

FAN HUB PLUS

A Bigger World for Every Fandom

Project Documentation

End-to-End Web Solutions

Field	Detail
Project	Fan Hub Plus
Course	End-to-End Web Solutions (Aptech Limited)
Technology	PHP 8.2 (Laravel 12) - MySQL - Bootstrap 5
Team	SFC-TikTech
Prepared by	Team SFC-TikTech
Date	September 28, 2026

Team Members

Sr.	Member Name	Student ID	Role
1	Mehran Ali Khan	Student1699795	Group Leader / Full-Stack
2	Muhammad Bin Faheem	Student1693129	Full-Stack / Back-End
3	Ziyan Khan	Student1698366	Front-End / UI
4	Uzair Haider	Student1698363	Back-End / Database
5	Nehal Kumar	Student1696723	Documentation / Testing

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1. Introduction

1.1 Project Overview

Fan Hub Plus is a web portal that brings eight fandom worlds together in one place: Anime, Gaming, Movies, TV Shows, K-Pop, Comics, Manga and Cosplay. Visitors can browse, search and filter curated content, explore character profiles and featured articles, find events near them, and browse a merchandise showcase. Registered members can bookmark anything, rate and like content, follow fandoms, submit their own fan content, and track it all from a personal dashboard. An administrator reviews every submission and manages all content through a dedicated control panel.

The project is built against the Fan Hub Plus - End-to-End Web Solutions SRS and follows a three-level content model: Category, then Fandom, then Content.

1.2 Objectives

- Provide a single, well-organised home for content across eight fandom categories.
- Give every fan tools to discover, save and follow what they love.
- Let members contribute fan content under administrator moderation.
- Deliver a complete, secure administrator control panel with live statistics.
- Meet accessibility expectations (dark mode, adjustable text size, breadcrumbs, clear navigation).

2. Scope of Work

2.1 In Scope

- User authentication and account management (registration, login, email verification, password reset).
- Personalised member dashboard with favourites, bookmarks, activity and recommendations.
- Fandom content explorer with multi-level search, filtering and sorting.
- Interactive multimedia centre: embedded videos, trailers, audio, podcasts and explainers.
- Character profiles and a featured-articles hub with timeline-style event highlights.
- Merchandise showcase with fandom and category grouping, plus an upcoming-releases page.
- Location-aware event discovery: map, "events near me", calendar and city filter.
- Bookmarking with private notes, ratings, likes and sharing.
- Feedback and analytics, including an administrator statistics panel.
- Administrator control panel: full CRUD for all content, moderation and user management.
- Accessibility features and an optional rule-based chatbot assistant.

2.2 Out of Scope

- Online payments and order processing - the merchandise showcase is display only.
- Real-time chat between members, direct messaging and social following.
- Native mobile applications (the site is fully responsive instead).
- Third-party OAuth sign-in (email and password only, as the SRS specifies).

3. Proposed Solution

Fan Hub Plus is delivered as a server-rendered web application built on Laravel. Blade templates render the pages, Eloquent models describe the data, and a single controller layer handles the public site, the member area and the administrator panel.

The solution is organised around four levels of access:

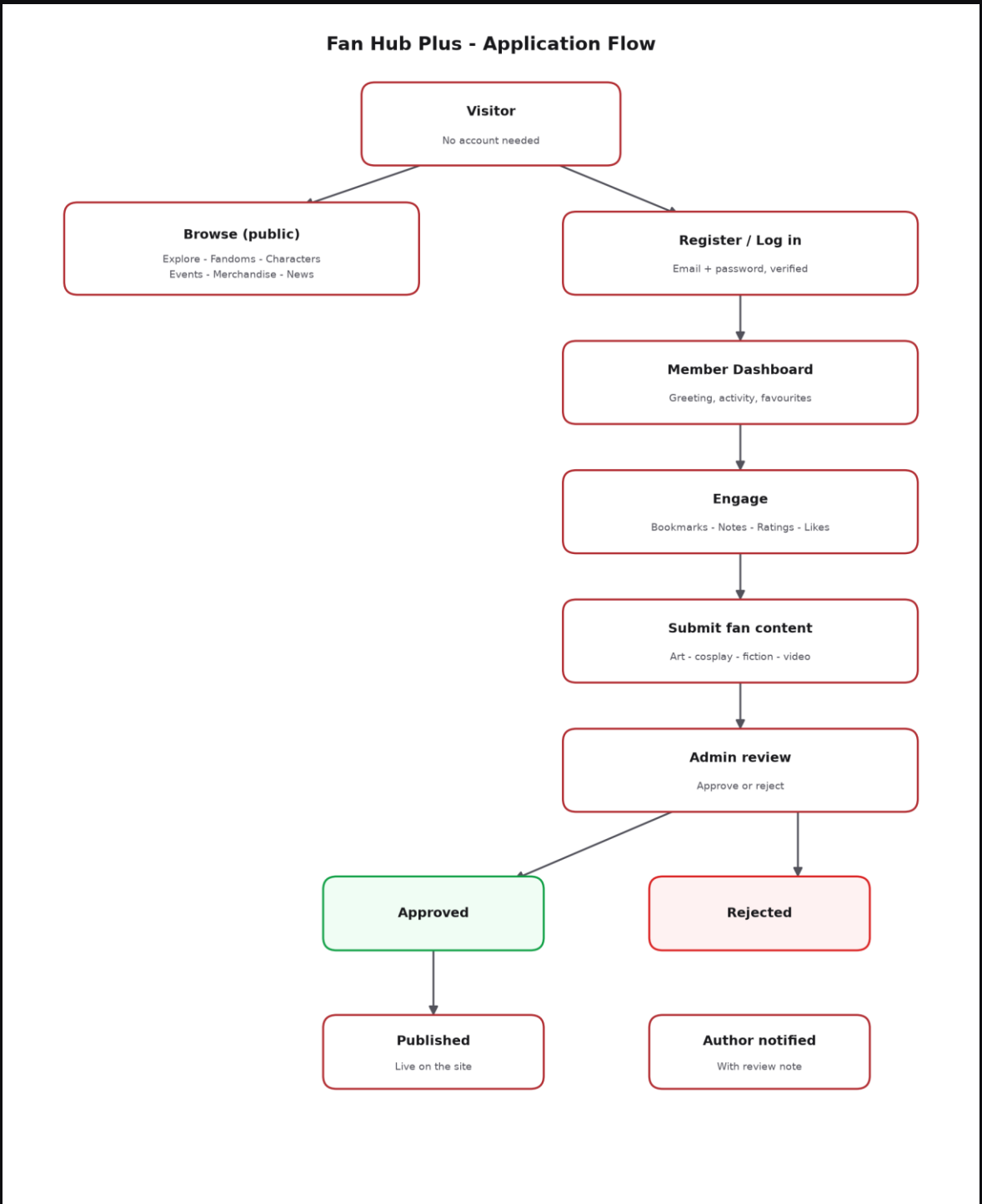
- Visitor - browses, searches and filters everything without an account.
- Member - everything a visitor can do, plus bookmarks, notes, ratings, likes, submissions and a dashboard.
- Administrator - full control of content, characters, fandoms, categories, tags, events, merchandise, users, feedback and statistics.
- Chatbot - an optional, rule-based assistant that answers questions from an administrator-managed knowledge base.

4. Technology Stack

Layer	Technology
Language / Framework	PHP 8.2, Laravel 12
Database	MySQL / MariaDB
Front end	HTML5, CSS3 (Sass), Bootstrap 5, Vanilla JavaScript
Asset build	Vite 7 (bundles Bootstrap, icons, Leaflet, Chart.js, fonts)
Server	Apache (XAMPP on Windows)
Key libraries	HTMLPurifier (sanitisation), Leaflet (maps), Chart.js (statistics)
Security	Bcrypt password hashing, CSRF tokens, Eloquent parameterised queries, role middleware, login rate limiting

