



LearnSphere (eLearning Platform)

Build a responsive **eLearning platform** with two sides:

1. **Instructor/Admin (Backoffice)**: create and manage courses, lessons, quizzes, attendees, publish courses to the website, and track learner progress.
2. **Learner (Website/App)**: browse/join courses, learn in a full-screen player, attempt quizzes (one question per page), earn points/badges, and post ratings/reviews.

1. Objective

Create a complete learning experience where:

- Instructors can build **courses** made of **video/document/image/quiz** lessons.
- Learners can **start/continue** learning, track **progress**, and complete a course.
- Quizzes support **multiple attempts** and award **points** based on the attempt number.
- Learners get **badges** based on total points.
- Instructors can see course-wise learner progress through **reporting**.

2. Roles

A) Admin

- Full access to back-office features.
- Can manage courses, reporting, and settings.

B) Instructor / Course Manager

- Creates and edits courses
- Adds lessons and quizzes
- Publishes/unpublishes courses
- Adds attendees (invites users)
- Views reporting

C) Learner (User)

- View published courses (based on course rules)
- Purchase/Starts/continues lessons
- Attempts quizzes
- Earns points and badges
- Adds ratings and reviews

Guests (not logged in) can view courses only if allowed, but must log in to start learning.

3. What you need to build

Module A — Instructor/Admin Backoffice

A1) Courses Dashboard (Kanban/List)

A dashboard that lists all courses.

Must have

- Two views: **Kanban** and **List**
- Search courses by name
- For each course show:
 - Course title
 - Tags
 - Views count

- Total lessons count
- Total duration
- Published badge (if published on website)
- Actions on each course:
 - **Edit** (open course form)
 - **Share** (copy/generate course link)
- Create course:
 - **+** button opens a small pop-up to enter the course name and create it.

A2) Course Form (Edit Course)

This is the main page to configure a course.

Header actions

- **Publish on website** toggle (ON/OFF)
- **Preview** (open learner view)
- **Add Attendees** (opens wizard to directly add the learner to the course by sending email)
- **Contact Attendees** (opens wizard to contact the attendees by mail)
- Course image upload

Course fields

- Title (required)
- Tags
- Website (required when published)
- Responsible / Course Admin (select a user)

Tabs

1. **Content** (lessons list)
2. **Description** (course-level description shown to learners)
3. **Options** (visibility/access rules + course admin)
4. **Quiz** (list of quizzes for this course)

A3) Lessons / Content Management

Inside the **Content** tab:

- Show a list of lessons with:
 - Lesson title
 - Type (Video / Document / Image / Quiz)
 - 3-dot menu: **Edit** / **Delete** (delete needs confirmation)
- Button: **Add content** (opens lesson editor popup)

A4) Lesson/content Editor (Add/Edit Lesson)

Popup editor with 3 tabs:

1) Content tab

- Lesson title (required)
- Lesson type selector: **Video / Document / Image**
- Responsible (optional)
- Type-specific fields:
 - **Video**: URL (YouTube/Drive link) + duration
 - **Document**: upload file + **Allow Download** toggle
 - **Image**: upload image + **Allow Download** toggle

2) Description tab

- Text area or rich editor: lesson description shown to learners.

3) Additional attachment tab

- Add extra resources as:
 - File upload, OR
 - External link (URL)

These attachments must appear on learner's side under the lesson.

A5) Course Options (Access Rules)

In the **Options** tab configure:

Visibility (“Show course to”)

- Everyone
- Signed In

Access rule

- Open
- On Invitation
- On Payment (Display ‘Price’ field when Payment access rule is selected)

Course Admin

- Select course admin/responsible person

Meaning

- Visibility decides who can see the course.
- Access rule decides who can *start/learn* the course.

A6) Quizzes (Instructor side)

In the **Quiz** tab:

- Show list of quizzes linked to the course.
- Each quiz has Edit/Delete (with confirmation).
- Button: **Add Quiz** → opens quiz builder.

A7) Quiz Builder (Instructor)

A page to create quiz questions.

