

# **SOFTWARE ENGINEERING**

## **SOFTWARE REQUIREMENT SPECIFICATION**

### **Big Data Analytics Lab Website**

#### **GROUP MEMBERS**

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#### **1. Introduction:**

Big data Analytics Lab website is designed for BDA Lab IIITA. It has Delete about courses Research ,projects,Publication,lab member infor and their respective webpage

##### **1.1 Purpose:**

It is essential that colleges provide website visitors with a straightforward and intuitive way to navigate a site and find the content they are looking for. Addressing multiple audiences' unique pain points and content needs can be a challenge for institutions.

#### From Student's point of view

- *Current Students* may need to know how to set up their portal account to access their class information.
- Students can easily raise queries related to events, workshops and many other things.
- Students can easily get information related to their educational organization with the help of a website.
- Students can easily get in touch with faculty with the help of a website.

#### From Faculty's point of view

- A website for faculty is important because they can assist R.Scholar to organize conferences.
- With the help of websites teachers can share their views and ideas with the rest of faculty as well as visitors and students.
- Faculty allot projects to research scholars and students. They also guide them in their projects.

#### From Admin's point of view

- Admin responsibilities includes: editing webpage, securing venues, updating projects calendars, tracking project results etc. in the website.

## 1.2 Scope:

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

- a. Application for Project under various esteemed members of bda lab .
- b. Students can retrieve information about the ongoing projects.
- c. Conferences and Seminars from the Best of Research Personalities.

#### Out of Scope:

- a. Editing a running Project Code.
- b. Hosting the Seminar on this website itself.

C. Communication between other research labs is not possible.

### 1.3 Definitions, Acronyms, and Abbreviations:

#### Acronyms and Abbreviations:

- a. SRS: Software Requirement Specification
- b. R. Scholar : Research Scholar

### 1.4 References:

IEEE SRS Format

### 1.5 Overview:

The rest of this SRS is organized as follows: Section 2 gives an overall description of the software. It gives what level of proficiency is expected of the user, some general constraints while making the software and some assumptions and dependencies that are assumed. Section 3 gives specific requirements which the software is expected to deliver. Functional requirements are given by various use cases. Some performance requirements and

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design constraints are also given.

## 2. Overall Description:

### 2.1 Product Perspective:

The project is aimed to increase the efficiency of the research department of IITA and overcome the pertaining problems by responsive solutions, Both students as well as the management will be benefited from the website as the product improves the overall research quality of the institute.

### 2.2 Product Functions:

BDA Lab website supports the following use cases:

Use cases	Description of use cases
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<b>Admin:</b>	
Admin login	Allows Admin to login.
Edit Faculty web pages	Allows Admin to Edit Faculty web pages
Edit R. scholars web pages	Allows Admin to Edit research scholars web pages
Updates about page	Admin can make changes to the website
View Student's request	Admin can approve request from student about conferences
View/Answer FAQ	Admin can view the frequently asked questions posted by the IIIT Student's on the FAQ page and answer them.
Upload Resources	Admin can upload sample papers of questions similar to which students can expect in the interviews.
<b>Student:</b>	
View About page.	Allows students to view about BDA Lab IIITA.
View Resources	Students can view uploaded resources by Faculty

Student login	Allows students to login.
Contact Faculty	Faculty can be contacted about the project.
Contact Research Scholar	Research Scholar can be contacted about the project.
Contact Core Team	Student is able to contact Core members for assistance
View FAQ	Students can view the Frequently Asked Questions (FAQ).
View Contact Page	Students can view the contact details of Placement Cell of NIIT University.
Post FAQ	Students can post FAQ regarding any queries related.

View Resources	The Uploaded Resources can be viewed here

<b>Research Scholar:</b>	<b>Description of Use cases</b>
Create a new Project	Allows to create a new Project link
Update Project	Allows The R. Scholar to update project description.
Contact Faculty	Faculty can updated regarding developments in project.
Organize a Conference	Any Scholar with proper credentials is able to invite a speaker for a conference.
<b>Faculty:</b>	<b>Description of Use cases</b>
Approve entries for project	Allows to approve student in a project
Upload resources	Allows faculty to upload resources on resource tab
Create a new Project	Allows to create a new Project link
Update Project	Allows The Faculty to update project description.
Organize a Conference	Any Scholar with proper credentials is able to invite a speaker for a conference.

## 2.3 User Characteristics:

- a. The user should be familiar with the operation of web based applications.

