

Design Specification – SportHub

1 Overview

SportHub is a web application that lets users view upcoming games for multiple sports and keep a personal list of **favorite teams**. From those favorite teams, SportHub builds a personalized list of upcoming games. This document describes the planned screens, main UI elements, and shared components of the system.

The goal of this design specification is to give a clear breakdown of **every page and major part** of the SportHub user interface so that developers can implement it consistently and the instructor can see how the project is organized.

2 Global Layout

All pages share a consistent layout:

- A top navigation bar with links: **SportHub** (Home), **All Games**, **Teams**, **My Favorites** (for logged-in users), and **Admin** (for admin users).
- A main content area in the center of the page where each view displays its specific content.
- A footer with basic information about the team, course, and a brief note about the project.
- A consistent color theme and typography across all pages.

3 Home Page

Purpose

Serve as the landing page for SportHub and give users a quick overview of what the site does, along with shortcuts to the main features.

Main Elements

- **Page header** with the SportHub logo and tagline (for example, “Multi-Sport Scores & Favorites Tracker”).
- **Introductory text** briefly explaining that users can browse games, mark favorite teams, and view personalized schedules.
- **Quick links or cards** that navigate to:
 - **All Games** – browse all upcoming games.
 - **Teams** – choose favorite teams.

- **My Favorites** – view games for favorite teams (visible only when logged in).
- **Optional highlights**, such as a small list of games happening today or this week.

4 All Games Page

Purpose

Show all upcoming games so the user can quickly see what is happening across different sports.

Main Elements

- **Filters area** at the top:
 - Dropdown to select a sport (e.g., All, NBA, NFL, MLB, Soccer).
 - Date picker or simple date filter (e.g., Today, This Week, Custom Date).
- **Games list** in the main content area:
 - Each row or card shows the sport, home team, away team, date, time, and game status (e.g., Upcoming, Final, In Progress).
 - A **details button/link** that navigates to the Game Details page for that game.
 - If desired, a small indicator when either team is one of the user’s favorite teams.
- **Empty state message** displayed when no games match the selected filters (for example, “No games available for this date and sport.”).

5 Teams Page

Purpose

Allow users to browse teams by sport and choose which teams to follow as favorites.

Main Elements

- **Sport filter** at the top (tabs or dropdown) so users can pick a league such as NBA, NFL, Soccer, or MLB.
- **Team list or grid**:
 - Each team card shows the team name, sport, and optionally a logo or city.
 - For logged-in users, a **favorite star or toggle** to add or remove the team from their favorites.

- For guests (not logged in), the favorite control may be shown but disabled, with a small message such as “Log in to save favorites.”
- **Feedback messages** when a team is added to or removed from favorites.

6 Game Details Page

Purpose

Show detailed information about a single game selected from the All Games or My Favorites pages.

Main Elements

- **Game header** with the league/sport and Home Team vs. Away Team.
- **Details section** including:
 - Game date and time.
 - Location or venue.
 - Status (Upcoming, Final, etc.).
 - Scores if available (otherwise labels such as “TBD” or “_”).
- **Navigation controls**:
 - A back button or link to return to the previous list.
 - Optional quick links back to All Games or My Favorites.

7 My Favorites Page

Purpose

Allow the user to focus only on games involving the teams they care about most.

Main Elements

- Page title: **My Favorites**.
- Short description explaining that this page shows upcoming games for the user’s favorite teams.
- **Favorite teams summary** (optional) at the top, listing the names and sports of the teams the user follows.
- **Upcoming games list** that uses the same layout as the All Games page but filtered to only games involving favorite teams.

- **Unfavorite controls** so the user can remove a team from their favorites, which will eventually remove its games from the list.
- When the user has no favorite teams, an **empty state message**, such as “You have no favorite teams yet. Go to the Teams page to add some.”

8 Login Page

Purpose

Allow existing users to sign in and access personalized features such as My Favorites.

