

A Project Report On

Quiz game

Developed By

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Msc(it) Semester -1

Project Guide

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Submitted To



Geetanjali Collage of Computer Science & Commerce
(BBA), Rajkot.

Academic Year: 2025-2026

Acknowledgement

I Am Happy To Submit My Idea Of "quiz game "Application In Saurashtra University, Rajkot For mscit Degree In Computer Branch.

I Also Grateful To Prof. Brijesh Shah Head of The Department And All The Faculty Members Of The Department Of Computer Science For Their Kind Support Through Out This Journey.

I Take The Privilege To Acknowledge The Elite Authors Of Numerous Books And Papers And Blogs Which We Have Referred During Progress Of This.

I Also Say The Big Thank You To My Parents For Such A Support And Without Them I Can Do Nothing Not In Just Project But Also In Life. Thankful To My Family For Their Support.

The Feeling Of Gratefulness To Any One's Help Directly Arises From The Bottom Of Heart. A Small But An Important And Timely Help Can Prove To Be A Milestone In One's Life.

Very Thankful To Almighty Of All Of "God" To Give Me Such A Best Persons And All The Thing He Provides Before I Need And I Always Feel That Without Him I Are Nothing.

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Project Profile

Project Title	Quiz game
Development Software	VS Code
Frontend	HTML,CSS,JS,Bootstrap
Backend	laravel
Database	mysql
Academic Year	2025 - 2026
Developed By	Jay varu
Submitted To	Geetanjali Group Of Colleges
Documentation Tool	Microsoft Word
Operating System	Windows
Language	php

Software Development Life Cycle

Waterfall Model:

The project follows the Waterfall Model for software development, where each phase is completed before the next begins, ensuring a sequential and systematic process.

Steps:

1. Requirement Gathering
2. Project Planning
3. Design
4. Coding & Implementation
5. Testing

Phases Explanation:

1. Requirement Gathering: Identified user needs and analysed similar quiz game websites.
2. Project Planning: Defined the project scope, technology stack, and task division.
3. Design: Created preliminary and final design mock-up's for user interfaces.
4. Coding & Implementation: Developed the front-end and back-end systems based on the design and requirements.
5. Testing: Ensured the platform works as intended, including usability testing and bug fixing

System Requirement (For Development)

Hardware Requirements:

- Processor: Intel Core i3 or equivalent (minimum)
- RAM: 4 GB
- Storage: 1 GB available space for development; more depending on the size of the database and media files.

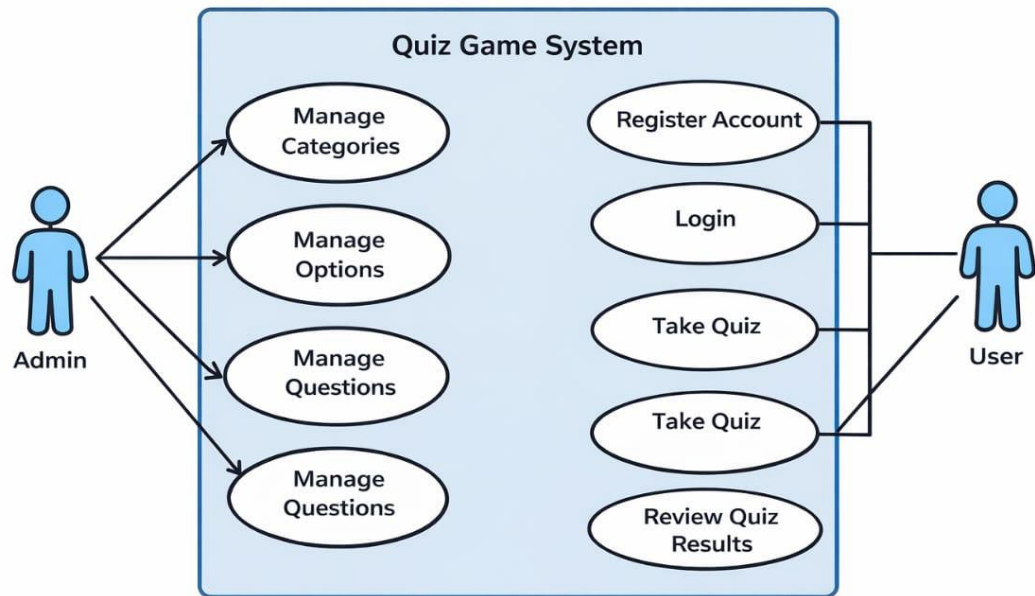
Software Requirements:

- Operating System: Windows/Linux/macOS
- Database: MYSQL (for development)
- IDE: Visual Studio Code
- Programming Languages: HTML, CSS, JavaScript ,laravel

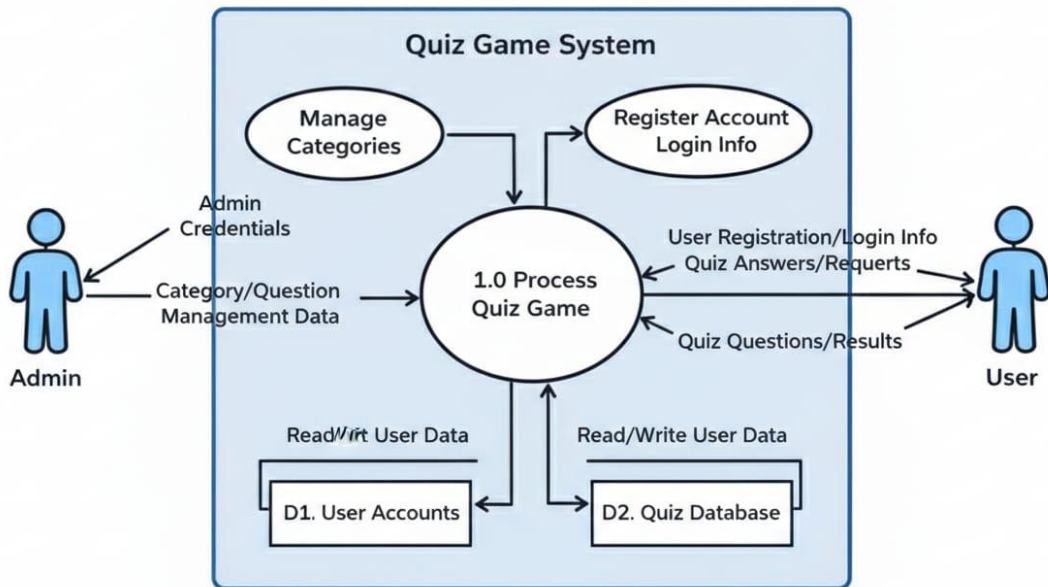
About the Tool (Tools & Technology Used)

- **Laravel:** A PHP-based web application framework used for back-end development. It provides a robust MVC architecture, built-in authentication, routing, and security features for developing the quiz game efficiently.
- **HTML/CSS/JavaScript:** Used for front-end development to create a responsive, interactive, and user-friendly quiz interface. JavaScript enhances real-time interactions such as question navigation and score calculation.
- **MySQL:** A relational database management system used to store quiz questions, user details, scores, and game results securely and efficiently.
- **Visual Studio Code:** An integrated development environment (IDE) used for writing, debugging, and managing the project source code.