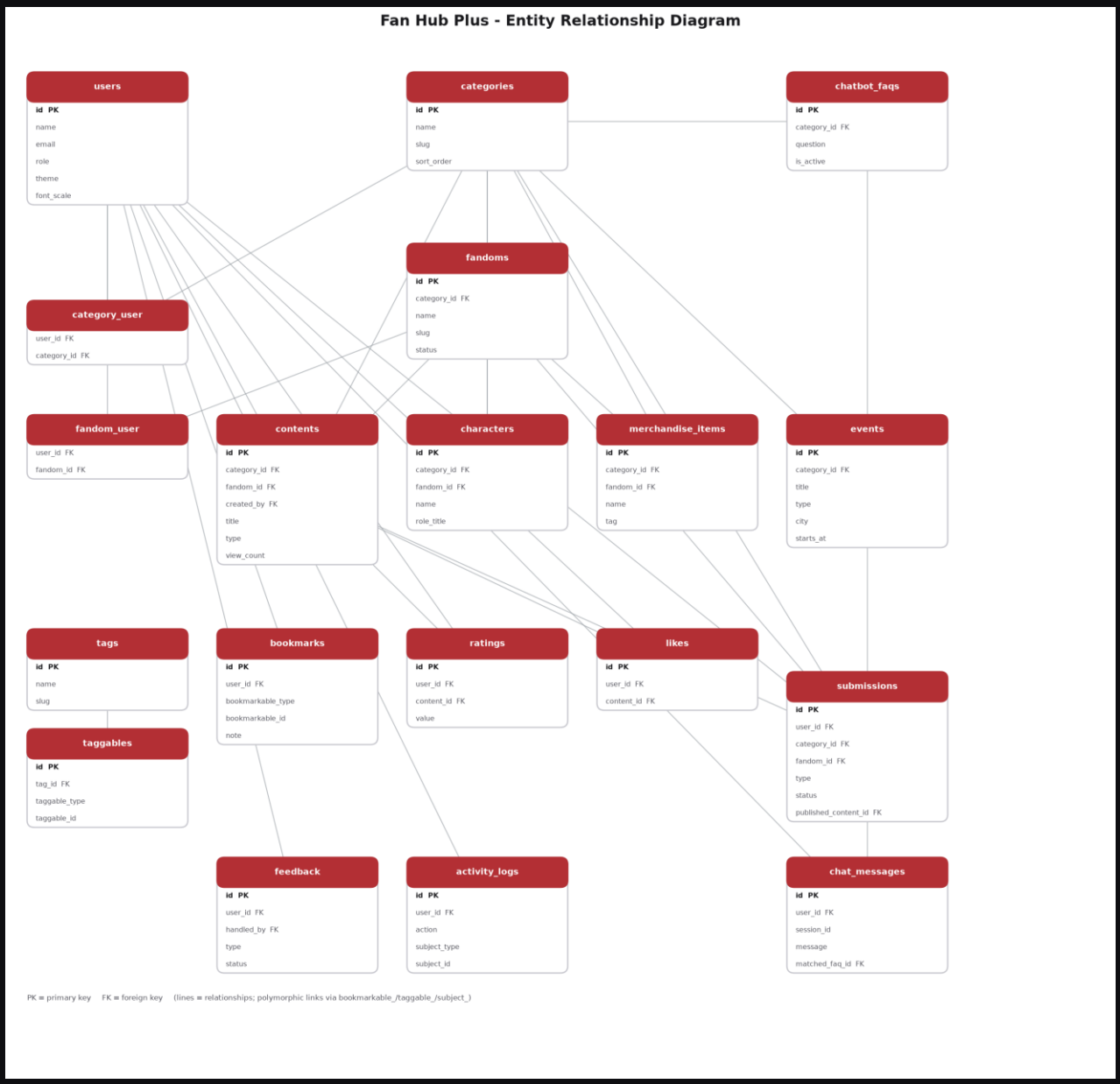
5. System Flow Diagram

The diagram below shows how a visitor moves through the platform: browsing publicly, registering as a member, engaging with content, submitting fan work, and how an administrator reviews that submission before it goes live.



