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# Project Objective

Welcome to your final assignment for the Angular training program. The objective of this comprehensive project is to apply all the concepts you have learned to build a fully featured, interactive e-learning web application from the ground up. You will be responsible for implementing the entire user-facing and administrative experience based on a provided professional design specification.

The goal is to create a dynamic, role-based, and user-centric platform that serves three distinct user types: Learners, Authors, and Administrators. By the end of this project, you will have a robust portfolio piece that demonstrates your proficiency in modern front-end development with Angular.

## Design & UI/UX Specification:

The entire user interface and user experience for this project have been professionally designed. Your task is to translate this design into a pixel-perfect, responsive, and functional Angular application.

**You must follow the design specification provided in the Figma link below:**

**Figma Link :-** [Click Here](#)

## Development Best Practices & Quality Standards

- Folder & Module Structure:
  - Logical Organization: Your project's folder structure should be clean and reflect the application's architecture. Use a feature-based structure where code for a specific feature (e.g., authentication, dashboard, course-authoring, admin-console) is grouped together.
  - Asset Management: Organize assets like images, fonts, and styles in a dedicated assets directory with logical subfolders.
- Unit Testing & Coverage:
  - Component Testing: Write unit tests for key components to verify they render correctly, respond to user input, and handle data binding.
  - Service Testing: Services containing business logic (like your AuthenticationService or a CourseService) should be thoroughly tested to ensure they handle data, make API calls (using HttpClientTestingModule), and manage state correctly.
  - Guard Testing: Your AdminGuard for protecting admin routes is a critical piece of security logic and must have unit tests to confirm it correctly allows or denies access based on user roles.

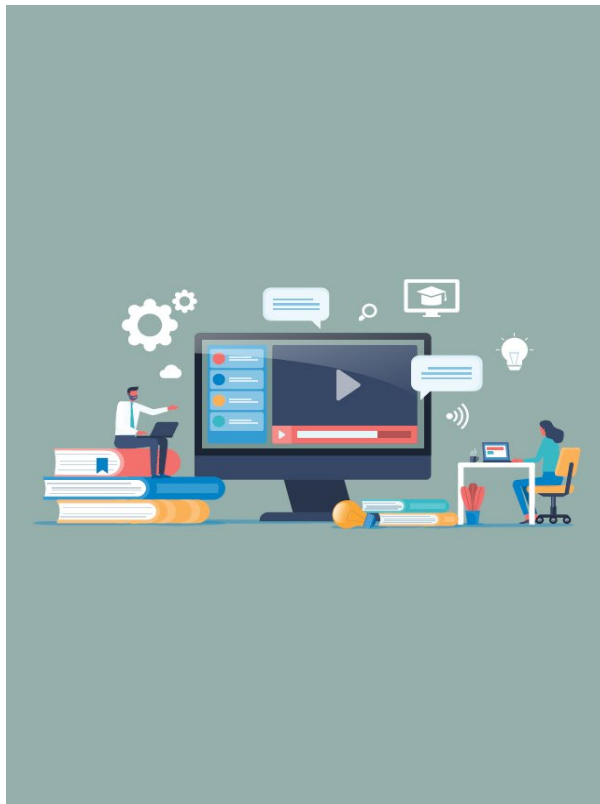
- Coverage: Aim for a 90% test coverage percentage to ensure your application is robust and less prone to regressions.
- Code Quality & Linting:
  - Consistency: The code should be consistent in style and patterns across all components, services, and modules.
  - Linting: Set up and use a linter (like ESLint for Angular) with a standard ruleset (e.g., Angular's recommended rules). Ensure your submitted code has no linting errors. This enforces best practices automatically.
  - No "Code Smells": Avoid common issues like large, monolithic components, deep nesting of if statements or loops, and magic strings/numbers. Use constants and enums where appropriate (e.g., for user roles or course levels).
- GitHub Practices for the Assignment
  - Branching Strategy: To keep your main branch clean, and stable always.
  - Commit Frequency & Atomicity: To create a clear, understandable, and reversible project history.
  - Commit Messages: To communicate the *what* and *why* of a change to your future self and others.

# Milestone 1: Core Application - Authentication and Learner Dashboard

This foundational milestone covers the complete user entry and home page experience. It involves creating the authentication flow that grants user's access and the main dashboard that serves as their central hub for learning activities.

## 1. User Authentication Flow:

- **Sign-Up Page:**



### Product Name

#### Sign up

Enter details mentioned below



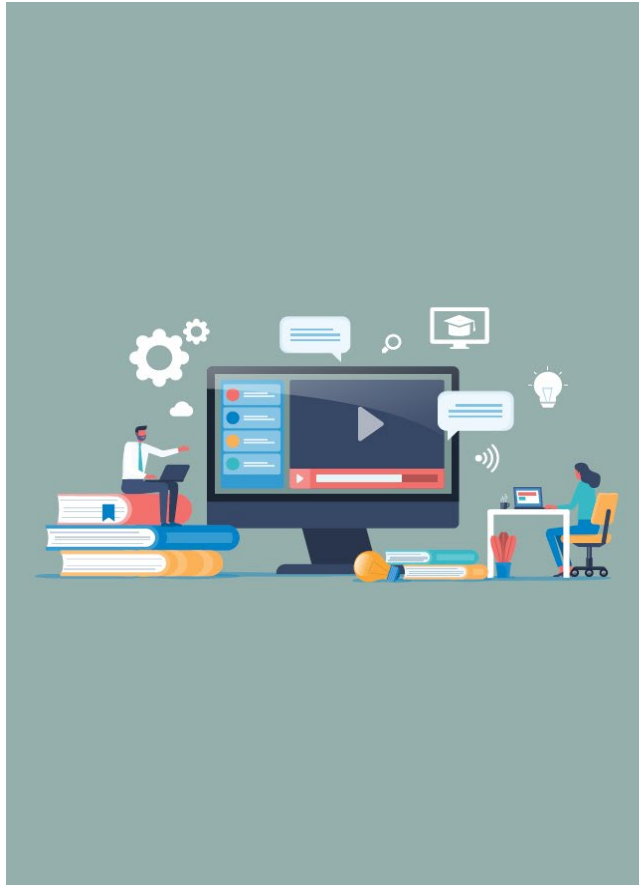
☐ I agree to the terms and conditions by signing up

Register

Already have an Account? [Login](#)

- Implement the registration page with a two-column layout (illustration and form).
- The form must include fields for **Username**, **Email**, and **Password**.
- It should feature a "Show/Hide Password" toggle and a checkbox for agreeing terms and conditions t
- A "Register" button serves as the primary action, with a link to the "Login" page for existing users.
- Add all the validations and disable the Register/Sign button with details are not entered.

- **Sign-In Page:**



## Product Name

### Welcome!

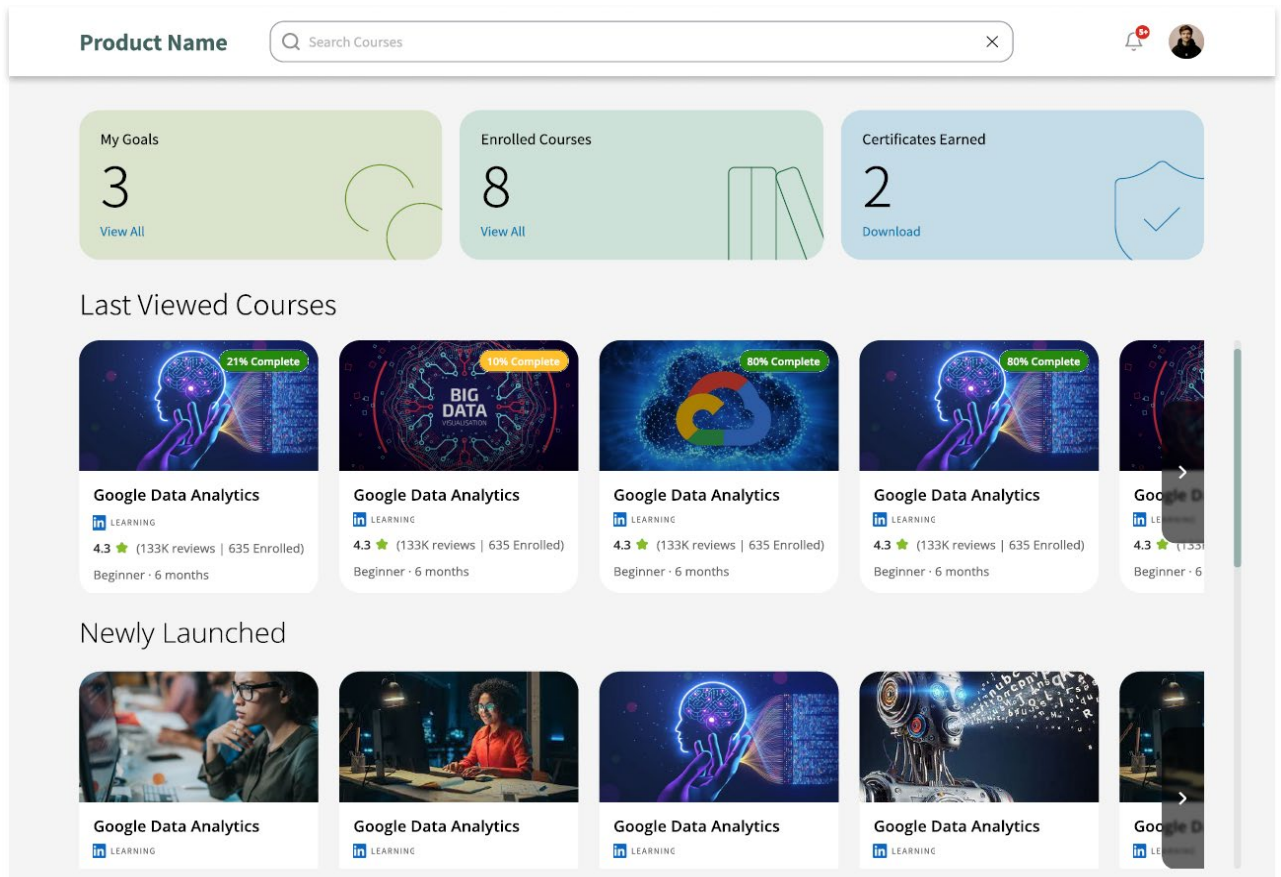
Sign in to your Learning account

☐ Remember Me[Forgot Password?](#)