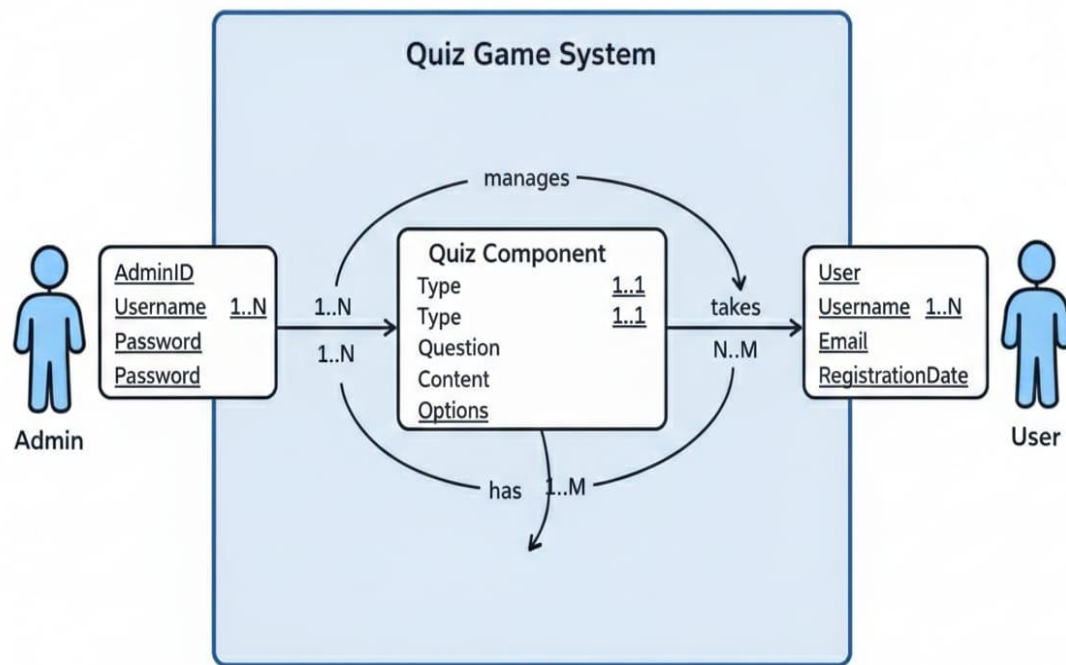
Use Case Diagram



DFD (Data Flow Diagram)



ER (Entity Relationship Diagram)



Data Dictionary

User Login:

Sr.no.	Field Name	Data Type	Size	Constraints
1	Id	bigint	20	Primary Key, Auto Increment, Unsigned, Not Null
2	Name	varchar	255	Not Null
3	Email	Email	-	Not Null, Unique
4	Email_verified_at	varchar	255	Nullable
5	password	varchar	255	Not Null

Questions:

Sr N o.	Field Name	Data Type	Siz e	Constrain ts
1	id	BIGI NT	20	Primary Key, Auto Incremen t, Unsigned , Not Null
2	category_ id	BIGI NT	20	Foreign Key, Index, Unsigned , Not Null
3	question	TEXT	—	Not Null
4	points	INT	11	Not Null, Default 10
5	time_limi t	INT	11	Not Null, Default 30

Option table

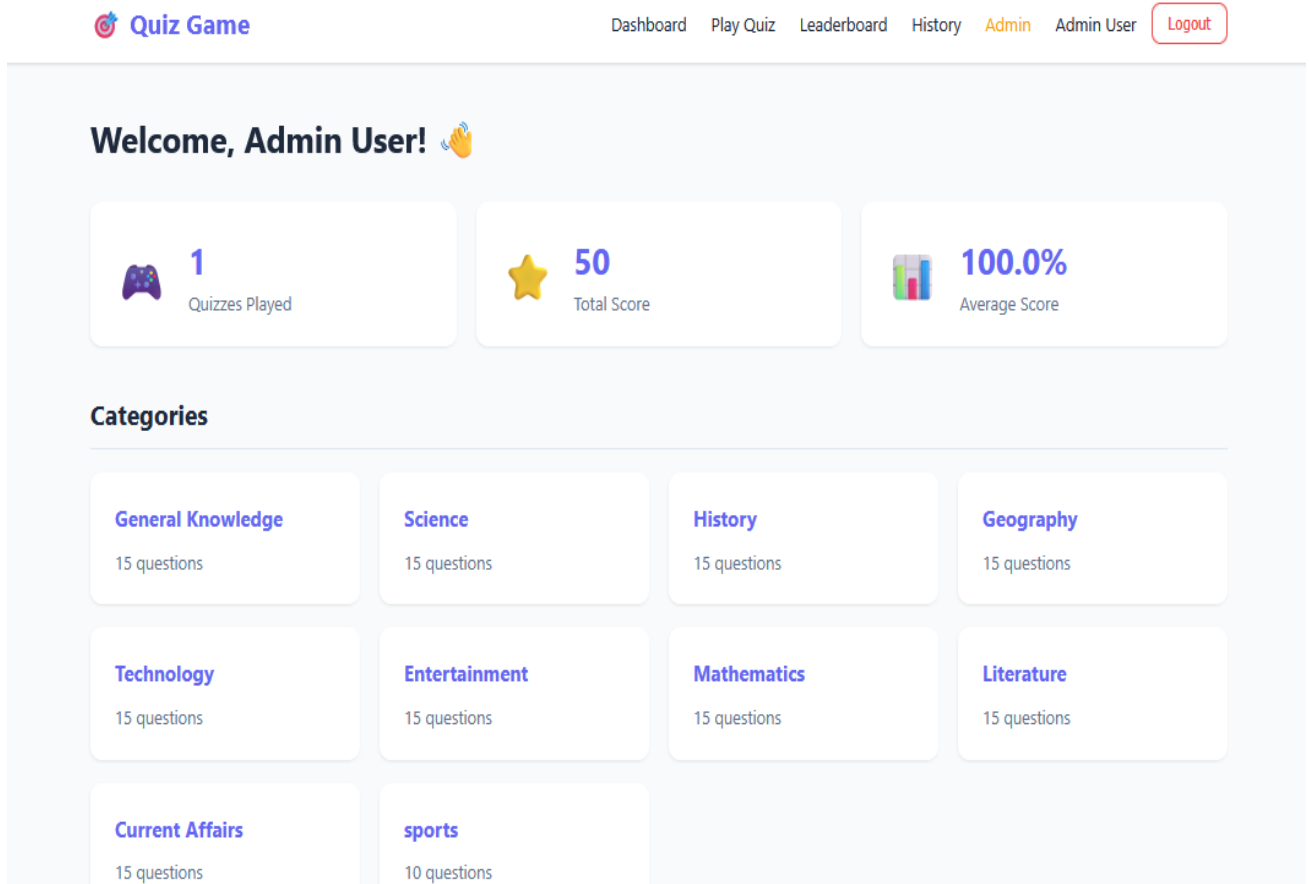
Sr No.	Field Name	Data Type	Size	Constraints
1	id	BIGINT	20	Primary Key, Auto Increment, Unsigned, Not Null
2	question_id	BIGINT	20	Foreign Key, Index, Unsigned, Not Null
3	option_text	VARCHAR	255	Not Null
4	is_correct	TINYINT	1	Not Null, Default 0

