

# IT314: Software Engineering

## SRS for Project: Version 1



### Group: 15 Conference Management System

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# 1. Introduction:

## 1.1 Purpose:

- There are various Research and Innovation Institutes across the world that organize annual conferences for academic and research purposes.
- While organizing conferences, many aspects need to be kept in mind. Firstly, an announcement of the conference has to be made for interested participants. Next, the agenda and discussion flow must be chalked out and shared with participants.
- All across the globe, people need help knowing about the agenda of a particular conference, the schedule, the venue, and the registration procedure for the same.
- To solve the problems associated with organizing conferences, a website for conference management is software that helps organizations plan and manage events and conferences. This website will be known as “FIRE”: Forum for Information Retrieval and Evaluation. This website was to be made under the mentorship of our TA: Bhargav Dave. There are several reasons why this website can be essential for organizing and managing conferences:
  - **Efficient registration process:** It streamlines the registration process for attendees, making it easy and convenient for them to sign up and pay for the event.
  - **Improved communication:** Organizers can communicate with attendees, presenters, and exhibitors efficiently and effectively, ensuring that everyone is up-to-date with the latest information.
  - **Easy scheduling:** It makes it simple to schedule sessions, meetings, and other events, reducing the time and effort required for manual scheduling.

- **Data tracking and analysis:** It provides organizers with real-time data on attendee registration, session attendance, and other metrics, helping them make informed decisions and improve the overall conference experience.
- Overall, this website for conference management helps organizations **save time, resources, and money** while delivering a **seamless and high-quality conference experience** for attendees.

## 1.2 Scope:

- **Classic home page with navigation bar and footer:** The homepage will be uncluttered which would make it easy for the user to readily access the various features of the website.
- **Details of lecturers/speakers that are participating in the conference:** It is important for the user/ attendee to know the details of the speakers in order to know about their research fields.
- **Display the details about the sponsors of the event:** No organization can work smoothly without money. Hence, it is always better to have sponsors who have scientific temperament to sponsor this platform.
- **Display the social media handle of the organization:** The social media handles will be displayed in order to make the platform more known to the wider audience.
- **Schedule Timeline:** Gives a glimpse of the various meetings/ events that had occurred in the past.
- **Mail Auto generation:** It will send a mail notification which indicates the confirmation that the user has successfully registered for the conference
- **Registration Fee Payment portal:** Here, the attendee will have to pay fees in order to attend the conference.

- **Editable Navigation bar:** The organization will be able to add or delete or update the details accordingly.
- **Feedback system:** Feedback portal that will ask for feedbacks from the visitors about their experience on our website.
- **Archives section:** That stores data/details of previous years conference

## 2. General Description:

### 2.1. An overview:

- The 'FIRE' or 'Forum for Information Retrieval Evaluation' will be a common platform to organize and manage conferences that are held for scientific/research purposes.
- The organizers can have their meeting put up on a schedule on the website. Then, the attendee will be able to register or cancel the registration for that particular event.
- The website shall have past data on these conferences along with the option for uploading research papers/ thesis for public view.
- Also , the website shall have a payment gateway for paying registration fees to organization with the help of online banking.

### 2.2. An Intended Audience:

- **Admin:** The admin will be the owner of the website, who would be granting permissions for organising or attending conferences.
- **User:**
  - a. **Organiser:** The one which shall be organising the events/ conferences.
  - b. **Researcher:** Any person who has been associated with writing any research paper or a thesis for a subject.

These can upload their research papers on the website for public view.

- c. **Attendee:** The audience that is interested in attending any of those conferences. It includes students, teachers, professors, and anyone interested in the topic.

### 3. Functional Requirements:

- A website should give all information regarding the conference organization, like venue, schedule, timings, participants and roles.
- A website should give schedule information for all the events/sessions which are part of the conference.
- The registration page should be there for an audience who wants to participate in the conference.
- Users should be able to register themselves. Upon successful registration, auto-generated mail containing a receipt should be sent to them as proof of registration.
- Registration page for organizations, and sponsors for the conference.
- Organizations should be able to register themselves on the website by providing relevant details.
- This registration may be paid or unpaid, depending on the conference requirements.
- Details of lecturers/speakers that are participating in the conference.
- Detailed rules and regulations with a deadline for submitting a research paper in the conference.
- A portal to manage the accommodation of participants, where one should be able to register him/herself.
- Students should be able to track their allocated rooms.

- A portal for students to be able to apply for travel grants. So that students residing far away can also get a chance to participate in conferences.
- A website should have a contact us page providing all relevant mailing lists.
- Also, details of all the coordinators/members of committees/organizations should be available.
- Since the conference is conducted every year, the website should also have a feature of archives where past data can be accessed.