Don't have account yet? [Register now](#)

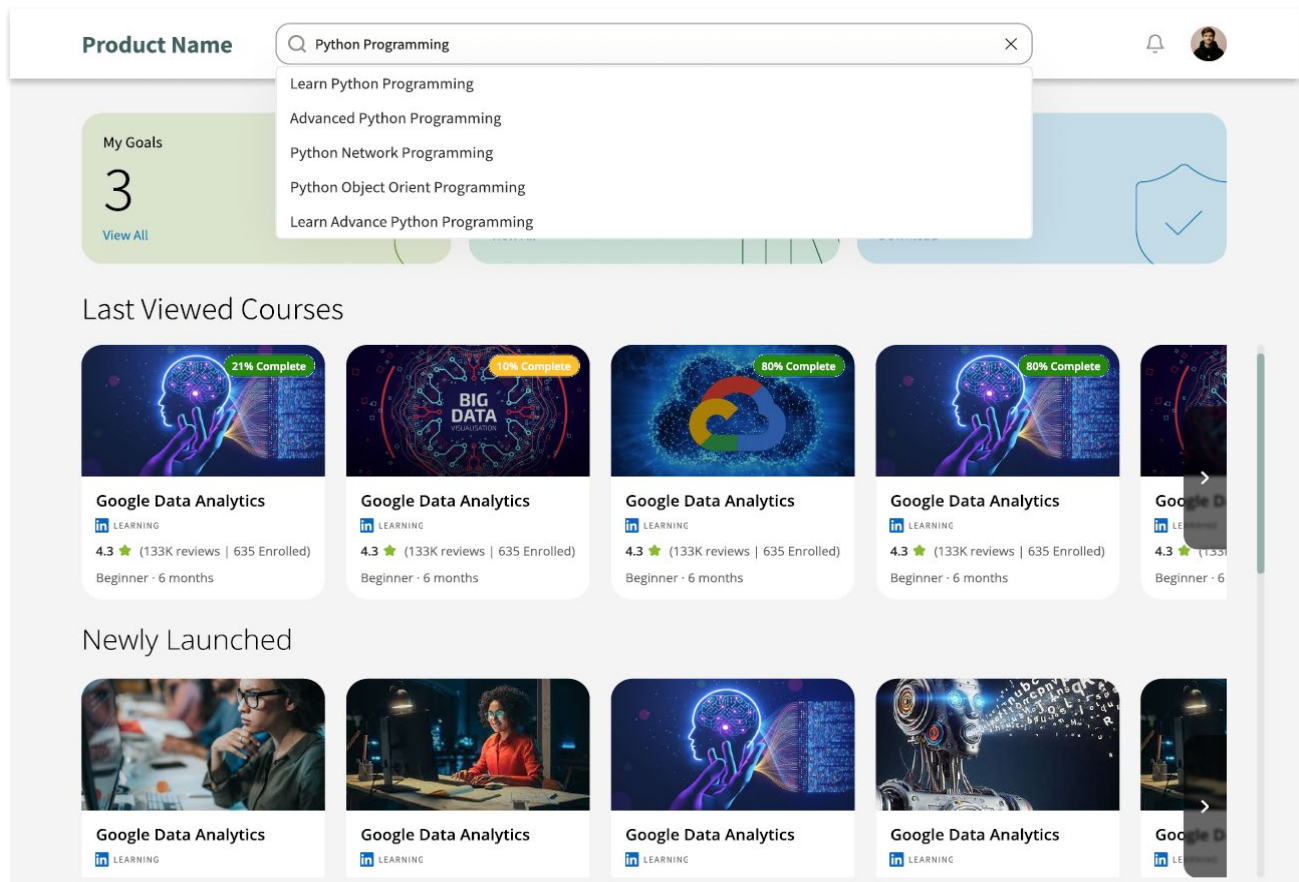
- Implement the login page, maintaining the two-column layout.
- The form must include fields for **Username/Email** and **Password**.
- It should also feature a "Show/Hide Password" toggle, a "Remember Me" checkbox, and a "Forgot Password?" link.
- A "Sign In" button serves as the primary action, with a link to the "Register now" page for new users.

## 2. Learner Home Page / Dashboard:



- **Overall Layout:**
  - Create the main dashboard screen that a user sees after successfully logging in.
  - The layout consists of a main header and a content area with multiple sections.
- **Header Component:**

The header must contain the "Product Name," a user profile avatar, and a notification icon.  
Decided The product name by your yourself.



- Implement a central **Search Bar** with integrated **Autocomplete Functionality**. As a user type, a dropdown with relevant course suggestions must appear. The search input should also have a clear (x) button to reset the text.
- **Dashboard Content:**
  - **Statistics Section:** Build the three high-level summary cards: "My Goals," "Enrolled Courses," and "Certificates Earned."
  - **Course Carousels:** Create two horizontally scrolling carousels for "Last Viewed Courses" and "Newly Launched" courses.
  - **Reusable Course Card Component:** Design and build a detailed, reusable component for displaying a course. This card must include:
    - Course thumbnail image with a progress overlay (e.g., "21% Complete").
    - Course Title and Provider (e.g., LinkedIn Learning logo).
    - Detailed metadata: Star rating, review count, enrollment count, difficulty level (Beginner, Intermediate and Advanced), and course duration.
- **User Profile Dropdown Implementation:**

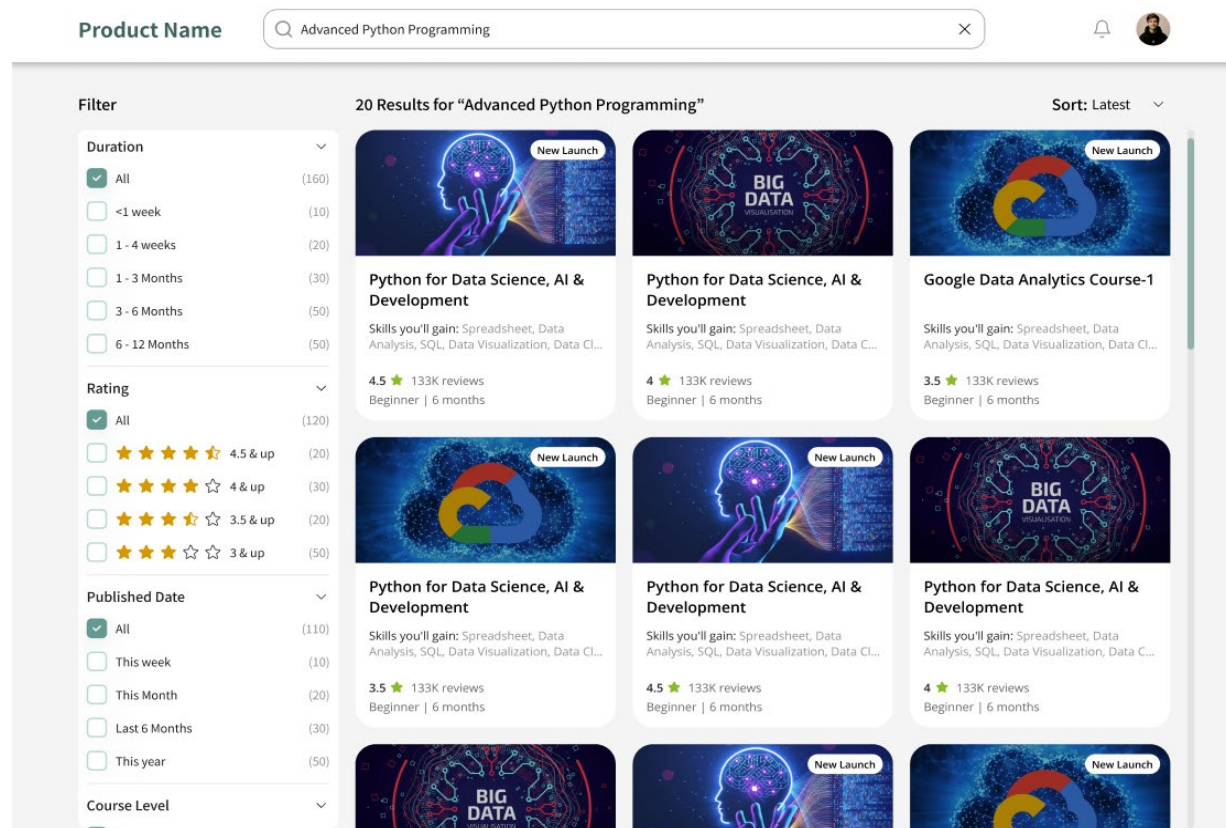
- In Header Component once user clicks on the user profile avatar opens a dropdown menu.
- The dropdown's header should display the user's avatar, full name (e.g., Harry Shimron), and role/track (e.g., DC Software Engineer).
- The dropdown must contain the following navigation links:
  - My Profile
  - Admin Console
  - My Courses
  - Blog
  - Log Out



## Milestone 2: Course Discovery and Detailed Evaluation

Building upon the Learner Dashboard from Milestone 1, this milestone focuses on the complete user journey of discovering, filtering, and evaluating specific courses before making an enrollment decision. It involves creating the search results page and the multi-faceted course details page.

