

A PRELIMINARY REPORT ON

DIGITAL LANGUAGE LAB PORTAL

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FOR THE AWARD OF THE DEGREE

**BACHELOR OF ENGINEERING (COMPUTER
ENGINEERING)**

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2020-21



CERTIFICATE

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ABSTRACT

These is web as well as android application help to conducts schools and colleges in online mode. These application makes task easy such as upload documents, videos, pdf regarding syllabus and study material. By using these application teachers get online exam and generate result quick as possible. Student also conduct missed lectures beyond limit of place and time.

Student conduct live lectures and lecture whose missed due to some reasons. Student get regular notification on app regarding college, department and exam. Student also conduct exams in online mode and get result quick. These application also helpful to submit assignment and practical work online to teachers.

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LIST OF ABBREVIATIONS

ABBREVIATION	ILLUSTRATION
VPN	Virtual Private Network
IP	Internet Protocol
IDS	Intrusion Detection System
TCP	Transmission Control Protocol

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INTRODUCTION

MOTIVATION

Now a days we are see all education facilities being in online mode. Due to many reasons student are unable to conduct lecture in physical classroom so we need to design a system such a way that these system make work simple and beyond the limit of space and time. By using these portal student can conduct lecture in online mode and also conduct lecture whose are missed by some reason. Student get all notification in their applications and also submit assignment, attend the exam. These system also helpful for teacher to examine the student progress by view their reports and also generate report on one click.

PROBLEM DEFINITION

Now a day schools and colleges conduct in online mode so student needed online lectures and documentation regarding syllabus, topics. These application help to student as well as teachers or faculty to manage online lectures. Teachers provides online pdf, videos, and other documents. Also conduct online exam for student and quick generate results.

LITERATURE SURVEY

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Abstract

The use of technology in language learning has extensively expanded in line with the advancement of technology itself. However, the investigation into the implementation of video conferences, learning management systems, and mobile applications, particularly during the emergency remote teaching/the Covid-19 pandemic, is still lacking. This paper presents survey data from three groups of Indonesian EFL students using three different digital learning platforms: Cisco WebEx Meeting video conferencing, Google Classroom learning management system (LMS), and WhatsApp mobile messenger application. The purpose of the study was to determine the students' preferences including their perception and point of views on using the platforms and application during the remote teaching situation.

Introduction

On March 11, 2020, the World Health Organization (WHO) announced that the novel coronavirus (Covid-19) outbreak had become a worldwide pandemic because the cases outside China rose 13 times and the number of countries with cases increased threefold over two weeks (Cucinotta & Vanelli, 2020). Several days later, as reported by UN Educational, Scientific and Cultural Organization on March 18, 2020, approximately 107 countries had implemented national school closures concerning to this pandemic that has impacted 862 million children and young people around the world (Viner et al., 2020). The policy was to curb the widespread of the virus and to reduce the transmission and the number of cases. In Indonesia, in the

middle of March 2020, most schools and universities have been closed along with the presidential briefing and campaign to work, learn, and worship from home. Officially, as cited from <https://www.thejakartapost.com/> by Sutrisno (2020), the Indonesian government has issued two regulations, they are government regulation and Health Ministry regulation by early April to apply a largescale social restriction (Pembatasan Sosial Berskala Besar or PSBB); it equals to partial lockdown. As a consequence, offices, schools, universities, and worship places have to close, and people move into online activities through Work from Home and Learn from Home agenda. In the educational sector, some schools and universities have applied the policy of remote teaching and online learning (Purwanto et al., 2020). It resulted in a situation where teachers and students are undesirably asked to change their teaching system from the offline face-to-face session in the classroom into a digital/virtual teaching system using various online platforms or applications. They must quickly learn and adapt their teaching and learning management to cope with this unprecedented situation. Likewise, an adjustment in teaching materials, media, and assessments is highly needed to be performed immediately. Teachers and students in the field of English as a foreign language have no differences in handling it

Results

This current paper was addressed to describe the students' preferences on the use of the Cisco WebEx Meeting (CWE), Google Classroom (GC), and WhatsApp (WA) among three different groups of student-participants during ERT/the Covid-19 pandemic. The results were presented based on six criteria of CALL evaluation and responses upon opened questions among the three platforms and applications. The first criterion was the language learning potential. It explores the learning opportunity focusing on material delivery and language exercise that allows students to learn a language. Based on the result in Table 4, WhatsApp got the highest percentage on material delivery, but GC gained on top of presenting language exercise. Not only that, almost half of participants on each group-participant, 44%-61% of

them, perceived that the digital platforms they used during ERT were as beneficial and potential in language learning.

