

# **D2U EXAM: DEVELOPMENT OF AN ONLINE EXAMINATION PLATFORM USING PHP TO REDUCE CHEATING AMONGST STUDENTS**

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**FAKULTY OF ART, COMPUTER AND CREATIVE INDUSTRY  
UNIVERSITI PENDIDIKAN SULTAN IDRIS**

**2023**



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**FINAL YEAR PROJECT REPORT SUBMITTED TO MEET THE REQUIREMENTS TO  
OBTAIN A BACHELOR OF EDUCATION DEGREE (EDUCATION SOFTWARE  
ENGINEERING) WITH HONORS**



**FACULTY OF ART, COMPUTER AND CREATIVE INDUSTRY  
UNIVERSITI PENDIDIKAN SULTAN IDRIS**

**2023**



**FAKULTI SENI, KOMPUTERAN DAN  
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To Reduce Cheating Amongst Students  
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I confirm that all the material contained in this final year project report is the result of my own efforts. If there are other people's or other parties' work whether published or not (such as books, articles, papers, or materials in other forms such as audio and video recordings, electronic publications, or the Internet) that have been used, I have already recorded the recognition of their contributions through appropriate academic conventions. I also acknowledge that the material contained in this final year project report has not yet been published or submitted for another program or diploma/degree in any university.

25/2/2023

Date

Student's Signature  
(Mohd Aras Aiman Bin Abu Bakar)**Supervisor's Certificate:**

I acknowledge that I have read this work and in my view this work is sufficient in terms of scope and quality for the purpose of awarding the Bachelor of Software Engineering (Educational Software) with Honors.

25/2/2023

Date

Supervisor's Signature

(Dr. Nor Asiah Binti Mohamad @ Razak)



## APPRECIATION

Alhamdulillah thanks Allah SWT. and as much gratitude as possible to the divine presence because with his grace I was able to successfully complete the assignment for this final year project.

With this opportunity, I am very pleased to present a million thanks to Dr. Nor Asiah Binti Mohamad @Razak, as the supervisor for my final year project for having put his full trust in me to complete the assignment given.

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Thank you.

## D2U EXAM: DEVELOPMENT OF AN ONLINE EXAMINATION PLATFORM USING PHP TO REDUCE CHEATING AMONGST STUDENTS

### ABSTRACT

This project aims to overcome the problem of fraud among students when exams are conducted online. The project was carried out by developing an online exam system software called D2U Exam which has several features that can be used to prevent students from copying during the exam. D2U Exam is developed using the Hypertext Preprocessor (PHP) programming language and tested by providing this system to users. The results of the study found that the developed system is effective in preventing students from copying during online exams. The use of this D2U Exam system also found that it is a good way to overcome the problem of copying among students because it has some good functions such as students cannot surf the internet when this system is open on their computer, and they cannot use the keyboard for improper purposes.

## D2U EXAM: DEVELOPMENT OF AN ONLINE EXAMINATION PLATFORM USING PHP TO REDUCE CHEATING AMONGST STUDENTS

### ABSTRAK

Projek ini bertujuan untuk mengatasi masalah penipuan dalam kalangan pelajar Universiti Pendidikan Sultan Idris (UPSI) ketika peperiksaan secara atas talian dijalankan. Projek dijalankan dengan membangunkan sebuah perisian sistem peperiksaan atas talian bernama D2U Exam yang mempunyai beberapa ciri yang boleh digunakan untuk menghalang pelajar daripada meniru ketika peperiksaan dijalankan. D2U Exam dibangunkan menggunakan bahasa pengaturcaraan Hypertext Preprocessor (PHP) dan diuji dengan pemberian sistem ini kepada pengguna. Hasil kajian mendapati bahawa sistem yang dibangunkan adalah berkesan dalam mencegah para pelajar dari meniru ketika dalam peperiksaan atas talian. Penggunaan sistem D2U Exam ini juga mendapati ianya adalah satu cara yang baik untuk mengatasi masalah meniru dalam kalangan pelajar disebabkan ianya mempunyai beberapa fungsi yang bagus seperti pelajar tidak dapat melayari internet ketika sistem ini sedang terbuka di komputer mereka, dan mereka tidak boleh menggunakan papan kekunci untuk tujuan yang tidak sepatutnya.