Main Elements

- Page title: **Login**.
- **Form fields:**
 - Email or username input.
 - Password input.
- **Buttons and links:**
 - Login/Submit button.
 - Link to the Register page for new users.
- **Error and success messages:**
 - Clear messages for invalid credentials or missing fields.

9 Register Page

Purpose

Allow new users to create a SportHub account so they can maintain a list of favorite teams and personalize their experience.

Main Elements

- Page title: **Register** or **Create Account**.
- **Form fields:**
 - Email or username.
 - Password.
 - Confirm password.

- **Buttons and links:**
 - Register/Sign Up button.
 - Link back to the Login page.
- **Validation messages:**
 - Password mismatch errors.
 - Missing required field warnings.

10 Admin Pages

Purpose

Give authorized project members (admins) a way to manage teams and games without directly editing the database.

Admin – Teams Management

Main Elements

- **Teams table** listing existing teams with columns such as team name, sport, and status (active/inactive).
- **Actions** for each row:
 - Edit button to open a form for updating a team.
 - Delete button (with confirmation) to remove a team.
- **Add Team form** with fields:
 - Team name.
 - Sport (dropdown).
 - Optional city/logo URL.
- **Save** and **Cancel** buttons for the form.

Admin – Games Management

Main Elements

- **Games table** with columns such as sport, home team, away team, date, time, location, and status.
- **Actions** for each game:
 - Edit button to update date, time, location, or status.

- Delete button (with confirmation) to remove the game.
- **Add Game form** with fields:
 - Sport.
 - Home team (selected from existing teams).
 - Away team (selected from existing teams).
 - Date and time.
 - Location.
 - Optional status or score fields.
- **Save** and **Cancel** buttons for the form.

11 Shared Components and Tools

Navigation Bar

- Always visible at the top of the page.
- Links:
 - SportHub logo (navigates to Home).
 - All Games.
 - Teams.
 - My Favorites (visible only for logged-in users).
 - Admin (visible only for admin users).
 - Login or Logout button depending on authentication state.

Game Card Component

- Reusable layout used on All Games and My Favorites pages.
- Displays sport, teams, date/time, and game status.
- Contains a button or link to view full details.
- May show a small icon if the user follows one or both teams.

Team Card Component

- Used on the Teams page.
- Shows team name, sport, and optional logo/city.
- Provides a favorite star or toggle when the user is logged in.

Empty State Messages

- Standard messages for when lists have no content, such as:
 - “No games available for this selection.”
 - “You have no favorite teams yet.”
 - “No teams found for this sport.”
- These help guide users toward the next step (e.g., going to the Teams page to add favorites).

12 Snapshot 4 Updates and Future Work

- Final polish: consistent header/footer across All Games, Teams, My Favorites, and Admin; fixed seeded data for filters and favorites in the demo.
- Validation coverage: TestRail cases C50–C53 cover All Games filter, Favorite toggle, My Favorites listing, and Admin CRUD happy path for the final run.
- Admin UX: simple forms for adding/editing/deleting games and teams remain, with backend persistence and auth planned as a follow-up.
- Future work: live sports data integration, database-backed favorites with authentication, richer game details, notifications, and CI/CD automation.

13 Dependencies and Container Inputs

- **Backend (Node/Express):** Node.js 20, `express ^4.19.2`, `cors ^2.8.5`. Entry: `backend/index.js` served on port 4000.
- **Frontend (demo):** static HTML/JS served via simple HTTP server (Node 20) or container; seeded data in `frontend/script.js`. Port 3000 in Docker Compose.
- **Docker/Compose:** `docker-compose.yml` orchestrates frontend, backend, and PostgreSQL placeholder (future persistence). Backend Dockerfile uses official Node base image; frontend can be served via nginx or Node.
- **Build tools:** Docker & Docker Compose required; LaTeX for docs (`latexmk` or `pdflatex`) if regenerating PDFs.
- **Optional/future runtime:** PostgreSQL for persistent teams/games/favorites once the DB-backed flow is enabled; authentication middleware and sports API client to be added in post-snapshot work.