## **2.4 Principal Actors:**

The principal actors in the BDA Lab website are "Admin", Faculty, Research Scholars and Students.

## **2.5 General Constraints:**

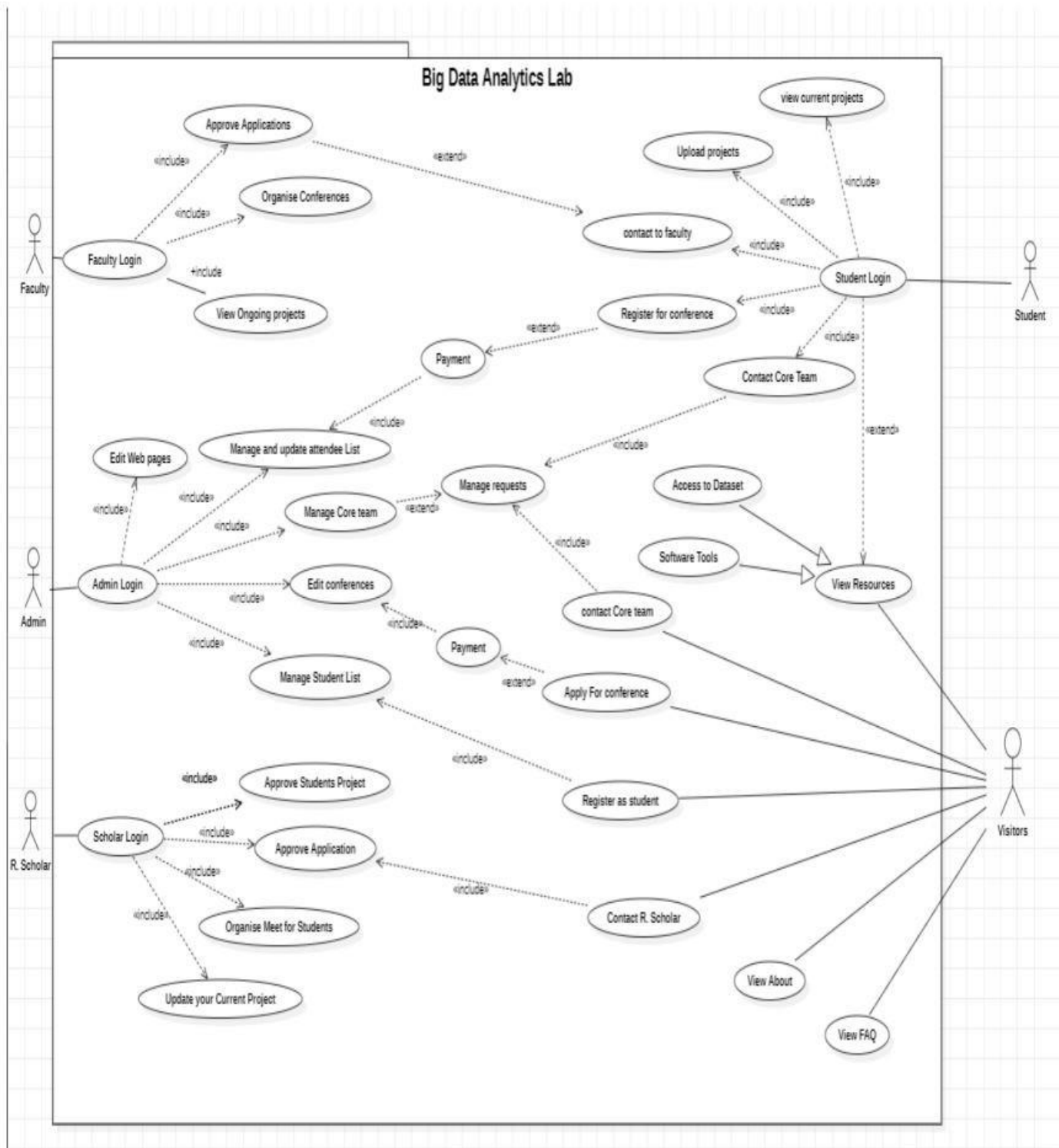
a. Working at BDA Lab requires an Internet connection.

a. BDA Lab is a Multi user and editable website. Every student/faculty/research scholar should have their corresponding credentials to log in.

## **2.4 Assumptions and Dependencies:**

Working of the BDA Lab website is dependent on the availability of Internet connection.

