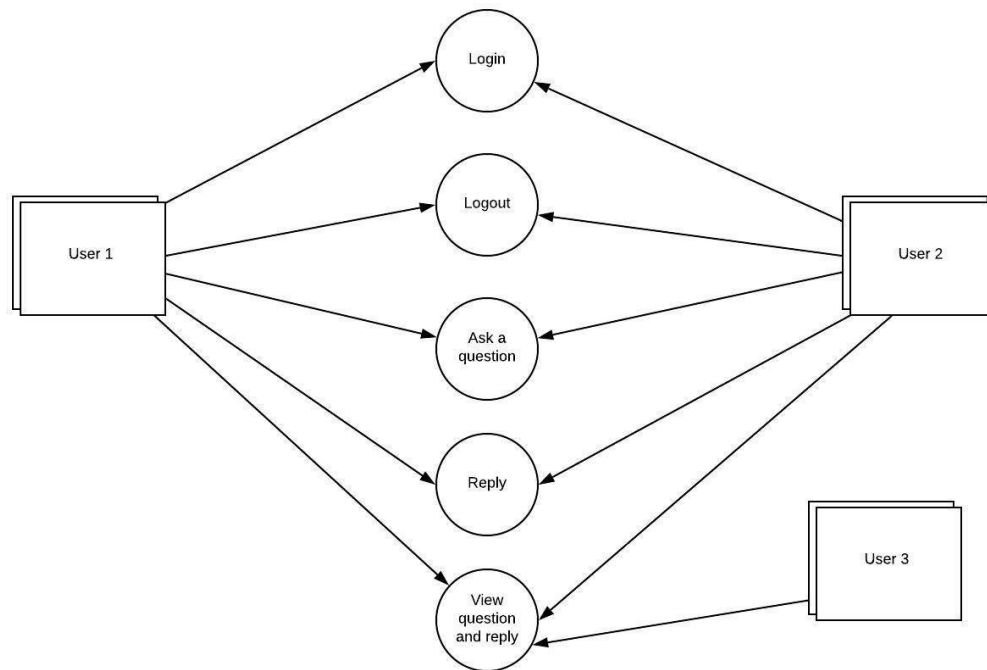
*Goals in context: The student or any public will reply a question that relate to the CSEDU.*

Scenario:

1. User click the comment button of a specific question.
2. A page will be shown, where there will be the written answer.
3. Then send it by clicking the send button.

Priority: 1





### 3. Specific Requirement

#### 3.1 Functional Requirement

##### 3.1.1 Requirement 1

Name : Sign Up

Description: User can sign up by making a username and password and must need to use a valid gmail account. User must fill all the fields that are required to create an account.

Stimulus Response If user can't fill any of the field that are given or the user use the username or gmail that already used Please fill up all the field.

Stimulus Response: If all fields are correctly filled It will show that registration completed successfully.

Priority: 1

Associated Requirements:

3.1.1.1 Requirement ID: R51.54.01

Requirement Name: User name

Requirement Description: The user name will be at most 20 characters and at least 5 characters and only lowercase English letters.

Reference: R51.54.01

3.1.1.2 Requirement ID: R51.54.02

Requirement Name: Password

Requirement Description: The password will have to be at least 8 characters and at most 20 characters.

Reference : R51.54.02

3.1.1.3 Requirement ID: R51.54.03

Requirement Name: Gmail account

Requirement Description: The gmail account must be valid.

Reference : R51.54.03

3.1.1.4 Requirement ID: R51.54.04

Requirement Name: Academic year in CSEDU.

Requirement Description: As this project users are CSEDU students so it's need to fill up academic year. If the user is alumni then he/she fill it as alumni.

Reference R51.54.04

3.1.2 Requirement 2

Name: Sign In

Description: User can sign in by creating an account using his/her gmail account. For signing, user only can use username and his password.

Stimulus Response: If the username or password isn't valid It will show that the user name or password is invalid.

Stimulus Response: If the username or password is blank  
Please give the username and password correctly

Priority : 2

Associated Requirements:

3.1.2.1 Requirement ID : R51.54.05

Requirement Name : Username

Requirement Description : The user must have a valid  
username by creating an account.