6. Database Design (ERD)

The database is built around a three-level content hierarchy - Category, Fandom and Content - with separate tables for characters, merchandise, events, and all member interactions (bookmarks, ratings, likes, submissions, feedback). Tags and bookmarks use polymorphic columns so the same tag or bookmark can point at content, characters or merchandise.



6.1 Core Tables

Table	Purpose
users	Accounts for members and administrators (role, theme, text size, verification).
categories	The eight fandom domains (Anime, Gaming, Movies, TV Shows, K-Pop, Comics, Manga, Cosplay).

fandoms	A franchise inside a category (for example Solstice Reign inside Anime).
contents	Curated content: articles, videos, trailers, audio, podcasts, galleries and explainers.
characters	Character profiles linked to a fandom and category.
merchandise_items	Display-only merchandise, grouped by fandom and category.
events	Conventions, meetups, screenings and premieres, with coordinates for the map.
tags / taggables	Administrator-controlled labels applied to content, characters and merchandise.
bookmarks	Saved items per member, with a private note.
ratings / likes	Five-star ratings and hearts on content.
submissions	Fan-submitted posts, reviewed by an administrator before publishing.
feedback	Bug reports, suggestions and queries, with an administrator response.
activity_logs	A record of member actions (views, likes, bookmarks, ratings, joins).
chatbot_faqs / chat_messages	The chatbot knowledge base and stored conversations.

7. Modules and Features

Module	Key Features
Authentication	Register, log in, email verification, password reset, profile and preferences.
Dashboard	Greeting, favourites, bookmarks, recent activity, level/XP and recommendations.
Content Explorer	Search, filter by category, fandom, genre, year, type and popularity; sorting.
Multimedia Centre	Embedded videos, trailers, audio, podcasts and animated explainers.
Characters & Articles	Card-based profiles, featured articles and a storytelling event timeline.
Merchandise	Showcase grouped by fandom and category, plus upcoming releases.
Events	Map and "events near me" ranking, calendar, city filter and ticket links.
Bookmarks & Notes	Save any item, add a private note and share.
Feedback	Typed feedback (bug, suggestion, query) with a tracked administrator reply.
Admin Panel	CRUD for all content, moderation queue, user management and live statistics.
Accessibility	Dark mode, adjustable text size, breadcrumbs and reduced-motion support.
Chatbot	Optional FAQ assistant with a guided tour and content recommendations.

8. Group Members

The project was completed by Team SFC-TikTech, comprising the following members.

Sr.	Member Name	Student ID	Role	Contribution
1	Mehran Ali Khan	Student1699795	Group Leader / Full-Stack	20%
2	Muhammad Bin Faheem	Student1693129	Full-Stack / Back-End	20%
3	Ziyan Khan	Student1698366	Front-End / UI	20%
4	Uzair Haider	Student1698363	Back-End / Database	20%
5	Nehal Kumar	Student1696723	Documentation / Testing	20%

9. Student Task Sheet

Work distribution across Team SFC-TikTech. Mehran (leader) and Muhammad handled the largest share of the build.

Task	Assigned To	Deliverable	Status
Requirement analysis and scope	Mehran Ali Khan	SRS review and scope	Complete
Database design	Muhammad Bin Faheem	Migrations and seeders	Complete
Authentication and profiles	Mehran Ali Khan	Auth, verification, preferences	Complete
Content explorer and multimedia	Muhammad Bin Faheem	Explore, filters, media pages	Complete
Characters, articles and events	Mehran Ali Khan	Profiles, hub, map and calendar	Complete
Feedback and admin panel	Muhammad Bin Faheem	Feedback, CRUD, statistics	Complete
Merchandise and bookmarks	Ziyan Khan	Showcase, upcoming, save and notes	Complete
Accessibility and chatbot	Uzair Haider	Dark mode, text size, assistant	Complete
Testing and documentation	Nehal Kumar	Test suite and this document	Complete

10. Conclusion

Fan Hub Plus meets the requirements set out in the SRS: a complete, secure and accessible fandom portal with a public browsing experience, a full member area and a comprehensive administrator control panel. The three-level content model keeps the site organised, the moderation workflow keeps community content reliable, and the accessibility features make the platform usable by a wider audience.