

**Sri Lanka Institute of Information Technology**  
**Programming Applications and Frameworks**

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**Initial Document**

**Inkspire - Creative Writing & Storytelling**  
**Skill-Sharing & Learning Platform**

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# Table of Contents

<b>1. Introduction .....</b>	<b>3</b>
<b>2. Functional Requirements (FRs) .....</b>	<b>3</b>
Functional Requirements for the REST API and the Client Web Application .....	3
1. Skill Sharing Posts.....	3
2. Learning Progress Updates .....	3
3. Learning Plan Sharing .....	3
4. Interactivity & Engagement.....	4
5. User Profiles & Social Features.....	4
6. Notifications .....	4
7. Authentication .....	4
<b>3. Non-Functional Requirements (NFRs) .....</b>	<b>4</b>
<b>4. System Overview Diagram.....</b>	<b>5</b>
<b>5. System Architecture Overview.....</b>	<b>6</b>
<b>6. Work Distribution .....</b>	<b>7</b>
1. Skill Sharing Posts : IT22075994 – Kaveesha K.D.K .....	7
CRUD Operations: .....	7
Additional Responsibilities: .....	7
2. Learning Plan Sharing : IT22212054 - Jayasekara J.D.C.N .....	7
CRUD Operations: .....	7
Additional Responsibilities: .....	7
3. Learning Progress Updates: IT22060044 - Daniel O.D.S.....	9
CRUD Operations: .....	8
Additional Responsibilities: .....	8
4. Interactivity & Engagement : IT22280442 - Gunathilake G.S.K .....	8
CRUD Operations: .....	8
Additional Responsibilities: .....	8
Shared Responsibilities.....	9
User Management: Responsibilities .....	9
Authentication & Security : Responsibilities .....	9
Notifications : Responsibilities .....	9
<b>7. Gantt Chart .....</b>	<b>10</b>
<b>8. Conclusion.....</b>	<b>11</b>

# 1. Introduction

“**Inkspire**” is a Skill-Sharing and learning Platform designed to enable users to share, learn, and improve various skills through interactive engagement. This document focuses on Creative Writing and storytelling skills, allowing users to enhance their writing abilities through sharing short stories, poetry, and writing exercises. This feature will provide users with tools to create structured learning plans, track their progress, and receive feedback from other users. The platform ensures engagement through likes, comments, and following other writers, fostering a collaborative learning environment.

## 2. Functional Requirements (FRs)

### Functional Requirements for the REST API and the Client Web Application

#### 1. Skill Sharing Posts

- Users can upload and share short stories, poetry, and creative writing exercises.
- Users can add descriptions explaining their writing style, inspiration, and creative process.
- Support for image attachments (handwritten drafts, book excerpts) and audio recordings (spoken poetry or narrated stories).

#### 2. Learning Progress Updates

- Users can post updates on their writing journey, such as: "Completed 2 new chapters today!", "Practiced metaphor usage in poetry."
- Predefined templates for tracking writing goals (word count, editing, milestones).

#### 3. Learning Plan Sharing

- Users can create structured learning plans for different aspects of writing: Novel writing (character development, world-building, plotting), Poetry (rhyme schemes, free verse techniques, figurative language practice), and Scriptwriting (dialogue structure, screenplay formatting, pacing).
- Users can update their plans as they progress.

#### 4. **Interactivity & Engagement**

- Users can like and comment on writing posts.
- Comments can be edited or deleted by the user.
- Post owners can delete inappropriate comments.

#### 5. **User Profiles & Social Features**

- Each user has a profile page displaying: Their shared stories and poems, Their learning progress (e.g., 'Completed 5 short stories'), Their followers and engagement stats.
- Users can follow other writers to receive updates on new content.

#### 6. **Notifications**

- Users receive notifications when:
- Someone likes or comments on their writing.
- They get a new follower.
- A user replies to their comment or suggests edits.