Reference R51.54.05

3.1.2.2 Requirement ID : R51.54.06

Requirement Name : Password

Requirement Description : The user must have a valid password  
by creating an account.

Reference R51.54.06

### 3.1.3 Requirement 3

Name : Ask Question

Description : Here user can post any type of question related to  
CSEDU . User must fill up the title, body and question  
tag field.

Stimulus Response : If any one of these field are not filled  
This will notify the user.

Priority : 3

Associated Requirements :

3.1.3.1 Requirement ID : R51.54.07

Requirement Name : Logged in

Requirement Description : The user must be logged in to ask  
question.

Reference : R51.54.05 and R51.54.06

#### 3.1.4 Requirement 4

Name : Search Question tag

Description : User can search questions by tags. If user click tags then he/she can see different types of question tags and also see the questions bellow the tags and the total number of question under the tags.

Stimulus Response : If the user click any type of tag then Then he/she can see all the question and answer

Priority : 4

It has not any additional requirement because anyone can see this project website. So anyone can see result and can search here.

#### 3.1.5 Requirement 5

Name : Reply or answer

Description : Replay an answer of a question or give a reply of an answer that already given by another user.

Stimulus Response : If user click the answer or reply button User will see space to write the reply or answer.

Priority : 5

Associated Requirements :

3.1.5.1 Requirement ID : R51.54.08

Requirement Name : Logged in

Requirement Description : The user must be logged in to ask question.

Reference : R51.54.05 and R51.54.06

#### 3.1.6 Requirement 6

Name : Users

Description : The user can see all of the user who have an

account in this site.

Stimulus Response : If the user select the user button  
the user can see all of the user who have an account.

Priority : 6

Associated Requirements :

3.1.6.1 Requirement ID : R51.54.09

Requirement Name : Logged in

Requirement Description : The user must be logged in to ask  
question.

Reference : R51.54.05 and R51.54.06

### 3.2 Non Functional requirement

#### 3.2.1 Performance

3.2.1.1 Requirement ID : R51.54.14

Requirement Name : Capacity

Requirement Description : Maximum numbers of  
users/terminals/transactions our system can handle without  
performance degradation. System will give stimulus-response.

#### 3.2.2 Efficiency

3.2.2.1 Requirement ID : R51.54.15

Requirement Name : Degradation of service

Requirement Description : We don't want that our system will  
easily crash! We may want to stipulate that our system should  
handle the load, perhaps with the degraded state.

#### 3.2.3 Reliability

3.2.3.1 Requirement ID : R51.54.20

Requirement Name : Searching Result Precision

Requirement Description : This system will try it's best to give  
the more efficient searching result to it's users.

3.2.3.2 Requirement ID : R51.54.21

Requirement Name : Computation Capability

Requirement Description : This system only can show questions

result that exist in this system. Either It will give feedback.

### 3.2.4 Security

3.2.4.1 Requirement ID : R51.54.25

Requirement Name : Access

Requirement Description : Any type of user can search here and can see this system and data . But only authorize user can comment or reply or answer or modify in this system.

### 3.2.5 Robustness

3.2.5.1 Requirement ID : R51.54.26

Requirement Name : Error handle Capability

Requirement Description : This system is capable to cope with errors during execution. Also it can handle invalid or unexpected inputs result.

### 3.2.6 Adaptability

3.2.6.1 Requirement ID : R51.54.27

Requirement Name : Environmental adaptability

Requirement Description : This system is adaptable in any environment like Windows, Linux , Mac and Android .

3.2.6.2 Requirement ID : R51.54.28

Requirement Name : Other Problem

Requirement Description : It will be crushed if environment has too low ram like old version android that has too low ram and can't load the system.

### 3.2.7 Scalability

3.2.7.1 Requirement ID : R51.54.29

Requirement Name : User Scalability

Requirement Description : This system can handle a fixed amount of user/client. That means a fixed number of user can use this system at a time.