## **APPENDIX A: USE CASE DIAGRAM**



### 3. Specific Requirements:

#### 3.1 Functional Requirements:

We describe the functional requirements by giving various use cases.

##### Use Case 1:

**Name:** Admin login

**Summary:** Allows Admin to login.

**Actors:** Admin

**Pre-conditions:**

- Internet connectivity.
- Only for allowed Admin.

**Main success scenario:**

- Admin clicks on login button.
- App checks for the authorization of login.

**Extension:**

Id or password incorrect. Shows error dialog box.

**Post-condition:**

Admin can now access all features of the app.

##### Use Case 2:

**Name:** View About page.

**Summary:** Allows Visitors to view about BDA Lab website and it's Various team members.

**Actors:** Anyone on the internet



**Pre-conditions:**

- Internet Connectivity.
- Admin must upload some data on About page.

**Main success scenario:**

- Visitor clicks on About page tab.
- Visitors can view all data shown there.

**Extension:** NIL

**Post-condition:** NIL

**Use Case 3:**

**Name:** View Resources

**Summary:** Visitor can view All resources uploaded and permitted by Website admin..

**Actors:** Visitors

**Pre-conditions:**

- Internet connectivity.
- Admin must upload a Some resources

**Main success scenario:**

- Visitor clicks on resources tab.
- Student chooses from given Resources.

**Extension:**

Error in downloading. Shows error dialog box. Occurs due to poor internet connectivity. **Post-condition:**

Visitor can now open the resources which are available.

## Use Case 4:

**Name:** Student login

**Summary:** Allows student to login.

**Actors:** IIITA Students

**Pre-conditions:**

- Internet connectivity.
- Requires student mail id to login.

**Main success scenario:**

- Student clicks on student login tab and then gets redirected to Student login page.
- Student enters student mail id and password .
- Student submits and then redirected to the website again.

**Extensions:**

Id or password incorrect.

**Post-conditions:**

- Students can now access all features of the app provided for students.

## Use Case 5:

**Name:** Edit Web pages

**Summary:** Admin can change the Web pages of members as per their requirement.

**Actors:** Admin

**Pre - Conditions:**

Admin clicks on the Edit web pages icon to perform the required operations.

**Main Success scenario:**

- Admin Applies the changes successfully.

**Post condition:**

Admin acknowledges the successful Edit of web pages.

**Use Case 6:**

**Name:** Manage and update Attendee list

**Summary:** Admin is able to change and edit the list of conference attendees as per requirement.

**Actors:** Admin

**Pre - Conditions:**

- Student or any visitor submitting a request for attendance after payment.

**Main Success Scenario:**

- Admin applies the changes successfully and updates them on the website.

**Post condition:**

Student or visitor is able to know the status of the Application of his request.

**Use Case 7:**

**Name:** Manage Student List

**Summary:** Admin is able to update Student list upon new registration.

**Actors:** IIIT Students, Admin.

**Pre - Conditions: .**

Student submits registration request.

**Main Success Scenario:**

- A successful entry of student in the list of registered students.

**Post condition:**

Student has successfully registered and is able to login through his id.

**Use Case 8:**

**Name:** View FAQ

**Summary:** Visitors can view the Frequently Asked Questions (FAQ)

**Actors:** Everyone

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**Pre-conditions:**

Internet connectivity.

**Main success scenario:**

- Visitor click on FAQ tab.
- Visitor browses to the desired question from list of FAQ'
- Visitor gets the answer of the question he wished to look an answer for.

**Extensions:**

To get a result, there must be either the same or the related question for the user query.

**Post-condition:**

Visitors will be up to date with queries.

**Use Case 9:**

**Name:** View Contact Page

**Summary:** Student/Visitor can view the contact details of Placement Cell of NIIT University.

**Actors:** IIIT Students,Visitors

**Pre-conditions:**

Internet connectivity.

**Main success scenario:**

- Student/Visitor click on 'View Contacts'.
- Student/Visitor browses through the Contact details of the desired person until found.
- Student/Visitor gets the contact details of the desired person.

**Extensions:**

Student/Visitor is able to get the contact information of a person only if it has been provided by the admin.

**Post-condition:**

Student/Visitor gets the desired contact detail.

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#### **Use Case 10:**

**Name:** Edit Conferences

**Summary:** Faculty/Research Scholar can add Scheduled conferences.

**Actors:** Faculty/Research Scholar.

**Pre-conditions:**

- Internet connectivity.

