Documentation on backend of the edusphere

*Backend Functionalities

You'll need to create PHP scripts for:

☑ **User Authentication**

- **Register (register.php): Store user info securely with password hashing.**
- **Login (login.php): Verify credentials and start a session.**
- **Logout (logout.php): Destroy session and redirect to home.**

☑ **Course & Lesson Management**

- **List Courses (courses.php): Fetch from the courses table.**
- **List Lessons (lessons.php?course_id=1): Fetch from lessons.**
- **Fetch Lesson Details (lesson.php?id=1).**
- **Enroll a user into a course.**

☑ **Quizzes**

- **Get Questions (quiz.php?lesson_id=1).**
- **Submit Answers (submit_quiz.php): Validate responses and store scores.**

☑ **Test**

- **Get Questions (test.php?lesson_id=1).**
- **Submit Answers (submit_quiz.php): Validate responses and store scores.**

☑ **Tracking Progress**

- **Mark Lessons as Complete (progress.php).**
- **Check Progress (get_progress.php?user_id=1).**

☑ **Certificate Generation**

- **If a user passes the final test (generate_certificate.php), generate a PDF certificate.**

* <u>Directory</u>

```
eduSphere/
|— backend/
|    |----db.php  (Database connection)
|    |---- auth/
|    |    |----register.php
|    |    |---- login.php
|    |    |----logout.php
|    |---- courses/
|    |    |---- get_courses.php
|    |    |---- get_lessons.php
|    |    |---- enroll.php  (Enroll a user in a course)
|    |----quizzes/
|    |    |---- get_quiz.php
|    |    |---- submit_quiz.php
|    |---- tests/
|    |    |---- get_test.php      (Fetch test questions)
|    |    |---- submit_test.php    (Submit answers & check pass/fail)
|    |----progress/
|    |    |---- save_progress.php
|    |    |---- get_progress.php
|    |---- certificates/
|    |    |---- generate_certificate.php
```

*<u>Database schema</u>

1. users (Stores user data)

id	name	email	password	created_at
1	Abel Teferi	abel@example.com	hashed_pass1	2025-03-19 12:00:00

2. courses (Stores available courses)

id	title	description	thumbnail	created_at
1	CSS Basics	Learn CSS from scratch	css.jpg	2025-03-19 12:30:00

3. lessons (Lessons in each course)

id	course_id	title	content
1	1	Introduction to CSS	Basic CSS syntax

4. lesson_videos (Stores video URLs for lessons)

id	course_id	lesson_id	video_url
1	1	1	css_intro.mp4
2	1	2	css_flexbox.mp4
3	2	3	git_basics.mp4

5. enrollments (Tracks which users are enrolled in which courses)

id	user_id	course_id	enrolled_at
1	1	1	2025-03-19 13:00:00

6. quizzes (Stores quiz questions per lesson)

id	lesson_id	question	option_a	option_b	option_c	option_d	correct_option
1	1	What does CSS stand for?	Cascading Style Syntax	Creative Style Sheets	Cascading Style Sheets	Computer Style Syntax	C
2	1	What property is used for Flexbox?	display	flex	justify-content	align-items	B

✓ **Each lesson can have multiple quiz questions (at least two).**

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7. quiz_results (Stores user quiz scores)

id	user_id	lesson_id	score	completed_at
1	1	1	90	2025-03-19 14:00:00

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8. tests (Final test questions for courses)

id	course_id	question	option_a	option_b	option_c	option_d	correct_option
1	1	Which unit is relative to parent?	em	rem	px	%	A

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9. test_results (Stores final test results)

id	user_id	course_id	score	passed	completed_at
1	1	1	85	TRUE	2025-03-19 15:00:00

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10. lesson_progress (Tracks lesson completion)

id	user_id	course_id	lesson_id	completed_at
1	1	1	1	2025-03-19 15:30:00

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11. certificates (Tracks certificate issuance)

id	user_id	course_id	issued_at
1	1	1	2025-03-19 16:00:00

12. Comment table(to store comments about edusphere and fetch it to the hompage for the what students say about us section)

id	user_id	course_id	issued_at	Comment
1	1	1	2025-03-19 16:00:00	My experience in edusphere was amazing……

13. Course progress(tracks course completion)

id	user_id	course_id	completed_at
1	1	1	2025-03-19 15:30:00