

Indian Institute of Information Technology, Allahabad

Department of Information Technology



Course - Software Engineering

Software Requirement Specification

Project - Website for SERL Lab

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Introduction

SERL Website is a web application that gives out all the necessary information about the Software Engineering Research Lab at IIIT Allahabad.

Purpose

The purpose of the website is to give out all the necessary information about SERL.

From user's point of view : 1. All the necessary information is on the website. 2. Contact details should be available 3. Resources should be available 4. Faculty and research scholars involved in the lab should be available 5. Should be able to add publications on the website

From admin's point of view : 1. Should have authority to add faculty 2. Should have authority to add research scholars

Scope

We describe what features are in the scope and what are not in the scope of the software to be developed.

In Scope: 1. Information about all the faculty and research scholars in SERL 2. Accessibility Projects and publications by SERL 3. Contacts about SERL

Out of Scope: 1. Applications for internships/projects under SERL 2. Applications for research scholarship under SERL

Definitions, Acronyms and Abbreviations

SERL stands for **Software Engineering Research Laboratory**.

References

IEEE SRS Format.

Overview

Section 2 gives an overall description of the project. This includes the functional requirements and the non-functional requirements of the project. Performance and hardware requirements have also been added.

Overall Description

Product Perspective

SERL Website is intended to give out all the information necessary about the SERL lab. This includes the contacts, abouts, faculty, research scholars, projects, publications et cetera.

Product Functions

All actors by default are assumed to be **actor** and **user** except when brackets specify the actor.

Use case	Description of use case
Display Home Page	Displays the home page
Subscription	Register for subscriptions
Display About Section	Displays the about section
Faculty Page	Displays faculty page
Add Faculty (Admin)	Add new faculty member
Research Scholars Page	Displays research scholars page
Add Research Scholar (Admin)	Add new research scholar
Publications Page	Displays publications page
Resources Page	Displays resources
Contacts Page	Displays the contact us page
Feedback Form	Give feedback form
Google Maps Location	Give location of lab on Google Maps
Publications by User	List all publications for a user
HTTP RESTFul API	RESTFul API to abstract data layer

User Characteristics

The user should be familiar with the operation of a web browser and general HTML5 interfaces.

Principal Actors

Our principal actor is the **user** who visits our website and **admin**.

General Constraints

Functionality requires internet connection

Assumptions and Dependencies

1. Internet connection is assumed
2. Google Maps API is used to display location of the lab

Use Case Diagram

See next page.

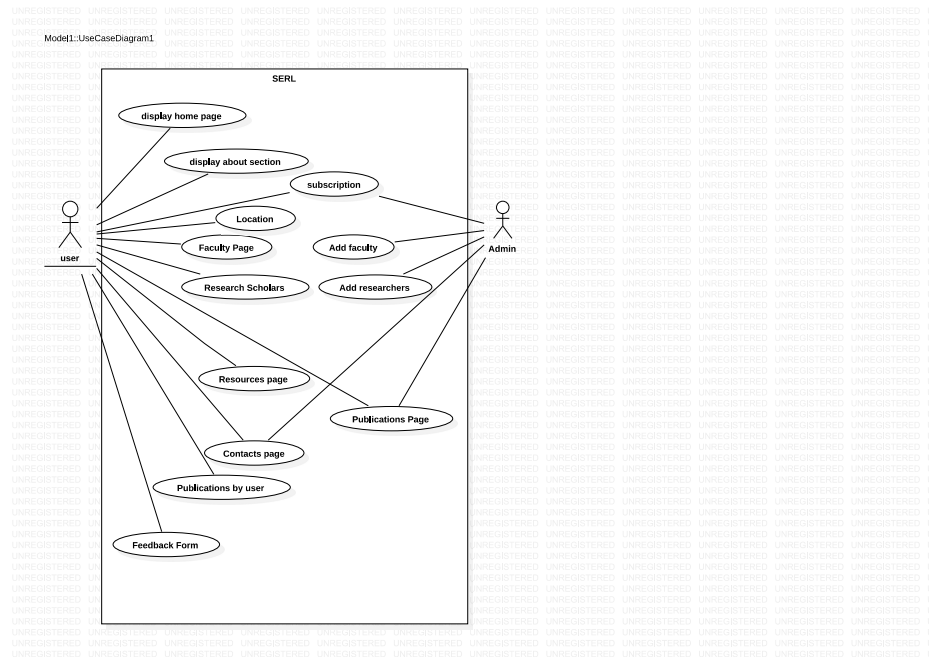


Figure 1: Use Case Diagram

Specific Requirements

Functional Requirements

Note that any use case valid for user is also valid for admin. The functional requirements are as follows :

Display Home Page

Summary: Displays the home page.

