

BrightBoard – A Course and Quiz System (User Documentation)

CSCI 441 VA: Software Engineering

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Project URL: <https://csci441-brightboard.onrender.com/>

GitHub URL: https://github.com/Element713/CSCI441_BrightBoard.git

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BrightBoard User Manual & Walk-through

Welcome to BrightBoard, a full-featured learning management system (LMS) for students and professors. This guide will walk you through installation, local development, core features, and troubleshooting.

Getting Started

- Prerequisites

Before you begin, make sure your system has the following:

- Node.js & npm (Install from <https://nodejs.org>)
- MongoDB (Local instance or cloud-based like MongoDB Atlas)
- (Optional) Deployment service such as Render.com, Heroku, or Vercel.

Installation & Setup

- Clone the Repository

```
git clone: https://github.com/Element713/CSCI441_BrightBoard.git
cd CSCI441_BrightBoard
```

- Backend Setup

```
cd server, npm install, Copy and rename .env.example: cp .env.example .env
```

Edit .env to include:

Init

Set the following

MONGO_URI

JWT_SECRET

PORT

- Frontend Setup

```
cd ../brightboard-frontend
```

```
npm install
```

Running the Application Locally

- A. Start the Backend Server
 - cd server
 - npm start
 - Runs on: <http://localhost:5000>
- B. Start the Frontend Server
 - cd ../brightboard-frontend
 - npm start
 - Opens at: <http://localhost:3000>

Navigating the Application

- A. Home Page
 - Go to: <http://localhost:3000>

Contains a welcome message, brief introduction, and navbar links to Register, Login, and Dashboard.

Student Experience:

- Register as a Student
- Click Register from the navbar.
- Choose Student role.
- Fill in details and submit.

Browse & Enroll in Courses

- Go to Catalog.
- View list of all published courses.

- Click on any course to view its details.
- Click Enroll to join.

Dashboard Overview

Access your dashboard to:

- View all enrolled courses.
- Track lesson and quiz progress.
- Quickly jump to active courses.

View Lessons

- Click View Lessons in a course card.
- Select a lesson to read its contents.
- Lessons may contain text, images, code samples, or embedded media.

Take Quizzes

- lessons include quizzes at the end.
- Answer multiple-choice or short answer questions.
- Submit and get immediate scores with feedback.

Professor Experience

- Register as a Professor

Same as student registration, but choose the Professor role.

- Professor Dashboard

- View all your created courses.
- Add new ones using the Create Course button.
- Manage Courses
 - For each course:
 - Edit title, description, and visibility.

Manage Lessons

- Inside a course, click Manage Lessons:
- Add lesson title and content.
- Edit or remove existing lessons.
- Reorder lessons for flow.

Manage Quizzes

- Inside a lesson, access Manage Quizzes.
- Add questions (MCQs, true/false, short answer).
- Set correct answers and scores.
- Delete or revise questions.

Deployment

- Build Frontend for Production
`cd brightboard-frontend`
`npm run build`

- Hosting Options
 Render.com (for full-stack hosting)
 Vercel (for frontend only)
 MongoDB Atlas (for cloud database)

Backend Deployment Tips

Use npm run build output in /build folder for frontend.

Use .env variables for your production Mongo URI and secrets.

Make sure CORS is configured if frontend and backend are on different domains.

Troubleshooting

Problem	Solution
Frontend can't connect to backend	Check that the backend is running on port 5000. Set proxy in package.json if needed.
Login fails	Ensure MongoDB is connected and .env has correct JWT and DB URI.
No courses or data	Try registering as a professor and creating sample courses/lessons.
Quiz not loading	Check browser console and backend logs for errors.

References:

<https://technicalwriterhq.com/writing/technical-writing/>