Category table

Sr No.	Field Name	Data Type	Size	Constraints
1	id	BIGINT	20	Primary Key, Auto Increment, Unsigned, Not Null
2	name	VARCHAR	255	Not Null
3	slug	VARCHAR	255	Not Null, Index
4	description	TEXT	—	Nullable
5	image	VARCHAR	255	Nullable
6	is_active	TINYINT	1	Not Null, Default 1

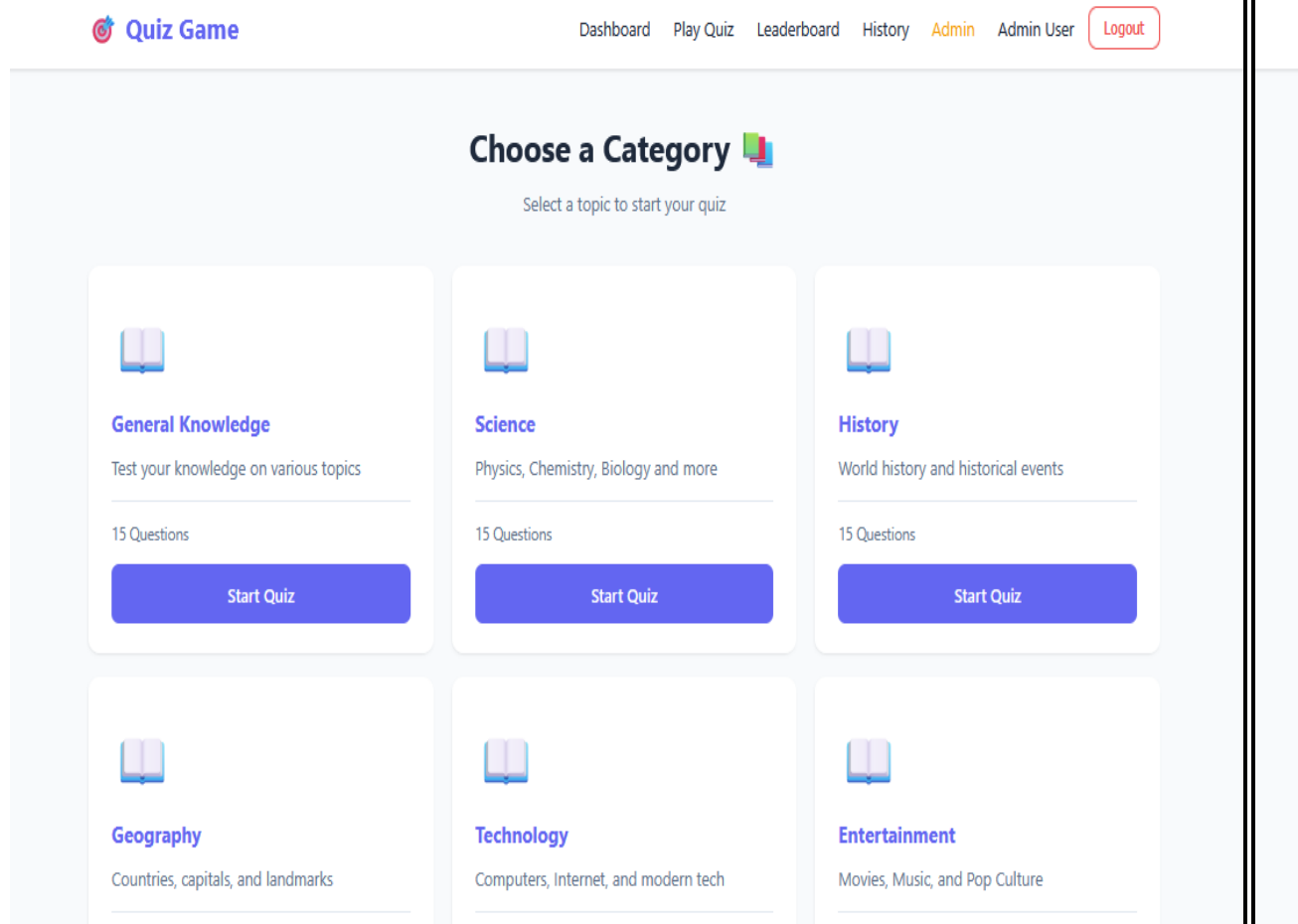
Screen Shots

Dashboard




- ➔ This is the dashboard.
- ➔ User can show the all detail they can be showed here.

Categories



- ➔ This is the categories page user can show the all categories.
- ➔ User and admin also can show the all categories and also play a quiz.

Leaderboard

 Quiz Game

DashboardPlay QuizLeaderboardHistoryAdminAdmin UserLogout

Leaderboard 🏆

Top quiz champions

1	kaushal 3 quizzes played	70 points
2	Admin User 1 quizzes played	50 points
3	mihir 1 quizzes played	50 points
4	Super Admin 1 quizzes played	20 points
5	sahil 1 quizzes played	10 points

- ➔ Here is the ladderboard page.
- ➔ User can also the show the results the top categories.

