



Artificial Intelligence Integrated E-Learning System

UNDERGRADUATE THESIS

Submitted as one of the requirements to obtain

Sarjana Komputer (S.Kom)

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FACULTY OF COMPUTER SCIENCE

INFORMATICS STUDY PROGRAM

CIKARANG

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ABSTRACT

Conventional English learning method at English Language Learning Center (ELLC) President University faces challenges with limited access for students to practice tests and lack of progressive individual difficulty levels for each of student. This capstone project presents the design and implementation of an adaptive quiz system within an AI-integrated e-learning platform for English language learning Center at President University. The quiz system has features which is five progressive levels of quiz where students must pass each of the level before continue to the next level. Each level contains of multiple-choice questions that are randomly generated to prevent memorization and similarity of quiz question when running. The system includes real-time scoring, immediate feedback to students, and the detailed progress tracking. The technical implementation of this quiz system uses React.js for the frontend, Flask-Python for the backend, and MySQL for data storage. The system automatically unlocks new levels when students achieve passing scores of the current level that they do and saves all quiz attempts for individual progress monitoring. This capstone project also do testing with 41 participants to evaluate the system, and as the result of the testing shows positive user satisfaction and effective learning outcomes. The quiz system successfully integrates with the broader AI learning platform, which provides students with accessible and flexible learning tools that support continuous English skill development.

Keyword: Quiz System, E-Learning Platform, Progressive System, English Learning

TABLE OF CONTENTS

ABSTRACT	i
DEDICATION	Error! Bookmark not defined.
ACKNOWLEDGMENTS	ii
TABLE OF CONTENTS	iii
LIST OF TABLE	v
LIST OF FIGURE	vi
CHAPTER I INTRODUCTION	1
1.1 Background	1
1.2 Problem Formulation	2
1.3 Problem Limitation	2
1.4 Objectives	3
1.5 Solution Selection	3
1.6 Research Methods	3
CHAPTER II LITERATURE REVIEW	6
2.1 Python Flask	7
2.2 React.Js	8
2.3 Basis Data MySQL	8
2.4 Related Work	9
2.5 Comparison Table	9

CHAPTER III SYSTEM ANALYSIS AND DESIGN.....	12
3.1 System Analysis	12
3.2 Product Perspective	13
3.3 Product Function	13
3.4 Interface Requirements	18
3.5 Design	20
CHAPTER IV SYSTEM IMPLEMENTATION AND TESTING.....	22
4.1 System Implementation	22
4.2 Software Functionality Testing	37
CHAPTER V CLOSING	51
5.1 Conclusion	51
5.2 Feature Work	52
REFERENCES.....	53

LIST OF TABLE

Table 2. 1 Comparison Table.....	9
Table 3. 1 Table Description Use Case.....	14
Table 3. 2 User Interface.....	18
Table 4. 1 Functionality Testing: generates question for the user	37
Table 4. 2 Functionality Testing: save the result for the database.....	40

LIST OF FIGURE

Figure 3. 1 Use Case: E-Learning System	13
Figure 3. 2 ERD: E-learning System	15
Figure 3. 3 Activity Diagram: Scoring Result	16
Figure 3. 4 Activity Diagram: Question Shuffle.....	17
Figure 3. 5 Activity Diagram: Display Result	18
Figure 3. 6 Overview Quiz System.....	20
Figure 4. 1 Implementation Interface: Quiz Page	22
Figure 4. 2 Implementation Interface: Quiz Question Page	23
Figure 4. 3 Implementation Interface: Quiz Result Page.....	24
Figure 4. 4 Implementation Interface: Track Your Journey (AI Insight)	25
Figure 4. 5 Implementation Code: Quiz Selection.....	26
Figure 4. 6 Implementation Code: Question Generation	28
Figure 4. 7 Implementation Code: Answer Evaluation	30
Figure 4. 8 Implementation Code: Score Calculation.....	32
Figure 4. 9 Implementation Code: Machine Learning.....	35
Figure 4. 10 Qualitative Testing: User Interface	42
Figure 4. 11 Qualitative Testing: Features Work Properly	43
Figure 4. 12 Qualitative Testing: If App Motivate	43
Figure 4. 13 Qualitative Testing: How Satisfied the character animation	44
Figure 4. 14 Qualitative Testing: Speech-to-text feature.....	44
Figure 4. 15 Qualitative Testing: Grammar Correction.....	45
Figure 4. 16 Qualitative Testing: Chatbot Respond to User	45
Figure 4. 17 Qualitative Testing: Quiz Generate Questions	46
Figure 4. 18 Qualitative Testing: Quiz Questions	46

Figure 4. 19 Qualitative Testing: Quiz Motivation.....	47
Figure 4. 20 Qualitative Testing: Quiz Score	47
Figure 4. 21 Qualitative Testing: Chatbot neutralizes offensive language	48
Figure 4. 22 Qualitative Testing: Progress Report displayed	48
Figure 4. 23 Qualitative Testing: System Accurately	49
Figure 4. 24 Qualitative Testing: Application Menu Understanding.....	49