Requirement ID : R51.54.30

Requirement Name : Data

Requirement Description : This system can handle at most 1.5

GB of data .

### 3.2.8 Safety

3.2.8.1 Requirement ID : R51.54.31

Requirement Name : Data Recovery

Requirement Description : There should be some options to recover from damage such as copy of database and information ,through offline or online services.

### 3.2.9 Reusability

3.2.9.1 Requirement ID : R51.54.32

Requirement Name : Efficiency of use

Requirement Description : Goals are easy to accomplish quickly and with few or no user errors.

3.2.9.2 Requirement ID : R51.54.33

Requirement Name : Intuitiveness

Requirement Description : The interface is easy to learn and navigate: buttons, headings and help/error messages are simple to understand.

3.2.9.3 Requirement ID : R51.54.34

Requirement Name : Low perceived workload

Requirement Description : The interface is appears easy to use, rather than intimidating, demanding and frustrating.

3.2.9.4 Requirement ID : R51.54.35

Requirement Name : Learning outcome

Requirement Description : User can properly learn about CSEDU and related questions about CSEDU.

### 3.2.10 Testability

3.2.10.1 Requirement ID: R51.54.36

Requirement Name: Testability

Requirement Description: Software will be implemented in such a way that the total software can be tested using Flask test framework.

### 3.2.11 Maintainability

*3.2.11.1 Requirement ID: R51.54.37*

*Requirement Name: Agile Development Model*

*Requirement Description: We will apply a agile design pattern to develop the application*

### 3.2.12 Cost

*3.2.12.1 Requirement ID : R51.54.38*

*Requirement Name : TCO Cost*

*Requirement Description : Total Cost of Ownership is mandatory for changing the ownership of this system.*

*3.2.12.2 Requirement ID : R51.54.39*

*Requirement Name : Installation Cost*

*Requirement Description : There is no installation cost in this system. This is open source for all user of CSEDU.*

*3.2.12.3 Requirement ID : R51.54.40*

*Requirement Name : Use Cost*

*Requirement Description : Users can use it in free. There is no payment for this system.*

*3.2.12.4 Requirement ID : R51.54.41*

*Requirement Name : Disposal Cost*

*Requirement Description : Disposal cost is needed for this system.*

## 3.3 External Interfaces Requirement

### 3.3.1 Hardware interfaces

*3.3.1.1 Requirement ID: R51.54.42*

*Requirement Name: Hardware specification*

*Requirement Description: For running the application we need at least 4GB of RAM at the server PC and at least 1GB of RAM at the client PCs and 700MB for android devices. At least 100MB hard disk space is needed in both server and clients. It is expected that the software would run correctly in at least desktop PCs and phone*



with browsers will support the web application.  
Continuous power and internet supply is also needed.

### 3.3.2 User Interfaces

*3.3.2.1 Requirement ID: R51.54.43*

*Requirement Name: Bootstrap layout design*

*Requirement Description: User interfaces are so clear that a user can easily find the options they can utilize and use. It will be a user-friendly interface. This product will use Bootstrap design for its interfaces.*

### 3.3.3 Software Interfaces

*3.3.3.1 Requirement ID: R51.54.44*

*Requirement Name: Platform Specification*

*Requirement Description: The software would run in PCs which have a browser that supports Flask and Python.*

We will use pycharm for implementing our project.

- Firebase database will be used.
- There will be need of a browser which that supports Flask.
- Some framework will be needed according to our design.

### 3.3.4 Communications Interfaces

*3.3.4.1 Requirement ID: R51.54.45*

*As the project is a web application, we will need a web browser, with Internet connection. We will use HTTP for sending the web page to client PCs. We will use CSRF token for encryption. It is preferable that the clients are connected to the server with a network connection greater than 100kbps.*

## 4. Other Requirements

*4.1. Database Requirements: We will use firebase database.*

*4.2. Internationalization Requirements: We will be primarily targeting only English language.*

*4.3. Legal Requirements: As this is an academic projects, software licenses are not being added.*

## **5. Analysis Model**

Will be added in Software Design Documentation.

## **6. Supporting Information**

### **7.1 Index**