history

Quiz Game

Dashboard Play Quiz Leaderboard History Admin Admin User Logout

Quiz History

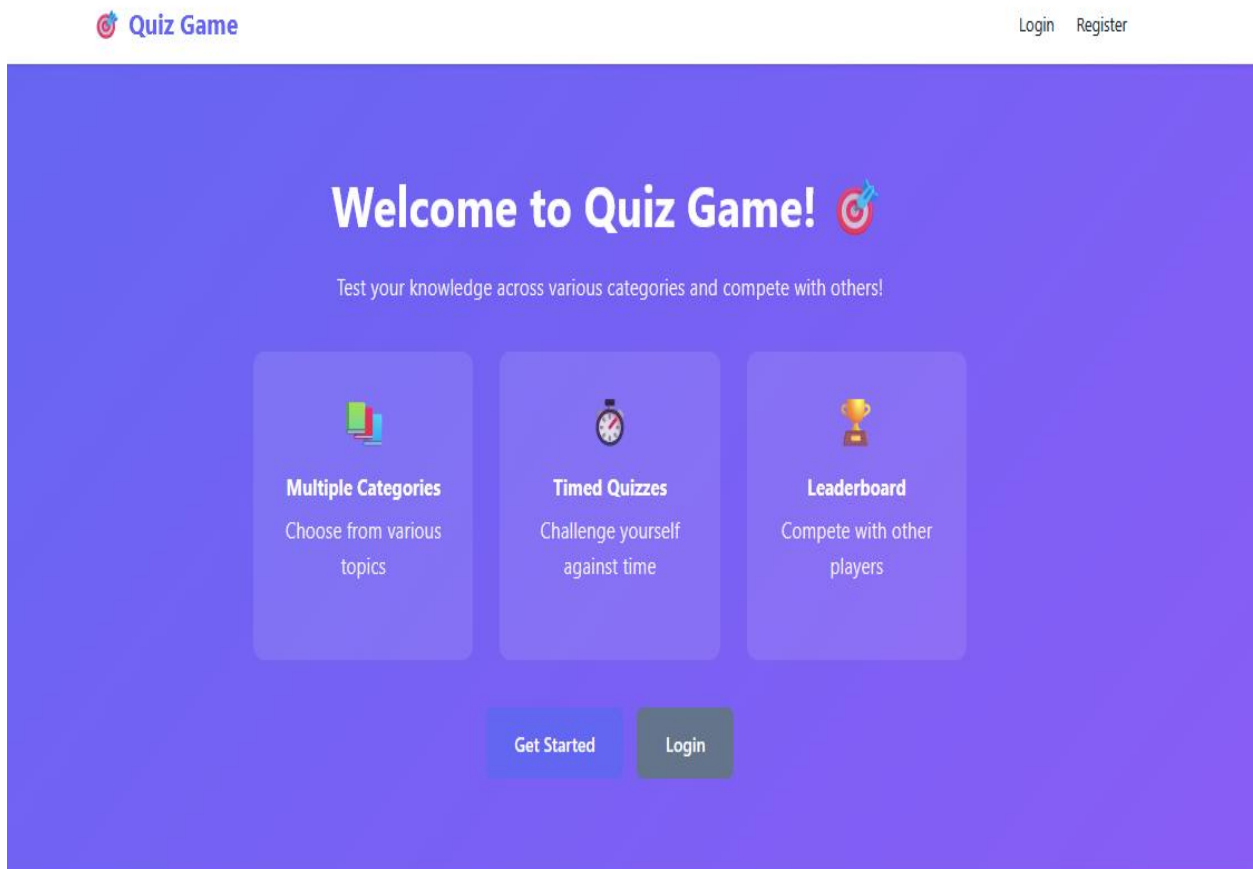
View all your past quiz attempts

Date	Category	Score	Correct	Accuracy	Time	Action