### 1. Enhanced Course Search and Filtering Page:



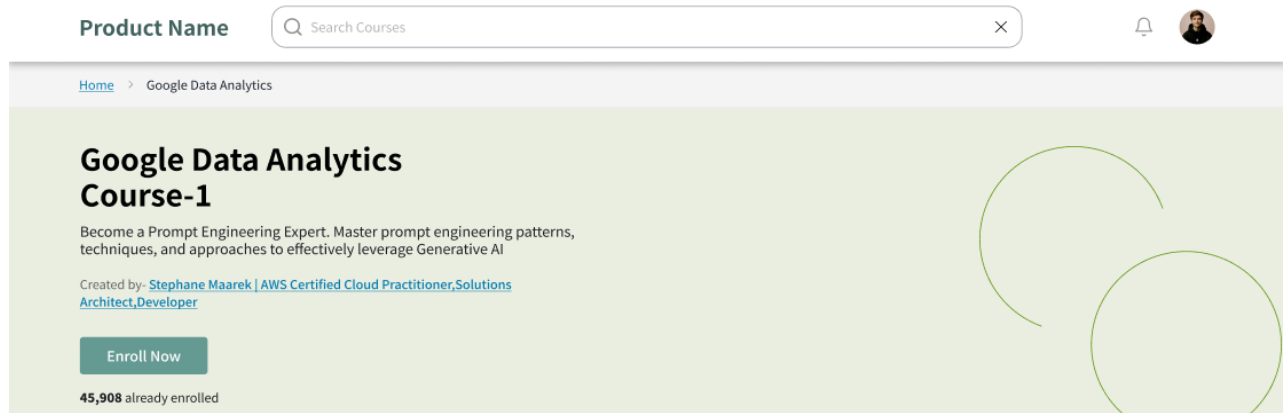
- **Functionality:** This page is displayed when a user executes a search from the header's search bar. It allows for advanced filtering and sorting of the entire course catalog.
- **Layout:** Implement the two-column layout shown in the design: a filter sidebar on the left and the main course results on the right. As show in the Design.
- **Filter Panel (Sidebar):**
  - Build a comprehensive filtering component with collapsible sections.
  - Implement the following filter groups using checkboxes or radio buttons:
    - **Duration**
    - **Rating** (Include the star icons in the UI)

- **Published Date**
- **Course Level**
- **Author**
- **Topics**
- Each filter option must display a count of matching courses (e.g., (160)).
- **Search Results Area (Main Content):**
  - **Results Header:** Display a dynamic summary of the search (e.g., 30 Results for "Advanced Python Programming") and a **Sort** dropdown menu (e.g., Sort: Latest).
  - **Course Grid:**
    - Display the filtered and sorted courses in a responsive grid layout.
    - **Crucially, you must reuse the Reusable Course Card Component created in Milestone 1.**
    - Ensure the data on the card matches the design: "New Launch" badge, thumbnail, title, "Skills you'll gain" summary, star rating, review count, difficulty level, and duration.
  - **Pagination**
  - **Sort**
    - **Latest**
    - **Highest Rating**
    - **Highest Reviewed**
    - **A-Z**
    - **Z-A**

## 2. Comprehensive Course Details Page:

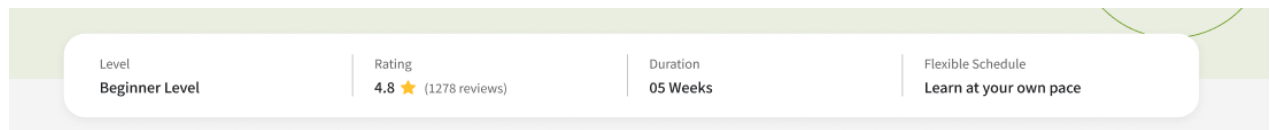
- **Functionality:** This is the single-page view for a course, accessible by clicking any course card from the [dashboard](#) or [search results page](#). It will use a dynamic route

- **Course Banner:**



- Create the top section featuring:
  - Breadcrumb navigation (E.g.: - Home > Google Data Analytics).
  - The full Course Title and a short description/tagline.
  - Created by with linked author names.
  - A prominent Enroll Now button.
  - An enrollment count (E.g.: - 45,908 already enrolled).

- **Course Metrics Bar:**



- Build the summary bar below the Course Banner with four distinct sections: Level, Rating, Duration, and Flexible Schedule.

- **Tabbed Content Section:**

- Implement a tab navigation system to switch between different views of the course information.
- **Overview Tab:** Build the default view containing:

45,908 already enrolled

Level <b>Beginner Level</b>	Rating <b>4.8</b> ★ (1278 reviews)	Duration <b>05 Weeks</b>	Flexible Schedule <b>Learn at your own pace</b>
--------------------------------	---------------------------------------	-----------------------------	----------------------------------------------------

Overview
Course Content
Author Details
Testimonials

### What you'll Learn

- Gain an immersive understanding of the practices and processes used by a junior or associate data analyst in their day-to-day job
- Learn key analytical skills (data cleaning, analysis, & visualization) and tools (spreadsheets, SQL, R programming, Tableau)
- Understand how to clean and organize data for analysis, and complete analysis and calculations using spreadsheets, SQL and R programming
- Learn how to visualize and present data findings in dashboards, presentations and commonly used visualization platforms

### Skills you'll gain

Productivity
Prompt Engineering
MS excel
Data Ethics
Document Management

Data Analysis
Data Visualization
SQL
Spreadsheets
Data Cleaning

### Requirements

- No experience required. If you can use a web browser, you are good to go!

### Description

Quickly master Google Analytics with this hands-on, scenario-driven course, and start improving the performance of your websites today!

#### Check out These Top Rated Reviews

- "This course gave me the information our company has needed for ages. No more big bucks to outsource this." - Sue Freyvogel
- "Amazing and usable content! ..Chock full of insights and helpful ideas. I learned so much." - Jolie Hasson
- "Laser-focused exactly on the essentials I needed to hit the ground running with Google Analytics, highly recommended." - Adolfo Foronda

#### Go from Beginner to Advanced

By the end of this Google Analytics course, you will be using Google analytics as a powerful tool to monitor the health of your business and identify growth opportunities.

You'll go from beginner to advanced and your instructor will take you through each step on screen:

- Create a Google Analytics Account
- Install Tracking Code
- Load Demo Data from a Real Online Store
- Add Filters to Remove Internal Traffic
- Analyze Real-Time Reports
- Analyze Audience Reports
- Analyze Acquisition Reports
- Analyze Behaviour Reports
- Deep Dive Into Data with Dimensions & Segments
- Track Marketing Campaigns with Campaign Tagging
- Add Colleagues to Google Analytics
- Configure Goal Tracking
- Remove Spam Traffic
- Set Up Custom Alerts
- Master new features like Analytics Intelligence

#### This Course Also Comes With...

- Lifetime Access to All Future Updates
- Fast & Friendly Support in the Q&A section
- Udemy Certificate of Completion Ready for Download
- A 30-Day "No Questions Asked" Money Back Guarantee!

#### This Offer Won't Last Forever

- Enroll today to claim your limited-time discount and learn how to grow your business and career with Google Analytics!

- What you'll learn (bulleted list).
- Skills you'll gain (styled as tags/pills).
- Requirements and a detailed Description.

- Course Content Tab:

Product Name

Search Courses

[Home](#) > Google Data Analytics

## Google Data Analytics Course-1

Become a Prompt Engineering Expert. Master prompt engineering patterns, techniques, and approaches to effectively leverage Generative AI

Created by- [Stephane Maarek](#) | [AWS Certified Cloud Practitioner, Solutions Architect, Developer](#)

Enroll Now

45,908 already enrolled

Level  
**Beginner Level**

Rating  
**4.8** ★ (1278 reviews)

Duration  
**05 Weeks**

Flexible Schedule  
**Learn at your own pace**

Overview

Course Content

Author Details

Testimonials

7 Sections • 25 Lectures • 18h 30m total length [Expand all sections](#)

Introduction

5 Lectures • 15 mins

Course Overview

03:00 min

Google Analytics Overview

03:00 min

How to Set Up a Google Analytics Demo Account

03:00 min

Google Analytics Dictionary - The Top 50 Terms to Know

03:00 min

A Note on Google Analytics 4 Setup

03:00 min

How To Setup Google Analytics Like A Pro

5 Lectures • 15 mins

How To Analysis Reports & Increase Traffic And Sales

5 Lectures • 15 mins

More Google Analytics Tips And Tricks

5 Lectures • 15 mins

Conclusion

5 Lectures • 15 mins

- Display a summary of the curriculum (e.g., 7 Sections • 25 Lectures • 18h 30m total length).
- Implement a **collapsible accordion** to display course sections and the lectures within them. Each section header should show its title and lecture/time summary. Each lecture item should show its title and duration.
- Include an "Expand all sections" which will Expand all the accordion.

- Author Details Tab:

Product Name

Q Search Courses

×

[Home](#) > Google Data Analytics

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Enroll Now

45,908 already enrolled

Level

Rating

Duration

Flexible Schedule

Beginner Level

4.8 ★ (1278 reviews)

05 Weeks

Learn at your own pace

Overview

Course Content

Author Details

Testimonials

### Author

**Stephane Maarek** | AWS Certified Cloud Practitioner,Solutions Architect,Developer  
Best Selling Instructor, 11x AWS Certified, Kafka Guru

Stephane is a solutions architect, consultant and software developer that has a particular interest in all things related to Cloud & Big Data. He's also a many-times best seller instructor on Udemy for his courses in AWS and Apache Kafka.

