# PRESIDENCY UNIVERSITY

# A CREATIVE WEB-BASED LEARNING APPLICATION INTEGRATING NOTES, QUIZZES AND GAMES

## A PROJECT REPORT

*Submitted by,*

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## BACHELOR OF TECHNOLOGY

IN

## COMPUTER SCIENCE AND ENGINEERING

### PRESIDENCY UNIVERSITY

### BENGALURU

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# PRESIDENCY UNIVERSITY

Private University Estd. in Karnataka State by Act No. 41 of 2013
Itgalpura, Rajankunte, Yelahanka, Bengaluru – 560064

**50 YEARS**

## PRESIDENCY SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

## BONAFIDE CERTIFICATE

Certified that this report "Interactive Smart Education Portal with Aptitude Quizzes and Memory games" is a bonafide work of "AMINA ZAIBA (20221CSE0365) , AMREEN KOWSAR (20221CSE0349), SRUSHTI (20221CSE0371)", who have successfully carried out the project work and submitted the report for partial fulfilment of the requirements for the award of the degree of BACHELOR OF TECHNOLOGY in COMPUTER SCIENCE ENGINEERING during 2025-26.

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## DECLARATION

We the students of final year B.Tech in COMPUTER SCIENCE ENGINEERING at Presidency University, Bengaluru, named Amina Zaiba , Amreen Kowsar, Srushti, hereby declare that the project work titled "Interactive Smart Education Portal with Aptitude Quizzes and Memory games" has been independently carried out by us and submitted in partial fulfilment for the award of the degree of B.Tech in COMPUTER SCIENCE ENGINEERING, during the academic year of 2025-26. Further, the matter embodied in the project has not been submitted previously by anybody for the award of any Degree or Diploma to any other institution.

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# Abstract

Technology has transformed the way students learn, work together, and evaluate their understanding in the current education system. Traditional methods of teaching in the classroom, although helpful, are not flexible and do not fully engage students who are accustomed to interactive and technology-driven environments. Web-based learning platforms have been found to be an answer through their scalability, accessibility, and interaction potential for education. However, most of the existing platforms only handle either content presentation or testing, little combining cognitive skill development and gamification methodologies.

In this research, an innovative web-based learning application that brings together three integral components—notes, quizzes, and cognitive skill games—is introduced under a combined platform. The proposed system is designed to support both students and teachers with customized dashboards and role-based features. Students can register securely, see collaborative notes, participate in time-sensitive quizzes, and unlock cognitive ability games based on quiz performance. Teachers, on the other hand, can register to post lecture notes in PDF or text format, create quizzes with auto-grading, and monitor student progress in real time. This two-dashboard approach not only facilitates teacher-student interaction but also ensures a structured and engaging learning experience.