Jan 04, 2026 08:19	sports	50	5/5	100%	59:25	View

➔ this is the history page.

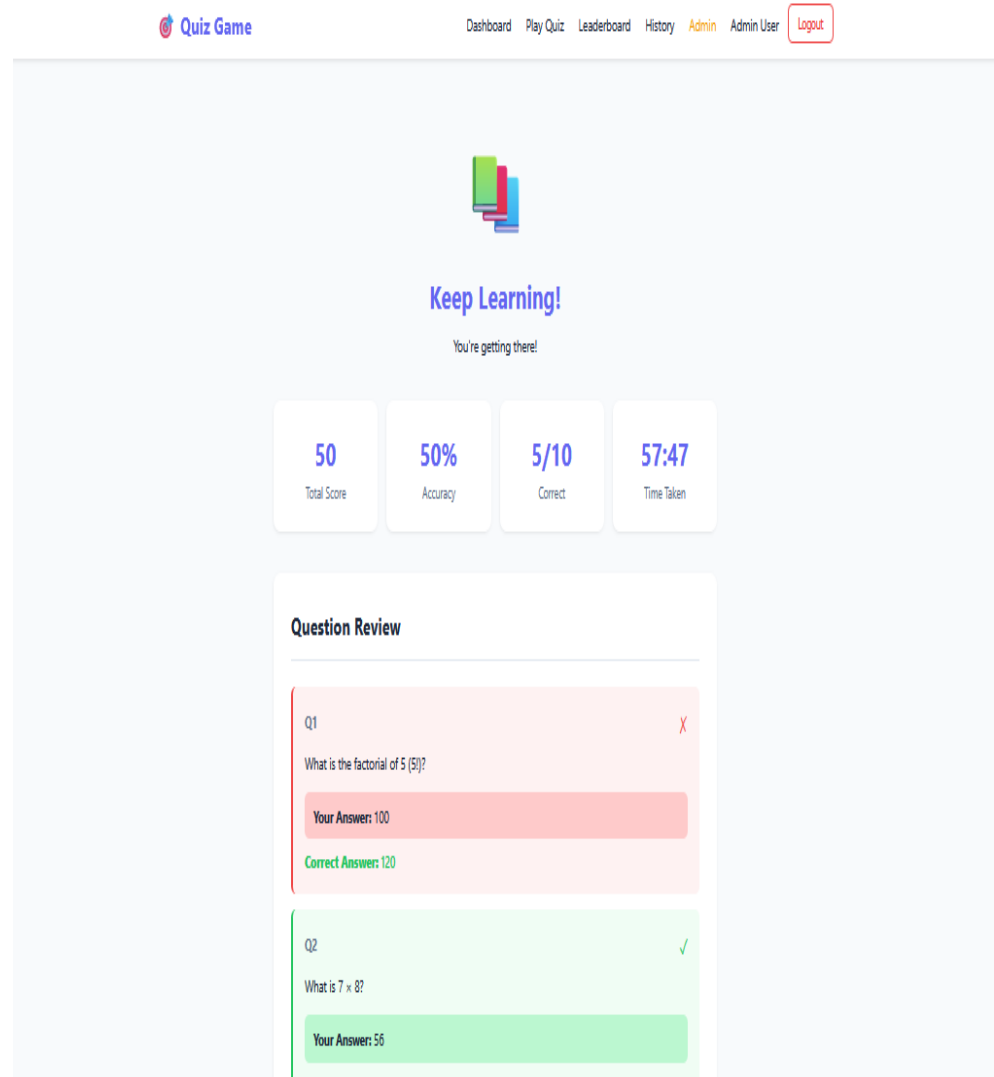
User and admin also see the history when they are play.