**Main success scenario:**

- Faculty/Research Scholar clicks on 'add Scheduled conferences.' tab.
- Faculty/Research Scholar fills in the required details of the new conferences to be added.
- Faculty/Research Scholar saves the details and the new conference gets added.

**Extensions:**

NIL

**Post-condition:**

New conference gets added by the admin.

**Use Case 11:**

**Name:** Approve Students requests

**Summary:** Faculty/Research Scholar can approve the details filled in by the student.

**Actors:** Faculty/Research Scholar

**Pre-conditions:**

- Internet connectivity.
- Student must have filled the necessary details.

**Main success scenario:**

- Faculty/Research Scholar views the student's profile.
- Faculty/Research Scholar cross verifies the students details against university's record.

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- If Faculty/Research Scholar does not find any data discrepancy, he approves the profile.

**Extensions:**

Disqualify Requests.

**Post-condition:**

Student's information/Profile gets approved by the Faculty/Research Scholar and therefore, Student can apply for the desired Project.

**Use Case 12:**

**Name:** View Undergraduate ongoing Projects

**Summary:** Faculty/Research Scholar can view projects..

**Actors:** Faculty/Research Scholar

**Pre-conditions:**

- Internet connectivity.

**Main success scenario:**

- Faculty/Research Scholar clicks on view projects tab.

**Extensions:**

NIL

**Post-condition:**

NIL.

### **Use Case 13:**

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**Name:** Post FAQ

**Summary:** Visitor can post FAQ regarding any queries related

**Actors:** Anyone with registration

**Pre-Condition:** There must be something to ask about.

**Main Success Scenario:**

- Student must click on the FAQ section
- Then they must post a FAQ if they have any
- The FAQ will then be answered by the placement cell members
- All the student will be able to view the FAQ posted by another student

**Extension:**

- The FAQ is already posted by some other student or
- FAQ section couldn't download due to weak internet connectivity
- FAQ not yet being answered by the higher authority

**Post Condition:**

Students can now view the answers of the queries posted by them.

#### **Use Case 14:**

**Name:** Update Current Project.

**Summary:** concerned members of projects can apply changes on description

**Actors:** Members of that project

**Pre-Condition:**

Concerned members of projects apply changes by clicking on change description.

**Main Success Scenario:**

- Concerned members of projects Apply changes and save it.

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**Extension:**

- NIL

**Post Condition:**

Application of changes.

#### **Use Case 15:**

**Name:** Upload Project Description

**Summary:** Project will uploaded

**Actors:** Project Head(Faculty/Research Scholar).

**Pre-Condition:**

Project Head must give the Project links and description.



**Main Success Scenario:**

- Should have project Head Title And Must Contain a valid link and description of project.

**Extension:**

Complete information about the Project

**Post Condition:**

Members can view the projects.

**Use Case 16:**

**Name:** View Student's Profile

**Summary:** Admin can view the profile of any student he wishes to and check if he has uploaded all the necessary documents or submitted a particular document.

**Actors:** Admin i.e. NIIT University Placement Cell

**Preconditions:** Admin must be successfully logged in and he should have notified the students to submit a particular document earlier.

**Main success scenarios:**

- Admin clicks on View Student's profile tab.
- Admin chooses for the student he wishes to view profile of and clicks on View Profile Tab.
- Admin views the student's profile

**Extensions:**

If a student has not uploaded any document, a notification will be shown and he can then once again send a reminder to the student

**Post Condition:**

Admin has now successfully viewed the student's profile.

**Use case 18:**

**Name:** Upload resources.

**Summary:** Project Heads can upload resources in the resource tab.

**Actors:** Faculty

**Preconditions:** Faculty must be successfully logged in.

**Main success scenarios:**

- Faculty clicks on Upload Sample Papers tab.
- Faculty chooses for the file(s) he wishes to upload from his computer and then clicks on UPLOAD tab.

**Extension:**

Error in uploading. Shows error dialog box. Occurs in case of weak Internet connectivity.

**Post Condition:**

Faculty has now successfully uploaded sample papers.

### **3.2 Non-Functional Requirements:**

### **3.3 Hardware Requirements:**

Should run on web device. Requires minimum 2gb ram for smooth functionality of the app.

### **3.4 Software Requirements:**

Windows 10 or higher operating system.

Compatible web browser

### 3.5 Design Constraints:

- ✦ **Security:** The files in which the information regarding securities and portfolios should be secured against malicious deformations.
- ✦ **Fault Tolerance:** Data should not become corrupted in case of system crash or power failure.