#### **4. Non Functional Requirements:**

- The project should be open source and available for everyone.
- Display the timeline of the event to the user.
- The payment gateway of the system should be secure.
- Attendees of the conference should be able to share their thoughts and experiences through feedback.
- The system should be user-friendly and easy to use.
- The system should be fast, responsive, and have low latency.
- It should handle a more significant number of users.
- Registration for the conference should be closed after a maximum number of registrations have been made.
- The system is scalable to accommodate growth and increase the number of users over time.
- The system should protect sensitive data and ensure the privacy of users.
- The system should be available 24/7 and have high uptime.
- The system should be maintainable and easy to update.

## 5. Interface Requirements :

- The website should include all the necessary details required for the organizing of the conferences. However, it should be decluttered so that the user can find the information easily.
- The website should also be loaded fast and should not take too long for uploading.
- The theme chosen for the website should be such that does not strain our eyes, and that whatever is written/mentioned can be read easily.
- The UI design of a website should be user friendly so users can easily interact with the website.

## 6. Performance Requirements :

- The performance requirements include the user stories. I.e. what the user will want to have in the website

Front Card	Back of the card
As an <b>attendee</b> of the conference, I want all the details scheduled at least a week before the day the conference takes place.	<ul style="list-style-type: none"><li>• The schedule of all the conferences will be regularly uploaded/updated on the Website.</li></ul>
As a <b>user</b> , I want to check out the current year's conference and all past years' conference details and proceedings.	<ul style="list-style-type: none"><li>• Provide year-wise conference and proceedings details to all the users.</li><li>• Home page of the site must be current year conference details.</li></ul>
As a <b>user</b> , I want to check out any research papers.	<ul style="list-style-type: none"><li>• Any kind of user can access all research papers.</li></ul>



As an <b>admin</b> , I want to see the data of all the users data; and also be able to perform edit records, add new records, and delete record operations.	<ul style="list-style-type: none"> <li>• Only the admin can see the admin user's information.</li> <li>• Only one of the admins can edit, remove and add a new admin.</li> </ul>
As an <b>admin</b> , I want to display the sponsor's logos on the site.	<ul style="list-style-type: none"> <li>• Allocate some space for Sponsor's logos.</li> </ul>
As an <b>admin</b> , I want to set the background picture, which would be different per year.	<ul style="list-style-type: none"> <li>• Give some flexibility for setting the background image.</li> <li>• Take care of the resolution and image size of the uploaded image.</li> </ul>
As an <b>admin</b> , I want to be able to make changes in the home page.	<ul style="list-style-type: none"> <li>• Only the admin can add, remove, edit, and set the visibility of the home page.</li> </ul>
As an <b>admin</b> , I want to be able to make some changes in tabs visible on the sites on the home page.	<ul style="list-style-type: none"> <li>• The admin can edit, add, remove, and set the visibility of particular tabs.</li> </ul>
As an <b>admin</b> , I want to display the preview of the edited or added tab information, For assurance.	<ul style="list-style-type: none"> <li>• When the admin changes, the tabs preview the particular tab.</li> </ul>
As an <b>admin</b> , I want to be able to change publisher details on the site per year.	<ul style="list-style-type: none"> <li>• Only the admin can add, remove, edit, and set the visibility of the publishers.</li> </ul>
As an <b>admin</b> , I want to share the website's source code so that others can build their own conference management website.	<ul style="list-style-type: none"> <li>• Make source code available to everyone through GitHub</li> </ul>
As an <b>admin</b> , I want to make a new conference So that others can participate.	<ul style="list-style-type: none"> <li>• Provide some features so that admin can make a new conference.</li> </ul>

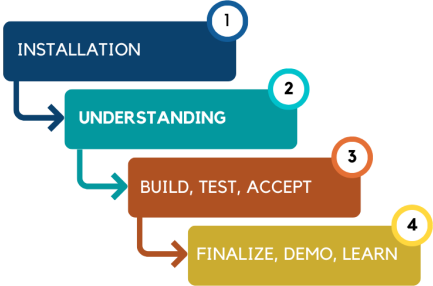
As an <b>admin</b> , I want to change the conference details.	<ul style="list-style-type: none"> <li>• Provide some features so that admin can edit conference details.</li> </ul>
As an <b>admin</b> , I want to make my website available 24x7 so that others can use it.	<ul style="list-style-type: none"> <li>• Make a website in such a way that it has a high uptime.</li> </ul>
As an <b>admin</b> , I want to access the data of the website, And others can't access that data	<ul style="list-style-type: none"> <li>• Only the admin has the right to access the data of the website</li> </ul>
As an <b>admin</b> , I want to edit the registration form So that I can change the registration form according to the data requirement.	<ul style="list-style-type: none"> <li>• Provide some features so that admin can edit the registration form.</li> <li>• Due to some reason, the admin can cancel the change, and the previous form can be retrieved.</li> </ul>
As an <b>admin</b> , I want a website whose technology can last at least 10 years So that website can be stable for a long time on one technology.	<ul style="list-style-type: none"> <li>• Developers can use react js for the front end and Django for the back end.</li> </ul>
As an <b>admin</b> , I want every past website linked to the current website, so I can get every past event data from there.	<ul style="list-style-type: none"> <li>• Store past event data in the database.</li> <li>• Every new year, link a new website to the past one.</li> </ul>
As an <b>admin</b> , I want strong security for the admin page, So that no one can hack into the system and temper the data.	<ul style="list-style-type: none"> <li>• Provide password facilities to the admin so that admin can set the password for security.</li> <li>• In case the admin can forget the password, then provide him forget password link through mail I so that he can set a new password.</li> </ul>