Login & register page



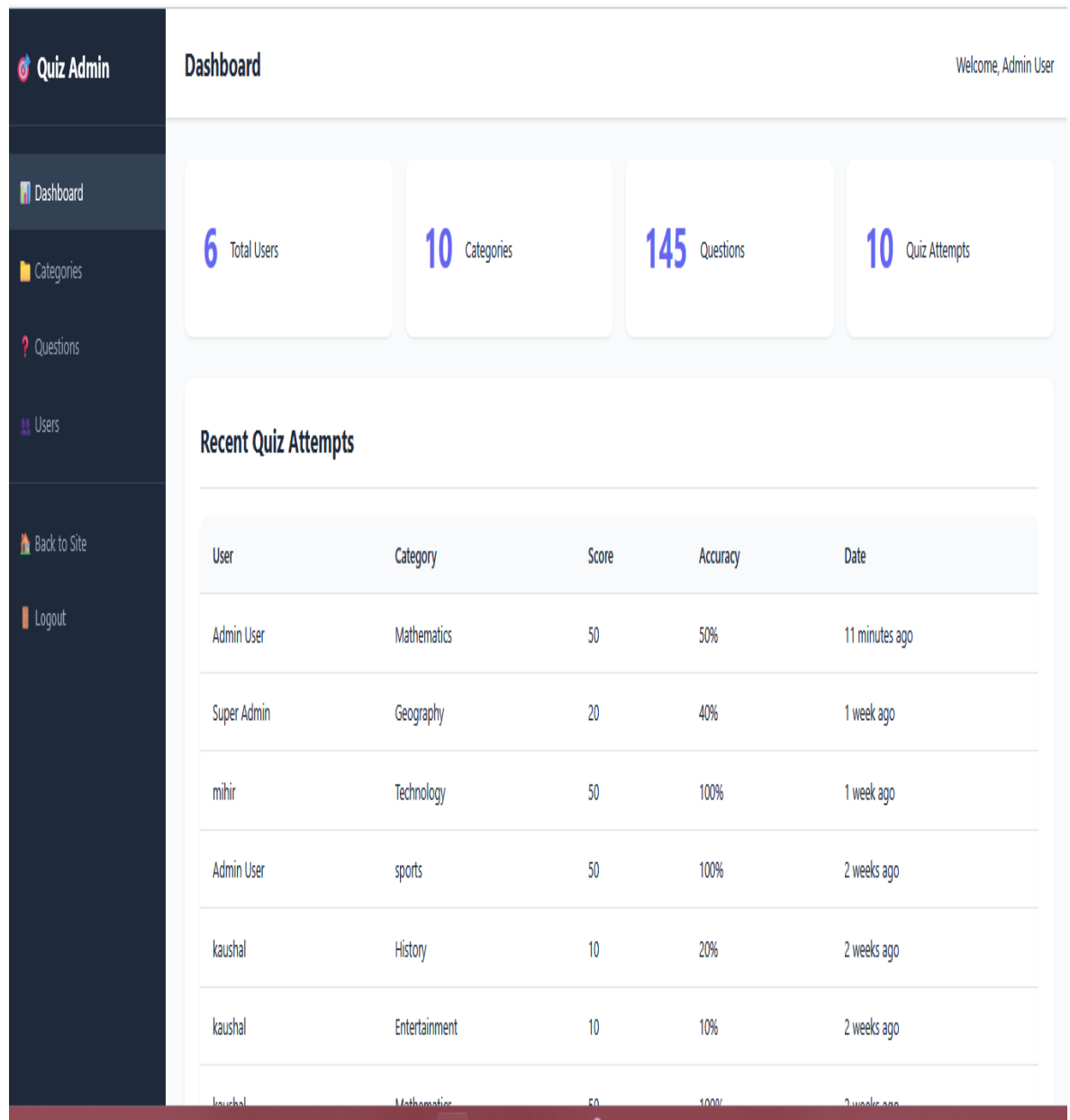
- ➔ Here is the login and registration page.
- ➔ New user also can register and previous user also login and enter to this page.

Result page



- ➔ Here is the result page.
- ➔ It can be show the result point wise.
- ➔ And it will show the answer true or false.

adminDashboard



->here is the admin dashboard page.

->admin can also show the all details of quiz game.