Stéphane is recognized as an AWS Hero and is an AWS Certified Solutions Architect Professional & AWS Certified DevOps Professional. He loves to teach people how to use the AWS properly, to get them ready for their AWS certifications, and most importantly for the real world.

He also loves Apache Kafka. He used on the Program Committee organizing the Kafka Summit in New York, London and San Francisco. He also was an active member of the Apache Kafka community, and has authored blogs on Medium and the guest blog for Confluent. He also has co-founded Conduktor, a prominent company in the Kafka ecosystem.

During his spare time he enjoys cooking, practicing yoga, surfing, watching TV shows, and travelling to awesome destinations!

**FAQ: In which order should you learn?...**

**AWS Cloud:** Start with AWS Certified Cloud Practitioner or AWS Certified Solutions Architect Associate, then move on to AWS Certified Developer Associate and then AWS Certified SysOps Administrator. Afterwards you can either do AWS Certified Solutions Architect Professional or AWS Certified DevOps Professional, or a specialty certification of your choosing. You can also learn about AI with the AWS Certified AI Practitioner course!

**Apache Kafka:** Start with Apache Kafka for Beginners, then you can learn Connect, Streams and Schema Registry if you're a developer, and Setup and Monitoring courses if you're an admin. Both tracks are needed to pass the Confluent Kafka certification.

- Create a dedicated view to display the author's profile, including their name, title, a detailed biography, and FAQ sections.

○ Testimonials Tab:

Product Name

Q Search Courses

×

🔔

[Home](#) > Google Data Analytics

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Created by- **Stephane Maarek** | AWS Certified Cloud Practitioner, Solutions Architect, Developer

Enroll Now

45,908 already enrolled

Level

Rating

Duration

Flexible Schedule

Beginner Level

4.8 ★ (1278 reviews)

05 Weeks

Learn at your own pace

Overview

Course Content

Author Details

Testimonials

4.8 ★★★★★

“

The Google Data Analytics course was a pivotal moment in my career. I went from having a basic understanding of spreadsheets to confidently performing complex queries in SQL and building interactive dashboards in Tableau. The real-world projects helped me build a portfolio that stood out to employers. I landed a job as a Junior Data Analyst just two months after completing the certificate. I couldn't be more grateful for the skills and confidence this program gave me.

**Wade Warren**  
Learning for U.S

4.7 ★★★★★

“

I was stuck in a marketing role with no room for growth. This data analytics program was a game-changer. The curriculum is incredibly well-structured, taking you from the basics of data cleaning to advanced machine learning concepts. The practical assignments, especially the capstone project, gave me a tangible portfolio to show potential employers. Within three months of graduating, I transitioned to a Data Scientist role at a top tech firm. This course was the best investment I've ever made in my career.

**Jacob Jones**  
Learning for India

4.5 ★★★★★

“

As a marketing professional, I knew I needed to become more data-driven. This course was the perfect entry point. The lessons were clear and engaging, and I went from zero programming knowledge to writing Python scripts for data analysis. The hands-on projects were invaluable, allowing me to build a practical portfolio. I can now confidently analyze campaign data and present insights using Power BI, which has made a huge impact on my role and effectiveness at work.

**Bessie Cooper**  
Learning for U.K

4.5 ★★★★★

“






I had a background in finance but wanted to pivot into a more analytical role. The Google Data Analytics certificate gave me the structured learning path I needed. The instructors are fantastic at breaking down complex topics like statistical analysis and machine learning. The capstone project was a highlight, as it simulated a real-world business problem and challenged me to apply everything I'd learned. I secured a position as a Financial Analyst with a data focus shortly after completion. Highly recommended!

**Ronald Richards**  
Learning for India

- Design and build the review card component.
- Display a grid of testimonials, with each card showing the star rating, the review text, and the reviewer's avatar, name, and affiliation.

- **Related Courses Section:**

#### Related Courses

	<b>Artificial Intelligence Professional Certificate</b> 24 Hours   Last updated 2/2024	4.8 ★ (63838 reviews) Highest Rated
	<b>Machine Learning A-Z: AI, Python &amp; R</b> 24 Hours   Last updated 1/2024	4.6 ★ (53843 reviews) Highest Rated
	<b>The Data Science Course: Complete Data Science Bootcamp</b> 24 Hours   Last updated 12/2023	4.5 ★ (35959 reviews) Bestseller
	<b>Python for Data Science and Machine Learning Bootcamp</b> 46.5 Hours   Last updated 11/2023	4.2 ★ (27659 reviews)
	<b>Tableau for Beginners: Get Certified in Data Visualization</b> 18 Hours   Last updated 10/2023	4.0 ★ (25959 reviews)

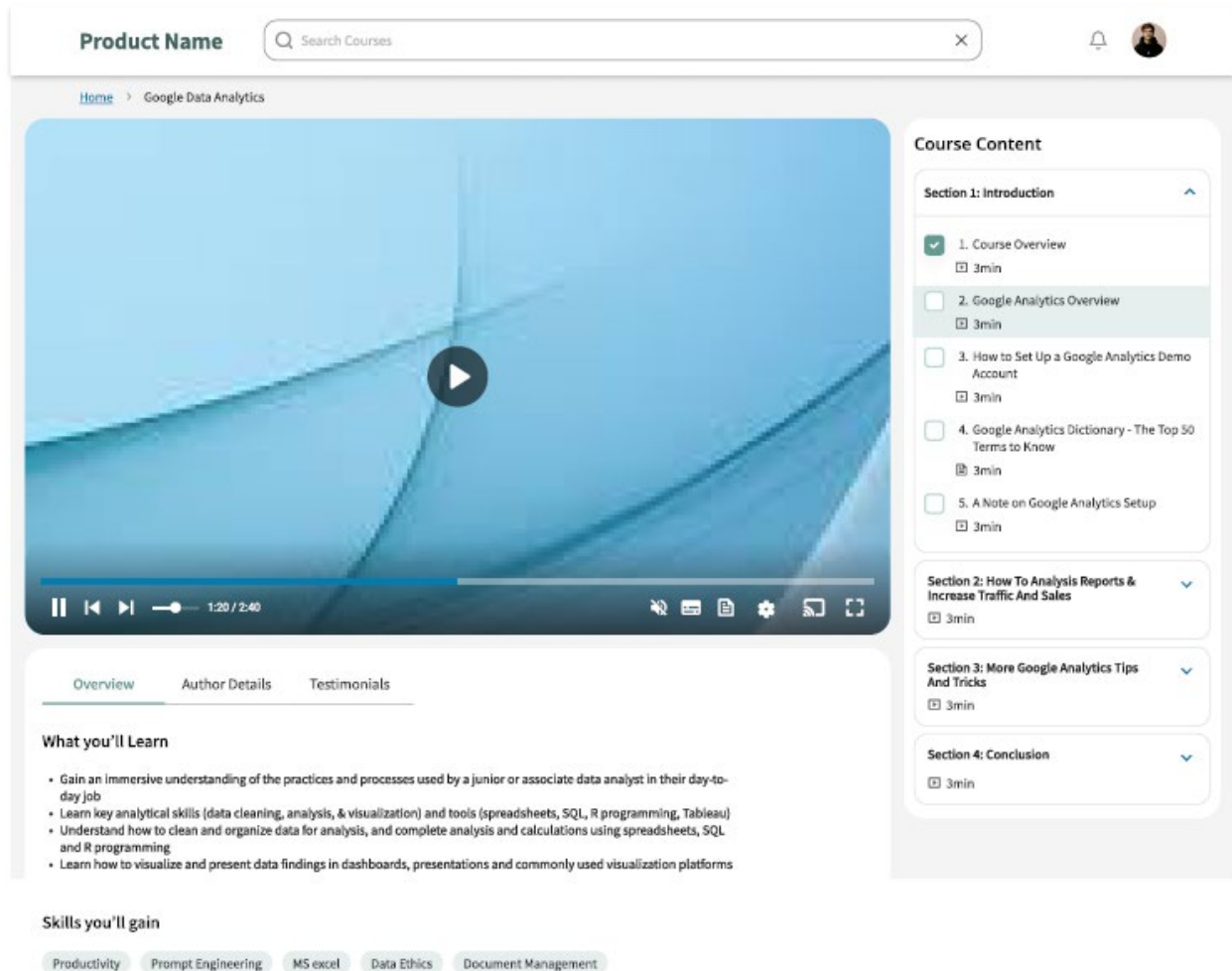
- At the bottom of the page, implement a "Related Courses" section.
- This section should display a simple list of other relevant courses, each with its thumbnail, title, duration, rating, and a descriptive badge (e.g., "Highest Rated," "Bestseller")



# Milestone 3: The Active Learning Experience & Knowledge Assessment

With the discovery and enrollment flows complete, this milestone focuses on the core of the platform: the course consumption interface. It involves building the interactive video player, PDF or Text content where users learn and a quiz system to assess their understanding.