CONCLUSION

This current study was to explore the students' preferences on digital learning platforms during the emergency remote teaching. The major finding shows that the student-participants at each group of three digital platforms on the survey, Cisco WebEx Meeting video conferencing, Google Classroom learning management system, and WhatsApp mobile messenger application perceives positive agreement and feel much learning and improvement though it was in an unprecedented situation. Approximately 44%-61% of the student-participant at each group agreed that the platform they used was beneficial and potential for language learning. F. M. Amin, & H. Sundari, EFL students' preferences on digital platforms during emergency remote teaching: Video Conference, LMS, or Messenger Application? | 375 For Cisco WebEx video conferencing, it scored within 73 to 84 for all six criteria. Authenticity received the highest score. It indicates that the student-participants felt Cisco WebEx help them learn using the real language for communication. Meanwhile, Google Classroom LMS achieved 74 to 95 in six criteria; the lowest score on positive impact and the highest score on language learning potential. This shows that the student-participant who used Google Classroom found that it brings good potential as a language learning tool, but they may feel doubt to use it for the next course. The use of Google Classroom might need to be accompanied by other platforms or applications to create a more communicative and interactive session. On the other hand, the WhatsApp mobile messenger application receives more positive agreement and preferences in four out of six criteria: meaning focus, learner fit, positive impact, and practicality. The student-participants facilitated by WhatsApp perceived that this application is practical and suitable for them in the term of age, preferences, and style.

SOFTWARE REQUIREMENTS SPECIFICATION

INTRODUCTION

Project Scope

Online learning is a wide platform to help students get more educated. With the E-Learning, the concept of learning has differed from the old times. This portal is widely increased as the each individual contains a smart phone with high speed internet through which, each can access the courses on the portal in minutes. Some report engines like KPMG released their research that, by the year 2021, the count of people who were using the e-learning platform can reach up to 9.6 million. This figure is huge in number. In order to help learners to get more knowledgeable. These portal creating more interest to students with their new courses, practical etc. This learning platform is creating its type of awareness which is available to the villages and all the cities.

User Classes and Characteristics

- New Registration
- Apply for Course
- View Documents and PDF
- View Media and Lectures
- Edit Profile
- Conduct Exam
- Submit Assignment's and work
- View Result

Assumptions and Dependencies

It refers to those factors that are assumed to be certain for the purpose of costing and planning. Some of the assumptions are duration of the course, duration of the course audio, client review days and so on.

Functional Requirements

System Feature 1

The term client/server refers primarily to an architecture or logical division of responsibilities, the client is the application (also known as the front-end), and the server is the DBMS (also known as the back-end). A client/server system is a distributed system in which.

- Some sites are client sites and others are server sites.
- All the data resides at the server sites.
- All applications execute at the client sites.

Nonfunctional Requirements

Performance Requirements

The basic objective of normalization is to reduce redundancy which means that information is to be stored only once. Storing information several times leads to wastage of storage space and increase in the total size of the data stored. Performance depends on how transaction is done on server side.

Safety Requirements

If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

Security Requirements

Security systems need database storage just like many other applications. However, the special requirements of the security market mean that vendors must choose their database partner carefully.

Software Quality Attributes

- **AVAILABILITY:** The flight should be available on the specified date and specified time as many customers are doing advance reservations.
- **CORRECTNESS:** The flight should reach start from correct start terminal and should reach the correct destination.
- **MAINTAINABILITY:** The administrators and flight in chargers should maintain correct schedules of flights.
- **USABILITY:** The flight schedules should satisfy a maximum number of customers needs.

System Requirement's

Database Requirements

- Mysql Database

Software Requirements(Platform Choice)

- Php (8.1)
- HTML, Java Script
- Android

Hardware Requirements

- Android 5.0 and Later
- Windows XP and Later
- HDD 120GB and Later

- RAM 256MB and Later

Analysis Models: SDLC Model to be applied

As implied in the waterfall SDLC models, the first phase of the development is analysis phase. Observation and interview have been conducted in SLC. The observation and interview conducted are to gain information and the better understanding of the problem and the needs that SLC has. Then, in the second phase or design phase, Unified Modelling Language (UML) is used to design the software architecture. The diagrams used in this phase are use case diagram, sequence diagram, activity diagram, and class diagram. After the class diagram is produced, data modeling is performed using entity relationship diagram. For the third phase or implementation, the application is developed from scratch concept using PHP. The part of the system that manages all tasks related to data like validation, session state, control, and data source structure (database). These model greatly reduces the complexity of the code the developer needs to write. The model layer is responsible for the business logic of an application. It will encapsulate

System Implementation Plan

First we need to normalize data which gather from requirements techniques. From these gather data we design database and decide attribute of database. Once database is design we are ready creates form for application. After creating all form these form are connected to each other. Once all form are connected we write logics for that forms.

