

# **QUIZ PUZZLE – GAMIFIED LEARNING**

## **ABSTRACT**

QUIZ PUZZLE – GAMIFIED LEARNING is an innovative web-based platform developed to address the growing challenge of keeping students engaged in today's digital learning environment, where traditional teaching methods often fail to capture attention and sustain interest. With the rise of digital distractions, students frequently struggle to maintain focus, resulting in reduced motivation and limited knowledge retention.

The project aims to transform routine studying into an enjoyable and effective process by integrating gamification techniques that encourage active participation and curiosity. Its primary objective is to enhance learning outcomes through self-paced study, sustained motivation, and interactive tools that keep students consistently engaged.

A key feature of the platform is its unique puzzle-based image system, where each correct quiz answer reveals a piece of a hidden puzzle until the entire image is uncovered. This approach adds excitement, a sense of achievement, and continuous motivation to the learning process. To complement this, personalized dashboards are provided for students to track their progress, while administrators gain access to simple and efficient tools for creating, managing, and monitoring quizzes.

The system is implemented using Python with Flask for the backend, HTML, CSS, and JavaScript for the frontend, and SQLite as the database. This lightweight yet reliable technology stack ensures scalability, responsiveness, and accessibility across devices, making the platform suitable for diverse learning environments.

By combining gamification with interactive puzzle-solving, QUIZ PUZZLE – GAMIFIED LEARNING is expected to deliver a robust, user-friendly solution that significantly improves student engagement and knowledge retention. Ultimately, it provides a rewarding educational experience that benefits both learners and educators.