## 1. Immersive Course Player Page:



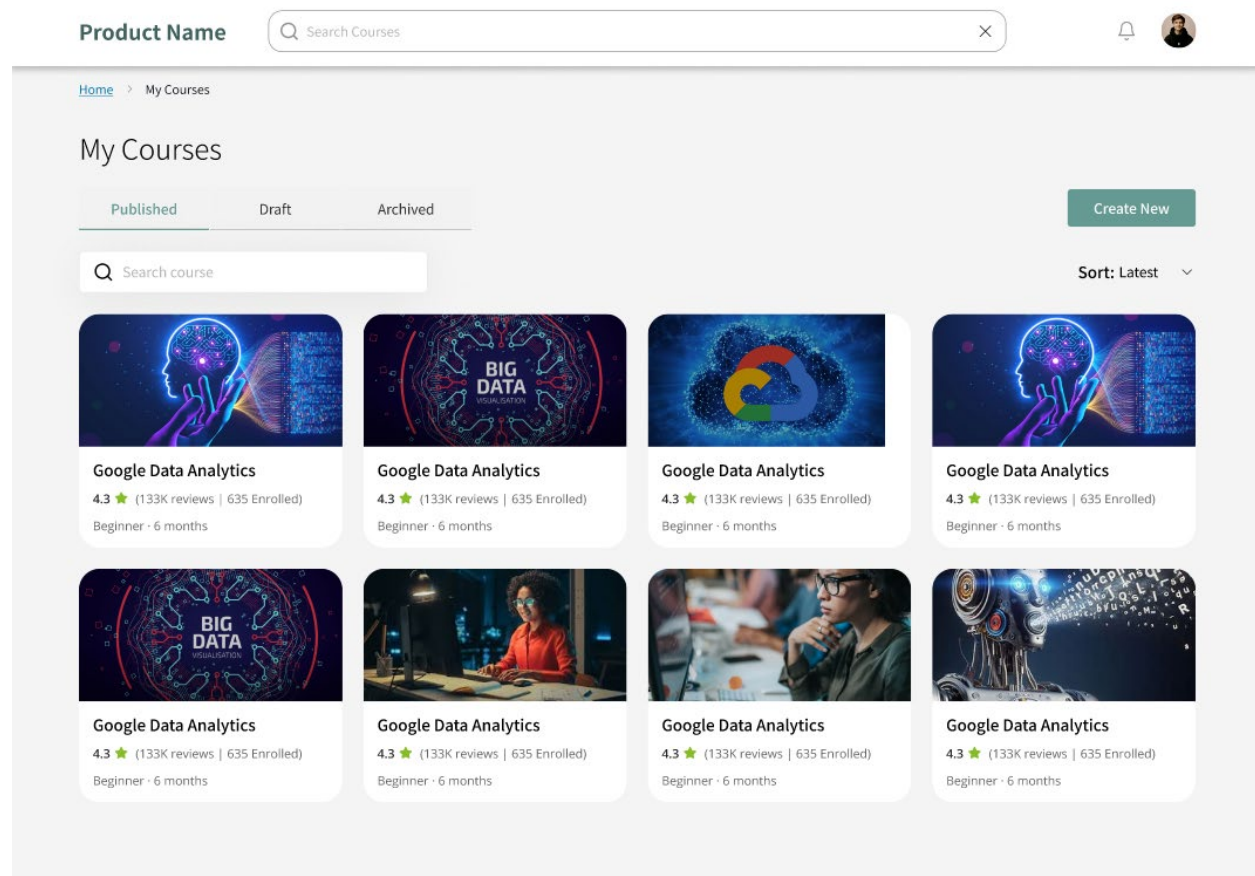
- **Functionality:** This is the main interface where a logged-in, enrolled user watches course lectures and navigates the curriculum. This page will be accessed via a dynamic route (e.g., /learn/:courseId/lecture/:lectureId).
- **Layout:** Implement the two-panel layout shown in the design.
  - **Main Content Panel (Left):** This panel is dedicated to the current learning material.

- **Video Player:** Implement a large video player component with a full set of custom controls: play/pause, volume control, a scrubbable timeline with progress and duration, settings (for playback speed/quality), and a Fullscreen toggle.
- **PDF Viewer**
- **Text Content Viewer**
- **Content Tabs:** Below the video player, implement a tabbed section. **Crucially, you should reuse the components/content from the "Course Details" page (Milestone 2)** for the Overview, Author Details, and Testimonials tabs to maintain consistency and demonstrate component reusability.
- **Course Curriculum Panel (Right):** This panel provides context and navigation for the entire course.
  - **Reuse the collapsible accordion component** from the "Course Content" tab in Milestone 2.
  - **Enhance the component with interactive states:**
    - The currently playing lecture must be visually highlighted.
    - Implement a checkmark icon to show which lectures have been completed. This state should be saved and persist for the user.
    - Clicking any lecture in the panel should update the route and load the corresponding video in the main player.

# Milestone 4: Course Authoring and Management

This milestone shifts focus from the learner to the course creator. It involves building the complete end-to-end workflow for users with an 'Author' role to create, structure, manage, and publish their own courses to the platform.

## 1. "My Courses" Dashboard for Authors:



- **Functionality:** Create a central dashboard for authors to view and manage all the courses they have created. This page will be accessible from the **"My Courses"** link in the user profile dropdown.
- **Role-Based Access:** This link and the corresponding page should only be accessible to users with an 'Author' or 'Admin' role.
- **Layout and Controls:**
  - Implement the main page layout with a breadcrumb (Home > My Courses), a page title, and a prominent **"Create New"** button.
  - **Tabbed Navigation:** Implement tabs to filter courses by their status: Published, Draft, and Archived.

- **Search and Sort:** Add a "Search course" input field and a "Sort" dropdown with options like Latest, Highest Rating, Highest Reviewed, A-Z, and Z-A.
- **Course Grid:**
  - Display the author's courses in a grid format.
  - **Crucially, reuse the Reusable Course Card Component from Milestone 1.** Clicking on a card should navigate to the course details page or an edit page.

## 2. Multi-Step "Create New Course" Wizard:

The screenshot displays a multi-step wizard for creating a new course. The interface includes a top navigation bar with a search bar and a user profile icon. The breadcrumb trail indicates the user is in the 'Create New Course' section. The main heading is 'Create New Course' with a 'Publish' button. A progress bar shows four steps: '01 Basic Details' (active), '02 Course Content', '03 Overview', and '04 Quiz'. The 'Details' section includes a 'Course Title' input field, a 'Description' input field, and an 'Upload Course thumbnail' section with a drag-and-drop area and a 'Choose file' link. At the bottom, there is a 'Delete' link and a 'Next' button.

- **Functionality:** Build a guided, multi-step form (wizard) that walks the author through the entire course creation process. This wizard should manage the state of the course being built until it is published.
- **Main Wizard Layout:**
  - **Stepper Component:** At the top of the page, create a visual stepper to indicate the user's progress: (01) Basic Details, (02) Course Content, (03) Overview. The current step must be visually highlighted.

- **Navigation:** Provide Next and Prev buttons to move between steps, and a master Publish button (which may be disabled until all required steps are complete).
- **Step 1: Basic Details:**
  - Create a form with fields for Course Title and Description (textarea).
  - **Reuse or adapt the drag-and-drop file uploader component** for the Upload Course thumbnail feature.
- **Step 2: Course Content - Curriculum Builder:**

The screenshot displays the 'Create New Course' interface. At the top, there's a header with 'Product Name' and a search bar. Below the header, a breadcrumb trail shows 'Home > My Courses > Create New Course'. The main heading is 'Create New Course' with a 'Publish' button on the right. A progress bar indicates four steps: '01 Basic Details', '02 Course Content' (active), '03 Overview', and '04 Quiz'. Under the 'Modules' section, there's a form to 'Enter module title here' with a counter '0 Lectures · 0 mins' and an 'Add Lecture' button. Below this is a link to 'Add New Section'. At the bottom, there's a 'Delete' link and 'Prev' and 'Next' buttons.

- This is the core interface for structuring the course.
- **Module/Section Management:** Allow the author to create sections (e.g., "Introduction"). Each section should display its title, a summary of its contents (5 Lectures • 15 mins), and an action menu (three dots) with options to Duplicate or Delete the section.
- **Lecture Management:** Within each section, provide an "Add Lecture" button that triggers a modal for adding content. The lectures should be listable, re-orderable (drag-and-drop handles), and show their type (video, text icon, etc.) and title.

The screenshot shows a web application interface for creating a new course. The main form is titled 'Create New Course' and has a sidebar with 'Basic Details' and 'Modules' sections. A modal titled 'Add New Lecture' is open, allowing users to add a new lecture to the course. The modal contains the following fields and options:

- Type:** A dropdown menu with 'Video' selected.
- Topic Title:** A text input field with the placeholder 'Enter Course title here'.
- Topic Description:** A text input field with the placeholder 'Enter Topic Description here'.
- Upload Video File:** A section with a dashed border containing a cloud upload icon and the text 'Drag and drop file to upload or, Choose file'.
- or add link for video:** A text input field with the placeholder 'enter link here'.

At the bottom of the modal are 'Cancel' and 'Submit' buttons. The background form has a 'Publish' button and a 'Next' button.

- **Step 3: Overview:**

- Create a form for all the detailed metadata that will be displayed on the course details page.
- Include fields for Duration, Level, What you will learn, What skill you will gain, Prerequisites, and Software Requirements.

### 3. Dynamic "Add New Lecture" Modal:

The screenshot shows a web application interface for creating a new course. At the top, there's a header with 'Product Name', a search bar labeled 'Search Courses', and a user profile icon. Below the header, a breadcrumb trail reads 'Home > My Courses > Create New Course'. The main heading is 'Create New Course' with a 'Publish' button. A progress bar shows four steps: '01 Basic Details', '02 Course Content' (active), '03 Overview', and '04 Quiz'. Under the 'Modules' section, there's a list of modules. The first module is 'Introduction' with '5 Lectures - 15 mins'. Below it, there are five more modules, each with a play icon, a title, a type, and a duration: 'Course Overview' (Text, 5 min read), 'Google Analytics Overview' (Video, 5 min read), 'How to Set Up a Google Analytics Demo Account' (PDF, 5 min read), 'Google Analytics Dictionary - The Top 50 Terms to Know' (PDF, 5 min read), and 'A Note on Google Analytics 4 Setup' (PDF, 5 min read). Each module has an edit icon. At the bottom of the module list is a link 'Add another'. Below the module list is a button 'Add New Section'. At the very bottom, there are 'Delete', 'Prev', and 'Next' buttons.