Actors: User

Pre-conditions:

- Internet connectivity

Main Success Scenario:

- The home page is displayed with all links and references functional

Extension: None.

Post-conditions: user can now access the website.

Subscription

Summary: Allow subscriptions

Actors: User

Pre-conditions:

- Internet connection
- Display of home page

Main Success Scenario: subscription data should be available in database

Extension: None.

Post-conditions: user is now subscribed

About Section

Summary: Displays the about section.

Actors: User

Pre-conditions:

- Internet connection
- Display of home page

Main Success Scenario: The about section is displayed.

Extension: None.

Post-conditions: user can now see the about section.

Faculty Page

Summary: Displays the faculty page.

Actors: User

Pre-conditions:

- Internet connection
- Display of home page
- Click on the faculty page in the navigation bar

Main Success Scenario: The faculty page is displayed.

Extension: None.

Post-conditions: user can now see the faculty page.

Add Faculty

Summary: Add faculty member.

Actors: Admin

Pre-conditions:

- Internet connection
- Display of home page
- Click on the “add faculty” button

Main Success Scenario: Faculty is successfully added to the database

Extension: None.

Post-conditions: Reload faculties page.

Research Scholars Page

Summary: Displays the research scholars page.

Actors: User

Pre-conditions:

- Internet connection
- Display of home page
- Click on the research scholars page in the navigation bar.

Main Success Scenario: The research scholars page is displayed.

Extension: None.

Post-conditions: user can now see the research scholars page.

Add Research Scholar

Summary: Add research scholar

Actors: Admin

Pre-conditions:

- Internet connection
- Display of home page
- Click on the “add research scholar” button

Main Success Scenario: Research scholar is successfully added to the database

Extension: None.

Post-conditions: Reload research scholars page.

Publications Page

Summary: Displays the publications page.

Actors: User

Pre-conditions:

- Internet connection
- Display of home page
- Click on the publications page in the navigation bar

Main Success Scenario: The publications page is displayed.

Extension: None.

Post-conditions: user can see the publications page.

Display Resources Page

Summary: Displays the resources page.

Actors: User

Pre-conditions:

- Internet connection
- Display the home page
- Click on the resources page in the navigation bar

Main Success Scenario: Resources page is displayed

Extension: None.

Post-conditions: user can see the resources page.

Display Contact us Page

Summary: Displays the Contact Us page.

Actors: User

Pre-conditions:

- Internet connection
- Display the home page
- Click on contact us page in navigation bar

Main Success Scenario: Contact us page is displayed

Extension: None.

Post-conditions: user can see contact us page

Post Feedback Form

Summary: Accept inputs in feedback form.

Actors: User

Pre-conditions:

- Internet connection
- Display the home page
- Click on contact us page in navigation bar

Main Success Scenario: Feedback successfully communicated to backend

Extension: None.

Post-conditions: feedback added to database.

Display Location on Map

Summary: Displays the location of the lab on Google Maps.

Actors: User

Pre-conditions:

- Internet connection
- Connectivity with Google Maps API
- Display of contact us page

Main Success Scenario: Location is displayed

Extension: None

Post-Conditions: user can see location on Google Maps.

Publications Page of One User

Summary: Displays the publications page, queried by author.

Actors: User

Pre-conditions:

- Internet connection
- Display of home page
- Click on the publications page in the navigation bar

Main Success Scenario: The publications page is displayed.

Extension: None.

Post-conditions: user can see the publications page of their author.

HTTP RESTFul API

Summary: Displays the publications page, queried by author.

Actors: User

Pre-conditions:

- Internet connection
- REST Client
- Click on the publications page in the navigation bar

Main Success Scenario: REST actions are enacted

Extension: None.

Post-conditions: database API is not exposed yet data changes can be made

Non-fucntional Requirements

- About section and images of the different faculty and research scholars must be added
- Contacts need to be added manually

Hardware Requirements

Should run on any device with a modern web browser.

Software Requirements

HTML5 and CSS3 should be supported on the web browser.

Design Constraints

- **User Interface:** should have a user-friendly and easy-to-master user interface
- **Authentication:** admin should be authenticated
- **Authorisation :** only admin should be able to access REST API