## 7. Design Constraints :

- For the backend portion of the project the group had agreed to use Django in association with NoSQL DB.
- However, Django does not have any well developed files that can integrate well with NoSQL DB.
- So for the backend we had to use Node JS for good integration with NoSQL DB.
- This was a constraint for the project which limited the design for the website.

## 8. Preliminary Schedule :

Week	Sprint Planning	Acceptance
Week 1	Lab 2 (9th February, 2023 for 3 hours) <ul style="list-style-type: none"><li>• Identification of problem statements and gathering functional and non-functional requirements from the user.</li><li>• Discussion on which SDLC model will be suitable for our project.</li><li>• Use case diagram created.</li></ul>	<ul style="list-style-type: none"><li>• We finalized the Agile SDLC model that is most suitable for our project.</li></ul>

<b>Week 2</b>	<p>Lab 3 (23rd February, 2023 for 3 hours)</p> <ul style="list-style-type: none"> <li>• Product owner reviews user stories with team</li> <li>• Stories researched and all possible design options investigated</li> <li>• Team defines and estimates the tasks</li> <li>• Estimation of sprint duration</li> <li>• Finalize the acceptance criteria for system</li> <li>• Determine build sequence for the sprint</li> <li>• TEAM COMMITS!</li> </ul>	<ul style="list-style-type: none"> <li>• Product owner agrees on the user stories created</li> <li>• <b>Sprint duration</b> decided to be around <b>4 weeks</b></li> <li>• <b>Acceptance criteria:</b> <ul style="list-style-type: none"> <li>○ Routing and some admin features in backend</li> <li>○ Details of the conference to be shown to the user</li> <li>○ Detailed schedule timeline</li> <li>○ Feedback system for the user</li> <li>○ Contact us page</li> </ul> </li> <li>• <b>Build Sequence:</b>  <pre> graph TD     1[1. INSTALLATION] --&gt; 2[2. UNDERSTANDING]     2 --&gt; 3[3. BUILD, TEST, ACCEPT]     3 --&gt; 4[4. FINALIZE, DEMO, LEARN] </pre> </li> </ul>
<b>Week 3</b>	(2nd March, 2023)	<ul style="list-style-type: none"> <li>• Build, test and accept</li> </ul>
<b>Week 4</b>	1st stage presentation	<ul style="list-style-type: none"> <li>• Implemented project demonstration</li> <li>• Learning for future planning of project</li> </ul>

## 9. Appendix :

### 9.1. References from where information gathered:

- [FIRE 2022 - Forum for Information Retrieval Evaluation](#)
- [For SRS formating](#)
- Lecture Slide 10: Use Case modelling
- Lecture Slide 11: User Stories
- Lecture Slide 12: Software Requirements
- Lecture slide 13: IEEE830-1993 for SRS Understanding

### 9.2. Definitions of specific terms, and abbreviations:

- **Agile Model:** The Agile model is a software development approach that includes flexibility, customer satisfaction, and iterative development. It involves breaking down the development process into smaller, incremental stages, each of which focuses on a specific set of features or requirements.
- **Functional Requirements:** Product features or functions that developers must implement to enable users to accomplish their tasks. Generally, functional requirements describe system behavior under specific conditions.
- **Non-Functional Requirements:** specifies the quality attribute of a software system. They judge the software system based on Responsiveness, Usability, Security, Portability and other non-functional standards that are critical to the success of the software system.
- **SDLC:** Software Developement Life Cycle which is a process used by software development teams to design, develop, and test high-quality software products.

- **Sprint Planning:** It is a collaborative meeting where the development team and product owner come together to plan the work that will be accomplished during the upcoming sprint.
- **SRS Document:** Software Requirement Specification Document. As name suggests, is complete specification and description of requirements of software that needs to be fulfilled for successful development of software system.
- **Use Case:** It describes how a user or system interacts with a software system to achieve a specific goal.
- **User Stories:** An informal, general explanation of a software feature written from the perspective of the end user or customer.