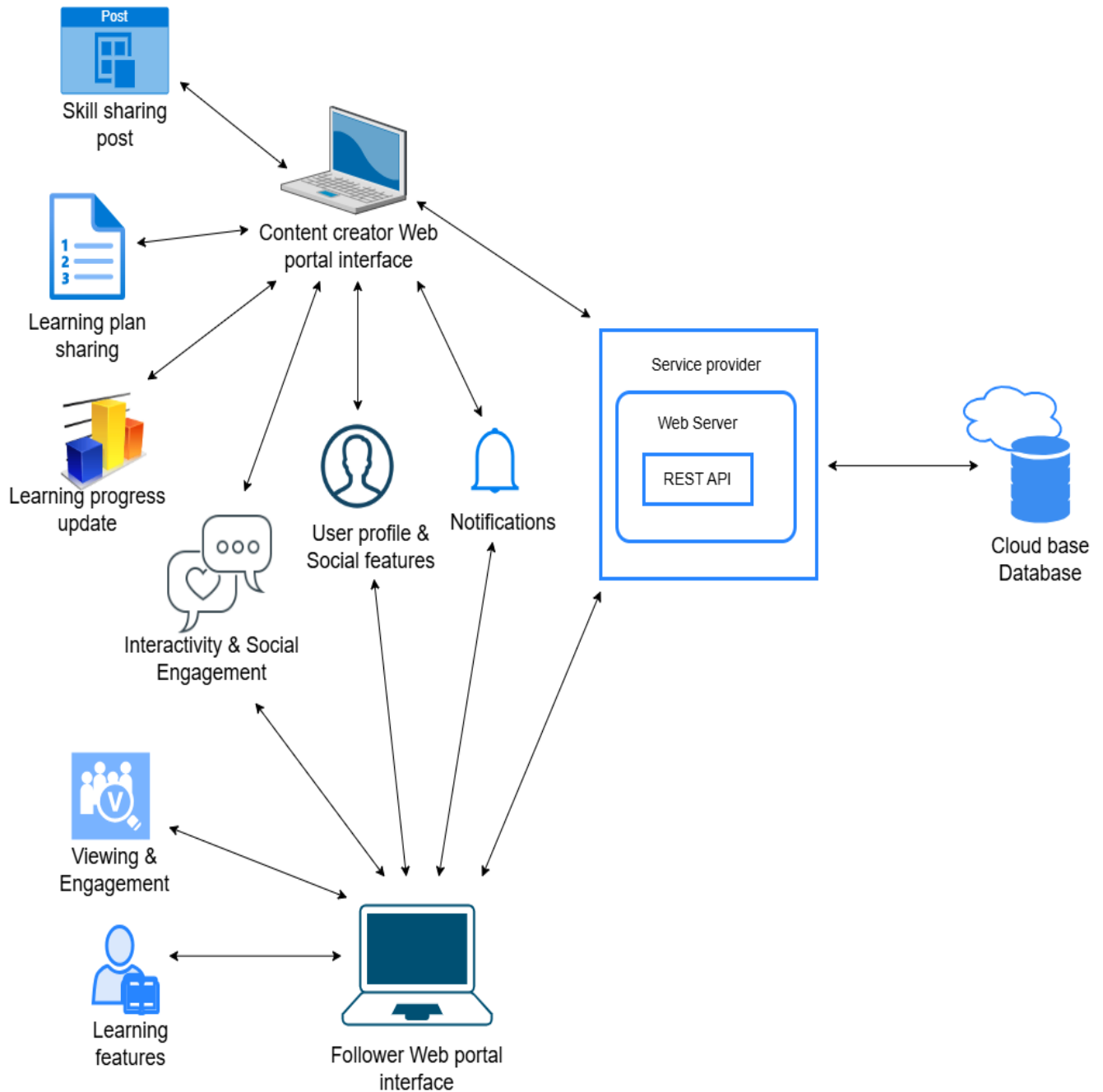
#### 7. **Authentication**

- Users can log in via OAuth 2.0 for secure access.

### 3. **Non-Functional Requirements (NFRs)**

- **Performance:** The platform should handle hundreds of concurrent users smoothly.
- **Scalability:** Designed to accommodate future expansion (more users, new writing-related features).
- **Security:** Protect user data and writing content through Spring Security & OAuth 2.0.
- **Maintainability:** Follow Spring Boot & React best practices to ensure long-term system stability.
- **Usability:** The UI/UX should be intuitive for seamless writing, sharing, and engagement.

## 4. System Overview Diagram



## 5. System Architecture Overview

- **Architecture (MVC - Model-View-Controller):** Structured design pattern to separate concerns, ensuring maintainability and scalability.
- **Backend (Spring Boot - Java):** REST API for handling user authentication, writing posts, learning plans, and comments.
- **Frontend (React - JavaScript):** User-friendly interface for creating, browsing, and engaging with writing content.
- **Database (MySQL):** Store user profiles, writing posts, comments, and learning progress.

## **6. Work Distribution**

### **1. Skill Sharing Posts : IT22075994 – Kaveesha K.D.K**

#### **CRUD Operations:**

- Allow users to upload up to 3 photos or 30-sec videos with descriptions.
- Users can view posts in their feed.
- Users can update the media or edit the description of their own posts.
- Users can delete their own posts.

#### **Additional Responsibilities:**

- Implement media upload functionality (photos/videos).
- Categorize posts by topic/skill type.

### **2. Learning Plan Sharing : IT22212054 - Jayasekara J.D.C.N**

#### **CRUD Operations:**

- Users can create, edit, and delete personalized learning plans.
- Allow setting milestones & tracking plan progress.
- Users can view and follow learning plans from others.
- Plans can be updated with additional learning materials.

#### **Additional Responsibilities:**

- Provide recommendations based on learning plans.
- Implement a progress reminder system.

### **3. Learning Progress Updates : IT22060044 - Daniel O.D.S**

#### **CRUD Operations:**

- Users post progress using predefined templates.
- View personal and others' progress updates.
- Edit progress details.
- Remove progress posts.

#### **Additional Responsibilities:**

- Enable users to track progress via visual charts.
- Allow users to mark progress as private or public.

### **4. Interactivity & Engagement : IT22280442 - Gunathilake G.S.K**

#### **CRUD Operations:**

- Users can add likes and comments on posts.
- Users can view total likes and comments on posts.
- Users can edit their own comments.
- Users can remove their own comments; post owners can also delete comments.