- **Functionality:** Implement a highly dynamic modal for adding various types of lecture content.
- **Type Selector:** The modal must contain a Type dropdown with options: Video, Topic Content editor, PDF.
- **Conditional Form Fields:** The form fields below the Type dropdown must change dynamically based on the selection:
  - If **Video** is selected: Display inputs for Topic Title, Topic Description, a **video file uploader**, and an optional text input to **add a link for a video**.
  - If **Topic Content editor** is selected: Display inputs for Topic Title, Topic Description, and a **Rich Text Editor (RTE)** for creating formatted text-based lectures.
  - If **PDF** is selected: Display inputs for Topic Title, Topic Description, and a **PDF file uploader**.
- The modal should have Cancel and Submit buttons. On submit, the lecture is added to the curriculum builder and the modal closes.

#### 4. Course Publishing Flow:

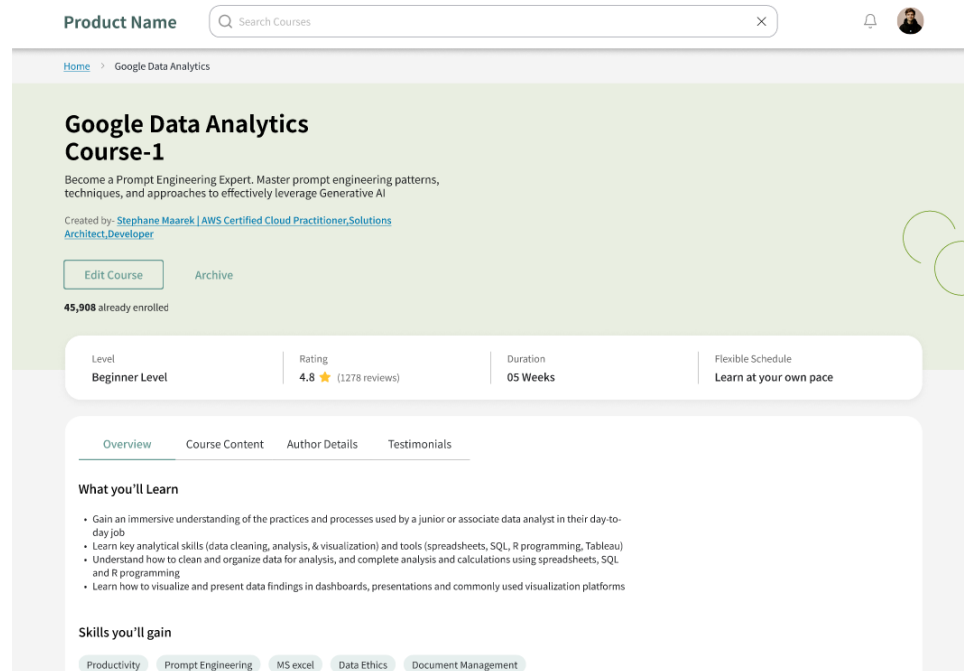
The screenshot shows the 'Create New Course' wizard at the 'Overview' step. The top navigation bar includes a 'Product Name' label, a search bar with 'Search Courses', a bell icon, and a user profile icon. The wizard progress bar shows four steps: 01 Basic Details, 02 Course Content, 03 Overview (active), and 04 Quiz. The 'Overview' section contains several form fields: 'Duration' and 'level' (both dropdowns with 'Enter Course title here' text), 'What you will learn' (text area), 'What skill you will gain' (text area), 'Prerequisites' (text area), and 'Software Requirements' (text area). At the bottom, there is a 'Delete' link in red, and 'Prev' and 'Next' buttons.

- **Functionality:** Finalize and publish the course.
- **Publish Action:** When the author clicks the main Publish button in the wizard, the application should validate all the course data.

The screenshot shows the 'Create New Course' wizard at the 'Quiz' step. The top navigation bar is the same as the previous screenshot. The wizard progress bar shows four steps: 01 Basic Details, 02 Course Content, 03 Overview, and 04 Quiz (active). The 'Quiz' section displays a question titled 'Question 01\*' with the text 'In data analytics,'. Below the question are three radio button options: 'fields that an', 'fields and da', and 'data that is not meaningful for reporting' (which is selected). A text box contains the text: 'Systems generate a lot of data that is meaningful to the system but not always meaningful to your reporting. Noise is anything that isn't valuable to the report or visualization.' Below this are two more radio button options: 'timing and calculations' and 'Add another'. At the bottom, there is a 'Checkbox' dropdown and a 'Required' status indicator. A white modal dialog is overlaid on the form, displaying the message: 'Your course published successfully! Dear user, your course is successfully published and its available for the enrollment!'. The modal has an 'Ok' button.



- **Confirmation Modal:** Upon successful validation and saving, display a success modal with the message: **"Your course published successfully!"** and an "Ok" button.
- **State Change:** Publishing the course should change its internal status from Draft to Published, making it visible to all learners on the platform and moving it to the "Published" tab in the author's "My Courses" dashboard.



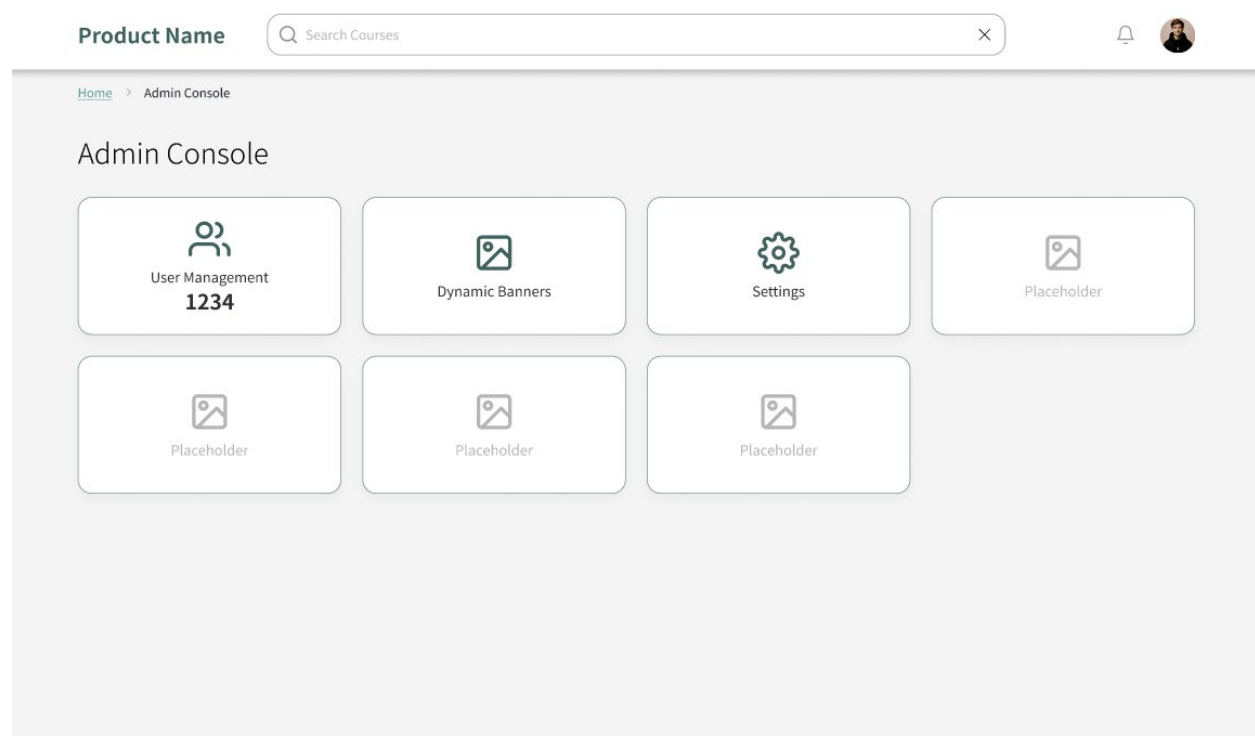
# Milestone 5: Administrative Console & User Management

This milestone focuses on creating a secure, admin-only section for managing the platform and its users. It requires implementing role-based access control to ensure that only authorized users can view and interact with these administrative tools.

## 1. Role-Based Access & Admin Navigation:

- **Authentication Enhancement:** Update the user model and authentication service (from Milestone 1) to include a role for each user (e.g., 'Admin', 'Learner', 'Author').
- **Conditional Navigation:** In the Header Component's profile dropdown, the "**Admin Console**" link must be conditionally rendered. It should **only be visible** if the logged-in user has the 'Admin' role.
- **Protected Routes (Admin Guard):** Implement an Angular Route Guard to protect all administrative routes (e.g., /admin/\*). This guard will check the user's role and redirect any non-admin users away from the console, typically back to the home page.

## 2. Admin Console Dashboard:



- **Functionality:** Create the main landing page for the administrative section, which serves as a hub for all management tasks.
- **Layout:**
  - Implement the page with a breadcrumb trail (Home > Admin Console) and a clear "Admin Console" title.

- Create a grid of clickable navigation cards.
- **Reusable Admin Card Component:**
  - Build a reusable component for the dashboard cards. This component should accept props for an icon, title, and a count or statistic.
  - Populate the dashboard with the cards shown in the design: "User Management" (with a dynamic user count), "Dynamic Banners" and other placeholders.
  - Clicking the "User Management" card must navigate the user to the user management page.