Admin categories

Quiz Admin

Dashboard

Categories

Questions

Users

Back to Site

Logout

Categories

Welcome, Admin User

+ Add Category

ID	Name	Questions	Status	Actions
1	General Knowledge	15	Active	<div>EditDelete</div>
2	Science	15	Active	<div>EditDelete</div>
3	History	15	Active	<div>EditDelete</div>
4	Geography	15	Active	<div>EditDelete</div>
5	Technology	15	Active	<div>EditDelete</div>
7	Entertainment	15	Active	<div>EditDelete</div>
8	Mathematics	15	Active	<div>EditDelete</div>
9	Literature	15	Active	<div>EditDelete</div>

->here is the admin categories page.

->admin can also add new categories ,edit and delete the all categories.

Admin questions

Quiz Admin

Dashboard

Categories

Questions

Users

Back to Site

Logout

Questions

Welcome, Admin User

+ Add Question

ID	Question	Category	Points	Options	Actions
1	What is the capital of France?	General Knowledge	10	4	<div>Edit</div> <div>Delete</div>
2	Which planet is known as the Red Planet?	General Knowledge	10	4	<div>Edit</div> <div>Delete</div>
3	What is the largest ocean on Earth?	General Knowledge	10	4	<div>Edit</div> <div>Delete</div>
4	How many continents are there on Earth?	General Knowledge	10	4	<div>Edit</div> <div>Delete</div>
5	What is the chemical symbol for gold?	General Knowledge	10	4	<div>Edit</div> <div>Delete</div>
6	Which country is known as the Land of the Rising S...	General Knowledge	10	4	<div>Edit</div> <div>Delete</div>
7	What is the largest mammal in the world?	General Knowledge	10	4	<div>Edit</div> <div>Delete</div>
8	How many colors are there in a rainbow?	General Knowledge	10	4	<div>Edit</div> <div>Delete</div>

->this is the admin panel question page

-> in this page admin can view update and delete the questions.

User history

<div>Quiz Admin</div> <div></div> <div>Dashboard</div> <div>Categories</div> <div>Questions</div> <div>Users</div> <div>Back to Site</div> <div>Logout</div>	Users		Welcome, Admin User			
	ID	Name	Email	Quizzes	Admin	Joined
	1	Super Admin	superadmin@quiz.com	1	Yes	Dec 20, 2025
	2	Admin User	admin@quiz.com	2	Yes	Dec 20, 2025
	3	sahil	sahil@gmail.com	4	No	Dec 20, 2025
	4	jay	jay@gmail.com	2	No	Dec 20, 2025
	5	kaushal	kaushal@gmail.com	3	No	Dec 29, 2025
	6	mihir	mihir@gmail.com	1	No	Jan 12, 2026

->here is the admin user history.

->admin can show the all user performance.

Test Cases

Test Case	Description	Actual Output	Test Result
Home screen	Display quiz categories, start quiz button, and navigation menu	All quiz categories and navigation options are displayed correctly	Pass
User registration screen	Allow new users to register with valid details	. User registration is completed successfully	Pass
Login screen	Allow registered users to log in using valid credentials	User is logged in and redirected to dashboard	Pass
Quiz category screen	show all available quiz categories	All quiz categories are displayed correctly	Pass
Quiz Question Screen	Display quiz questions with multiple-choice options	Questions and options load correctly	Pass

Limitation

☐ Limited Scalability

The application is designed for a small to moderate number of users. Performance may degrade when a large number of users attempt to play quizzes simultaneously, as advanced load balancing and caching mechanisms are not implemented.

☐ Basic Security Features

While standard Laravel authentication is used, the system does not include advanced security measures such as two-factor authentication, encrypted quiz content, or protection against sophisticated cheating techniques.

☐ Restricted Question Management

Quiz questions are manually added by the administrator. The system does not support automatic question generation, question difficulty balancing, or integration with external question banks.

Future Enhancement

☐ **Real-Time Multiplayer and Leaderboards**

Implement real-time multiplayer quizzes and live leaderboards using WebSockets or Laravel Echo to enhance user engagement and competition.

☐ **Advanced Analytics and Reporting**

Add detailed performance analytics for users and administrators, including score trends, topic-wise performance, and downloadable reports.

☐ **Enhanced Security and Anti-Cheating Measures**

Introduce features such as question randomization, timed sessions, IP-based monitoring, and two-factor authentication to reduce cheating and improve system security.

Webliography

- [Stack Overflow](#)
- [W3Schools](#)
- [TutorialsPoint](#)
- [Laravel documentation](#)