#### **Additional Responsibilities:**

- Implement reaction features (e.g., emojis).
- Add a report/comment moderation system.



## **Shared Responsibilities**

### **User Management: Responsibilities**

- Users can create and edit their profiles.
- Display shared posts, learning progress, and engagement stats.
- Users can follow/unfollow other writers.
- View follower count and engagement analytics.
- Implement profile privacy settings.
- Add a verification badge system.

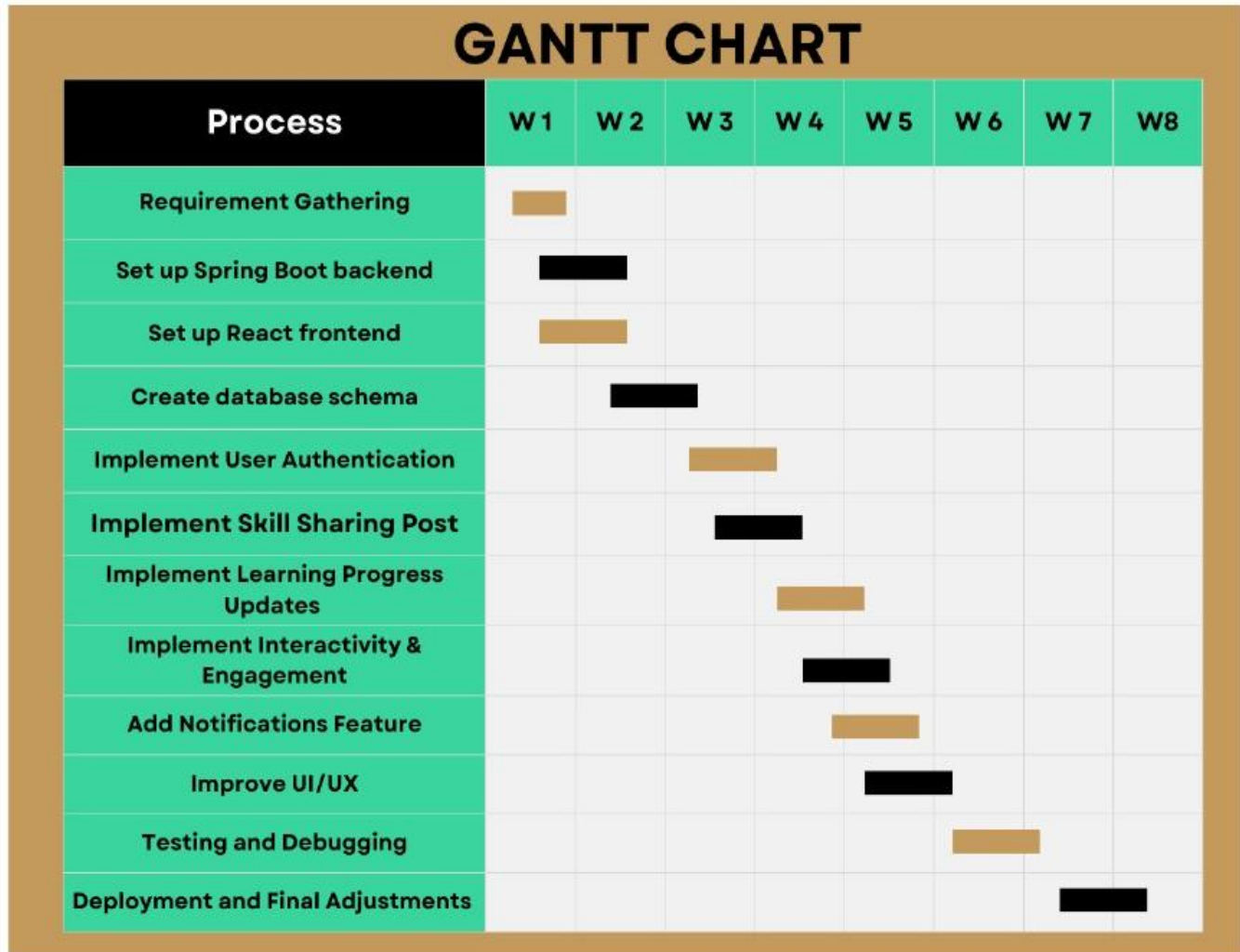
### **Authentication & Security : Responsibilities**

- Secure user authentication (OAuth 2.0 / JWT).
- Implement password reset & account recovery.
- Protect API endpoints from unauthorized access.
- Enable multi-factor authentication (MFA).
- Implement session timeout/logout features.

### **Notifications : Responsibilities**

- Auto-generate notifications for follows and mentions.
- Real-time updates for shared posts and progress.
- Allow customization of notification frequency.
- Implement push notifications for mobile users.

## 7. Gantt Chart



## **8. Conclusion**

The Creative Writing & Storytelling feature will provide an engaging, structured environment where users can improve their writing skills through learning plans, progress tracking, and community feedback. This aligns well with the Skill-Sharing & Learning Platform's goal of fostering interactive and collaborative learning experiences.

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