### 3. User Management Interface:

The screenshot displays the 'Admin Console' interface. At the top, there's a 'Product Name' field and a 'Search Courses' input. Below this, the 'Admin Console' title is followed by tabs for 'User Management', 'Dynamic Banner', and 'Settings'. A 'Search User' input and a 'Sort: Latest' dropdown are positioned above a table of users. The table has columns for 'User Name', 'Roles', 'Joined Date', and 'Actions'. It lists 10 users, each with their name, roles (Author or Normal User), joined date (06/15/2022), and an 'Edit' action link. At the bottom, it shows 'TOTAL RECORDS: 1250' and a pagination control for '10 / Page'.

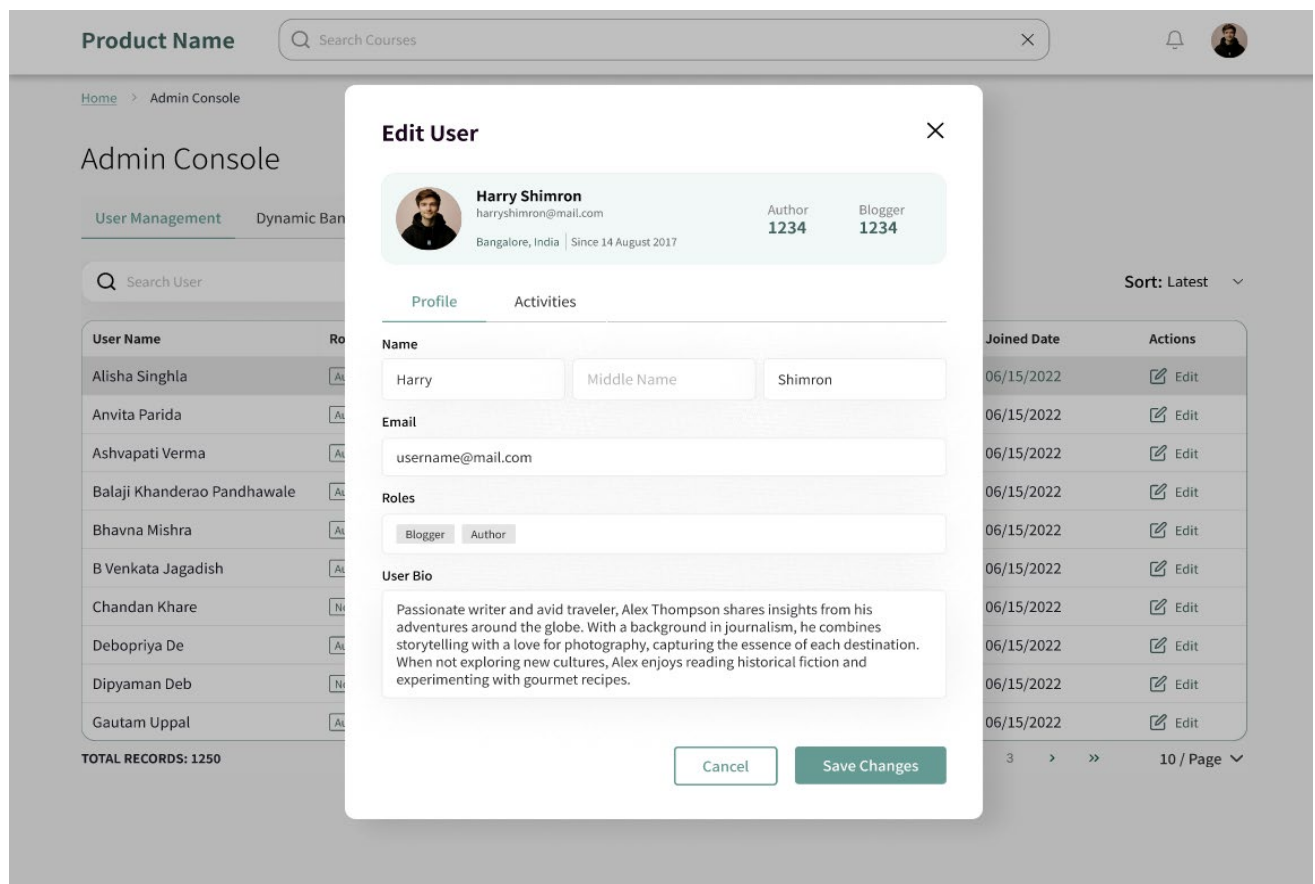
User Name	Roles	Joined Date	Actions
Alisha Singhla	Author, Blogger	06/15/2022	Edit
Anvita Parida	Author	06/15/2022	Edit
Ashvapati Verma	Author	06/15/2022	Edit
Balaji Khanderao Pandhawale	Author, Blogger	06/15/2022	Edit
Bhavna Mishra	Author	06/15/2022	Edit
B Venkata Jagadish	Author	06/15/2022	Edit
Chandan Khare	Normal User	06/15/2022	Edit
Debopriya De	Author	06/15/2022	Edit
Dipyaman Deb	Normal User	06/15/2022	Edit
Gautam Uppal	Author	06/15/2022	Edit

- **Functionality:** Build a comprehensive table to display, search, and manage all users on the platform.
- **Layout:** The page should have a tabbed interface for different admin sections ("User Management", "Dynamic Banner").
- **User Management Tab:**
  - **Controls:** Implement a search input field ("Search User") and a "Sort" dropdown.

- **Data Table:** Create a detailed table to list users with the following columns: User Name, Roles, Joined Date, and Actions.
- **Roles Column:** The roles for each user should be displayed as distinct, styled tags/pills (e.g., "Author", "Blogger", "Normal User").
- **Actions Column:** Each row must have an "Edit" button/link.
- **Pagination:** Implement a full pagination component at the bottom of the table, showing total records, page numbers, and a selector for items per page.

#### 4. "Edit User" Modal:

- **Functionality:** Create a modal window that allows an administrator to view and modify a user's details.
- **Modal Trigger:** The modal should open when an admin clicks the "Edit" button for any user in the management table. The modal should be pre-populated with that specific user's data.



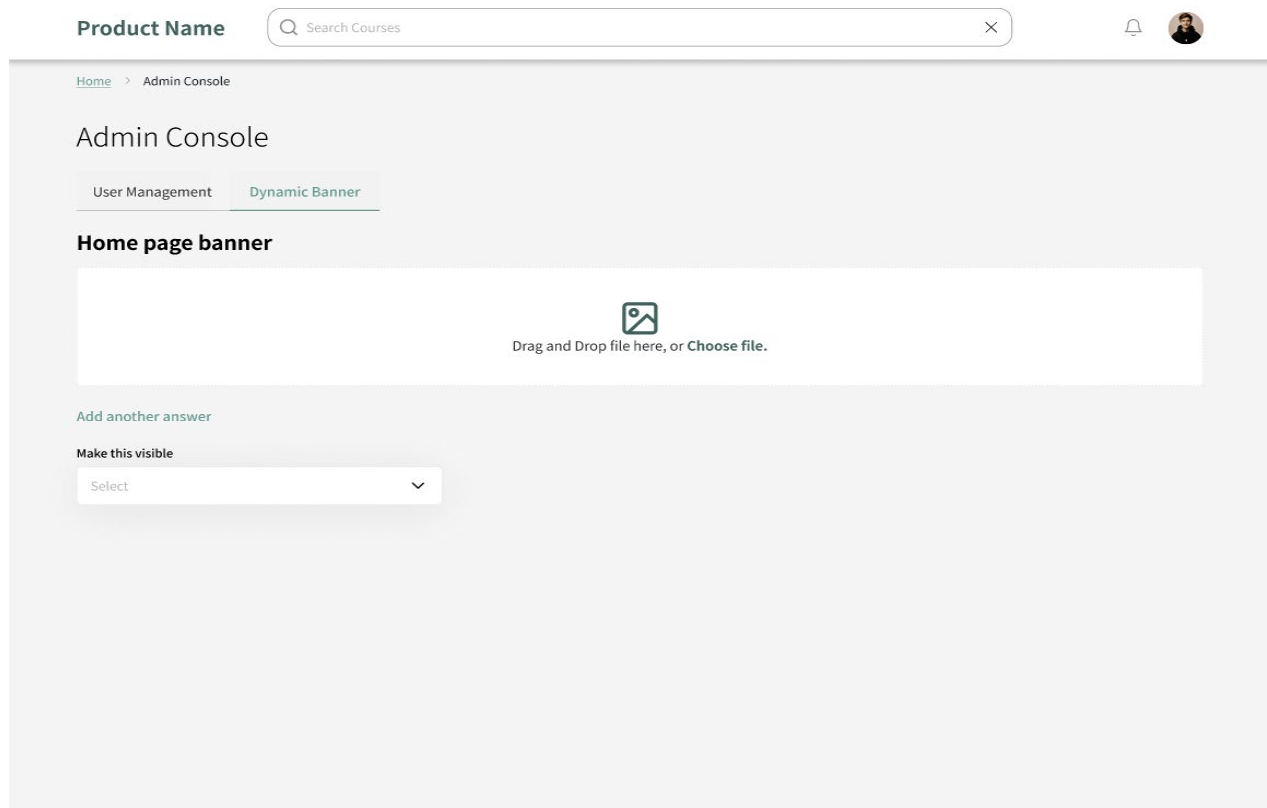
- **Modal Layout:**
  - **Header:** Display a summary of the user being edited: their avatar, name, email, location, join date, and key stats (e.g., Author ID, Blogger ID).

- **Tabbed Form:** Inside the modal, create a tabbed interface for "Profile" and "Activities".
- **Profile Tab:** Build a form that allows editing the user's Name, Email, Roles (using a tag input or multi-select component), and User Bio (using a textarea).
- **Activities:** Show the Learning Hours, Pending Courses, Rated Courses and list of courses under learning history.
- **Actions:** Include "Cancel" and "Save Changes" buttons. Clicking "Save Changes" should submit the form and close the modal.