Left panel

- Question list (Question 1, Question 2, ...)
- Buttons:
 - **Add Question**
 - **Rewards**

Question editor

- Question text
- Multiple options (add new option)
- Mark correct option(s)

Rewards

Set points based on attempt number:

- First try → X points
- Second try → Y points
- Third try → Z points
- Fourth try and more → W points

A8) Reporting Dashboard (Instructor/Admin)

Reporting shows course-wise learner progress.

Overview cards

- Total Participants
- Yet to Start
- In Progress
- Completed

Clicking a card filters the table below.

Users table

Each row shows one learner's progress in one course:

- Sr no.
- Course name
- Participant name
- Enrolled date
- Start date
- Time spent
- Completion percentage
- Completed date
- Status (Yet to Start / In Progress / Completed)

Customizable columns

A side panel allows show/hide columns using checkboxes.

Module B – Learner Website/App

B1) Website Navbar → Courses

A basic website layout with a **Courses** menu in navbar.

- Clicking it shows all published courses (based on visibility rules).

B2) My Courses Page (Learner Dashboard)

This page shows course cards and learner profile info.

Course cards show

- Cover image

- Title
- Short description
- Tags
- Button changes based on state:
 - **Join Course** (user not logged in)
 - **Start** (logged in, not started)
 - **Continue** (course in progress)
 - **Buy course** (when the course is paid)

Search

- Search courses by name.

My Profile panel (only on My Courses page)

- Total points
- Badge levels (based on points):
 - Newbie (20 points)
 - Explorer (40 points)
 - Achiever (60 points)
 - Specialist (80 points)
 - Expert (100 points)
 - Master (120 points)

B3) Course Detail Page

Shows course details and progress.

Course Overview tab

- Course title, image, short description
- Progress bar (% completed)
- Total lessons count
- Completed count
- Incomplete count
- Lessons list with status icons:

- In progress state
- Completed state (blue tick)
- Search lesson by name
- Clicking a lesson opens the full-screen player.

B4) Ratings & Reviews Tab

Inside the course page:

- Average rating (stars)
- Reviews list (avatar + name + review text)
- Button: **Add Review**
 - Logged-in user can add rating + review text

B5) Full-Screen Lesson Player

A focused learning view.

Left sidebar

- Course title
- % completed
- Lesson list + status icons
- Show additional attachments under lesson name
- Button/icon to show/hide sidebar

Main area

- Lesson title
- Lesson description (shown at top)
- Viewer area:
 - Video player / Document viewer / Image viewer / Quiz intro/questions

Buttons

- **Back** (go back to My Courses page)
- **Next Content** (move to next lesson)

B6) Quiz on Learner Side

Quiz is done inside the full-screen player.

Quiz intro screen

- Shows total questions
- Shows “Multiple attempts”
- Button: **Start Quiz**

Question pages

- **One question per page**
- User selects an option and clicks **Proceed**
- Last question button becomes **Proceed and Complete Quiz**

After completing quiz:

- Quiz becomes completed (tick in sidebar)
- User earns points based on attempt reward rules

B7) Points Popup + Course Completion

When learner earns points (usually after quiz):

- Show popup: “You have earned X points”
- Show progress to next rank

When all lessons are completed:

- Show button: **Complete this course**
- Clicking it marks the course as completed.

4. Rules (Simple and Clear)

Publishing

- Only published courses appear on the website/app.

Visibility

- Everyone: course visible to all
- Signed In: only logged-in users can see

Access

- Open: user can start normally
- On Invitation: only invited/enrolled users can access lessons

Progress

- Track lesson completion and show:
 - completed/incomplete status per lesson
 - course % completion

Quiz attempts & points

- Multiple attempts allowed
- Points reduce with more attempts based on the rewards settings
- Total points decide badge level

Why This Hackathon Problem is Important

Real-world learning workflow: Shows how a complete learning platform works end-to-end (Course setup → Publish → Enrollment/Access → Learning player → Quiz → Completion → Reviews → Reporting).

Business logic focus: Teaches handling real product rules like visibility vs invitation access, progress calculation, attempt-based scoring, points/badges, and reporting accuracy — not just UI screens.

Industry-ready system thinking: Builds a production-like solution with role-based permissions, structured content management, downloadable resources control, gamification, and analytics dashboards that reflect actual user behavior.

Mockup: <https://link.excalidraw.com/l/65VNwvy7c4X/1lPnE6enQuF>