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## LIST OF ABBREVIATION

SUS	System Usability Scale
HTML	Hypertext Markup Language
CSS	Cascading Style Sheet
UI	User Interface
SRS	Software Requirement Specification
SDD	Software Design Document
STD	Software Test Description

## ATTACHMENT LIST

- 1 Software Requirement Specification (SRS)
- 2 Software Design Document (SDD)
- 3 Software Test Description (STD)

## CHAPTER 1

### INTRODUCTION



## 1.1 Introduction

This chapter discusses the background of the study, the problem statement on the case of cheating among students that occurs when they take exams online. Since our country has been hit by the COVID-19 epidemic that has greatly affected our daily lives, including students at higher education institutes. Exams that used to be conducted online where students must answer questions prepared by lecturers through online applications such as Google Form, Microsoft Form, and others. Therefore, when students answer the exam at home, of course they cannot be monitored by the teaching staff. This will create a problem which is imitation among the students. This bad behavior needs to be contained to produce a quality generation that is useful to the job market.



## 1.2 Background of Study

Imitation among students is not a new thing in our country. This has been around for a long time and is getting harder to control. It can happen during face-to-face and online exams. When the exam is conducted face-to-face, various ways are done by students to imitate, including by sneaking in notes written on small papers and hiding them in their clothes. In this unethical way, they can refer to the notes when answering exam questions. So, how do these students imitate during online exams? These irresponsible students will use the internet as their notes. This happens because students do not have an honest nature in themselves. They will surf the internet to find answers to exam questions and imitate them.

Various ways have been done to curb the problem of copying among students







when exams are conducted online, one of which is to reduce the time required to answer questions to a shorter time. However, this method is less effective because students can still imitate during the exam. This is because they can still use the internet to find the desired answer.

In addition, among other ways that can be used to curb the problem of copying among students is to use software that works to prepare exam questions and this software will be used by students to answer exam questions. Among the advantages that need to be applied in this software is that it needs to be equipped with features to prevent students from browsing the internet when the online exam is taking place. With this, it can reduce the symptoms of imitation. So, software needs to be developed and have all the necessary features to overcome this problem by preventing students from opening other applications other than the application to answer the exam itself.



### 1.3 Problem Statement

There are several causes that can lead to the occurrence of imitation in online examinations, among them is the lack of detection method in online examination. Because students can answer the exam at home or wherever they are, therefore, they cannot be monitored by anyone. Then, they are free to do anything during the exam including copying.

Next is the waste of paper that is used to conduct face-to-face examinations. It takes 10-20 years to plant trees to be used to process into paper. So, if the exam is conducted online, the use of paper can be drastically reduced and thus reduce waste in accordance with today's world which is more geared towards technological development.



Therefore, we should take advantage of the use of technology in a better direction while taking care of our environment.

Finally, when comparing online and face-to-face exams, it takes more energy to conduct face-to-face exams because instructors must type the exam questions on their computers first before printing them on the exam paper. So clearly, a lot of work must be done by the instructor just to produce the exam paper. Not only that, the institute of higher learning also needs to prepare a special room like a hall to be used as an examination hall. Chairs and tables should be arranged for students.

#### 1.4 Research Objective

The objective of this research is to:

1. To identify the main problem that leads to cheating amongst the students during online examination.
2. To develop an online examination platform using PHP based on the problems discovered in O1 named D2U Exam.
3. To test the functionalities of the platform developed in objective number two (2).

#### 1.5 Research Questions

The following are the research questions:

1. How to identify the main problem that leads to cheating amongst the students during online examination?  
What are the main factors that contribute to academic cheating during online examinations, and how can educators effectively identify and address these issues to promote academic integrity?
2. How to develop an online examination platform using PHP based on the problems discovered in O1 named D2U Exam?  
How can a PHP-based online examination platform be developed to address the identified problems in the D2U Exam platform, and what are the key design considerations and implementation challenges associated with this process?

3. How to test the functionality of the platform developed in objective number two (2)? What methods and strategies can be used to effectively test the functionality of the platform developed in objective two, and how can these tests be designed and executed to ensure that the platform meets the desired specifications and quality standards?

## 1.6 Research Hypothesis

The hypothesis of this study is:

H01: D2U Exam system can solve 100% cheating amongst students.

H02: D2U Exam is equipped with all anti-cheat features suggested.

## 1.7 Scope/Limitations of the Research

Scope is the constraint of the study undertaken to ensure that the evaluator understands the study's limitations. The function of this research is to develop an online examination platform that can prevent any cheating during the online examination. Meanwhile, the target user for this D2U Exam is UPSI lecturers and UPSI students. For geographical area, it is in Tanjung Malim as the target user is the Sultan Idris Education University (UPSI) lecturers and students.

## 1.8 Importance of Research

The following are the findings of this project's development study:

1. Understanding the suitable features to create an anti-cheat examination system.
2. Emphasis on an easy-to-use function.
3. Understanding the benefits of online examination.