# Brownie Milestone 6: Dynamic Content Management - Homepage Banner

This special milestone focuses on empowering administrators by giving them direct control over the learner's homepage content. It involves creating a system for admins to upload, manage, and schedule promotional or informational banners that are dynamically displayed to all users on the main dashboard, connecting the admin role directly to the end-user experience.

## 1. Admin-Side Banner Management Interface:



The screenshot displays the Admin Console interface. At the top, there is a header with 'Product Name' and a search bar labeled 'Search Courses'. Below the header, the breadcrumb 'Home > Admin Console' is visible. The main section is titled 'Admin Console' and contains two tabs: 'User Management' and 'Dynamic Banner'. The 'Dynamic Banner' tab is active, showing a section titled 'Home page banner'. This section features a large white box with a placeholder image icon and the text 'Drag and Drop file here, or Choose file.' Below this box, there is a link 'Add another answer' and a dropdown menu labeled 'Make this visible' with a 'Select' option.

- **Functionality:** Build the user interface within the "Admin Console" that allows administrators to manage the homepage banners.
- **Location:** This functionality will live under the "**Dynamic Banner**" tab within the Admin Console page created in Milestone 5.
- **File Uploader Component:**
  - Implement a robust file uploader component.
  - It must support both **drag-and-drop** functionality and a "Choose file" link for traditional file selection.

- Upon upload, the interface should display a preview of all uploaded banners in a list format.
- **Banner List Management:**
  - For each uploaded banner in the list, provide two action icons:
    - **Replace/Update:** An icon to change the image for that specific banner slot.
    - **Delete:** An icon to remove the banner from the system.
  - Implement an "Add another..." link to allow admins to upload multiple banners for the carousel.

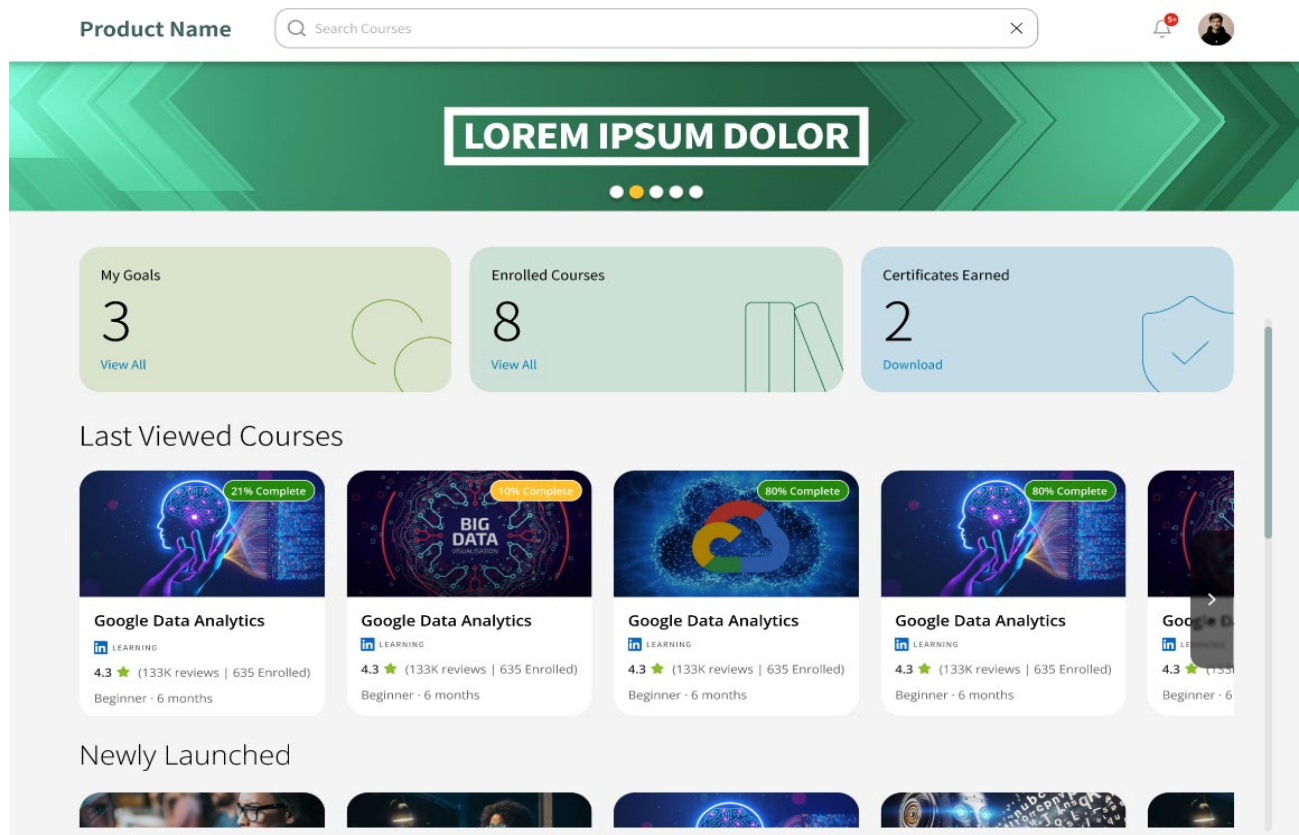
## 5. Implement Banner Scheduling and Visibility:

The screenshot displays a web interface for managing banners. At the top, there is a header with a 'Product Name' label, a search bar containing 'Search Courses', and a user profile icon. Below the header, the section is titled 'Home page banner'. It contains four horizontal banner slots, each with a green and white geometric background and the text 'LOREM IPSUM DOLOR'. Each banner has two icons on the right: a circular arrow for 'Replace/Update' and a trash can for 'Delete'. Below the banners, there is a link 'Add another answer'. At the bottom, there are three input fields: 'Make this visible' with a dropdown menu showing 'Schedule for later', 'Schedule Date' with the value '16/05/2021', and 'Expiry Date' with the value '16/08/2021'.

- **Functionality:** Give administrators fine-grained control over when the banners are visible to learners.
- **Visibility Control:**
  - For each banner (or for the set of banners), create a "Make this visible" dropdown menu.

- The dropdown should contain the options: Now, Schedule for later, and Will decide later (or a similar "Draft" state).
- **Conditional Date Pickers:**
  - The UI must react to the dropdown selection. When an admin chooses "**Schedule for later**," two date picker inputs for Schedule Date and Expiry Date must appear.

## 6. Integrate the Dynamic Banner on the Learner Dashboard:



- **Functionality:** Display the currently active banner(s) at the very top of the Learner Dashboard.
- **Component Modification:**
  - Modify the Learner Home Page / Dashboard component (from Milestone 1).
  - Add a new section at the top, above the "My Goals" and "Enrolled Courses" cards.
- **Dynamic Fetching Logic:**



- When the dashboard loads, it must make an API call to fetch the currently active banner(s).
- The logic should retrieve banners where the current date falls between their scheduleDate and expiryDate.
- **Carousel Implementation:**
  - As shown in the final design, if multiple banners are active simultaneously, implement a **rotating image carousel**.
  - Include the small dot indicators below the banner to show the number of active banners and which one is currently displayed. The carousel should auto-play and be navigable by the user.

# Application RBAC (Role-Based Access Control)

This table outlines the permissions for each user role across the application's key features.

## User Roles Defined:

- **Learner (Authenticated):** The standard user who enrolls in and consumes courses.
- **Author (Authenticated):** A user with permissions to create, manage, and publish their own courses. This role inherits all Learner permissions.
- **Admin (Authenticated):** A superuser with full platform control. This role inherits all Author and Learner permissions.

## Permission Legend:

- ✓: Access Granted
- ✗: Access Denied
- Read-Only: Can view the feature/data but cannot modify it.
- Manage Own: Can create, edit, or delete their own content/data.
- Manage All: Can create, edit, or delete any content/data, including that of other users.

Feature Area	Feature	Learner	Author	Admin
Authentication	View Sign-Up / Sign-In Pages	✗	✗	✗
	Register a New Account	✗	✗	✗
	Log In / Log Out	✓	✓	✓
General Access	View Learner Dashboard / Home Page	✓	✓	✓
	View Course Details Pages (All Tabs)	Read-Only	Read-Only	Read-Only
	Use Global Search Bar	✓	✓	✓
	View Search Results Page (with Filters)	✓	✓	✓
Learner Experience	Enroll in a Course	✓	✓	✓
	Access Course Player for Enrolled Courses	✓	✓	✓
	Take a Quiz within a Course	✓	✓	✓

	Access "My Profile" Page	Manage Own	Manage Own	Manage Own
	View Dynamically Added Homepage Banner	✓	✓	✓
<b>Authoring</b>	Access "My Courses" Authoring Dashboard	✗	✓	✓
	Use the "Create New Course" Wizard	✗	Manage Own	Manage All
	Edit/Update a Course	✗	Manage Own	Manage All
	Upload/Manage Course Content (Videos, PDFs)	✗	Manage Own	Manage All
	Publish / Unpublish a Course	✗	Manage Own	Manage All
<b>Administration</b>	View "Admin Console" Link in Profile Dropdown	✗	✗	✓
	Access Admin Console & Dashboard	✗	✗	✓
	Access User Management Page	✗	✗	✓
	Edit Any User's Profile & Roles	✗	✗	Manage All
	Access Dynamic Banner Management Page	✗	✗	✓
	Upload/Schedule/Delete Homepage Banners	✗	✗	✓

This table will be an invaluable guide for implementing your Angular Route Guards and for conditionally rendering UI elements (like buttons and navigation links) based on the current user's role.