SYSTEM DESIGN

System Architecture

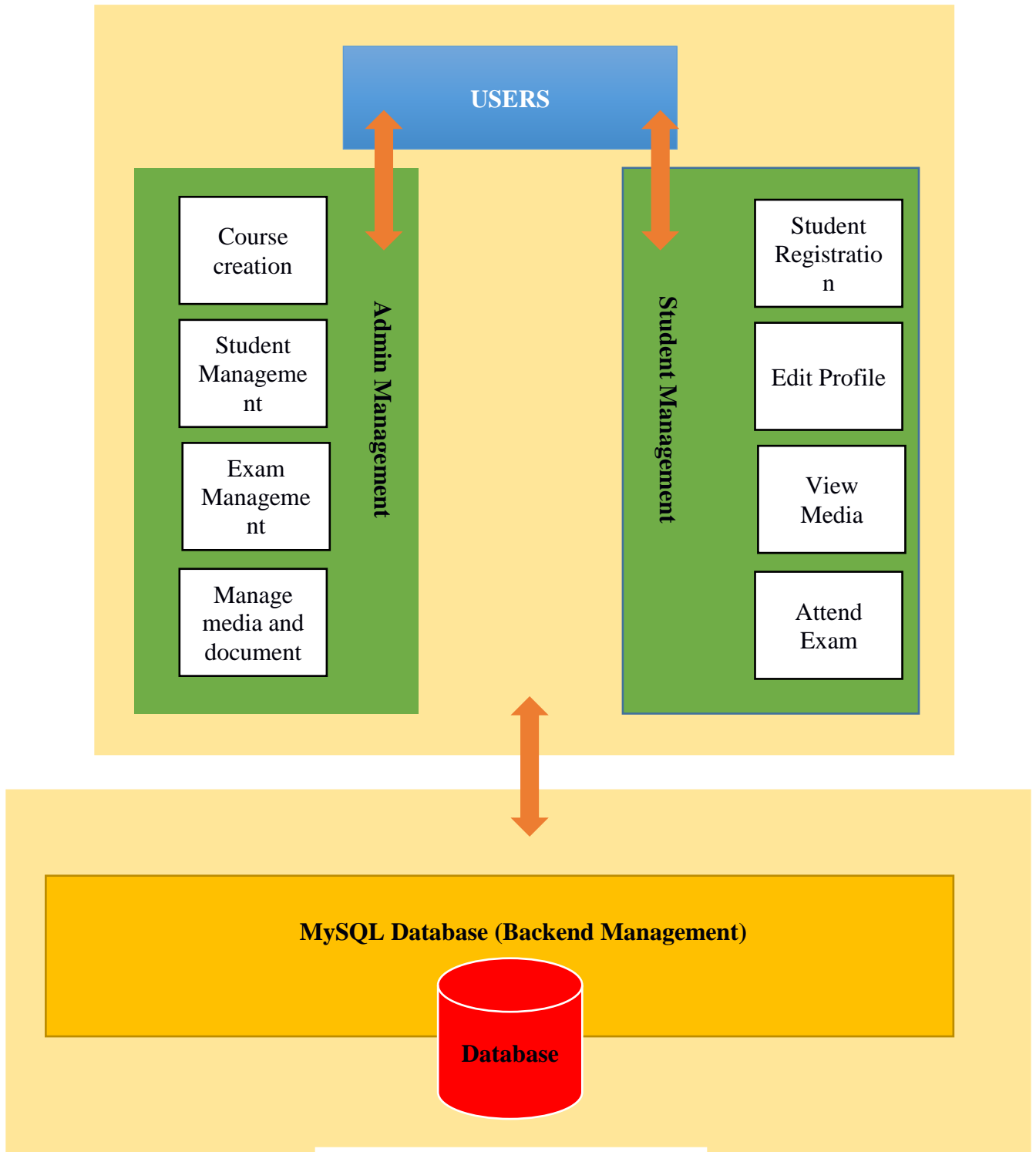


Figure system architecture

Data Flow Diagrams

Level 0

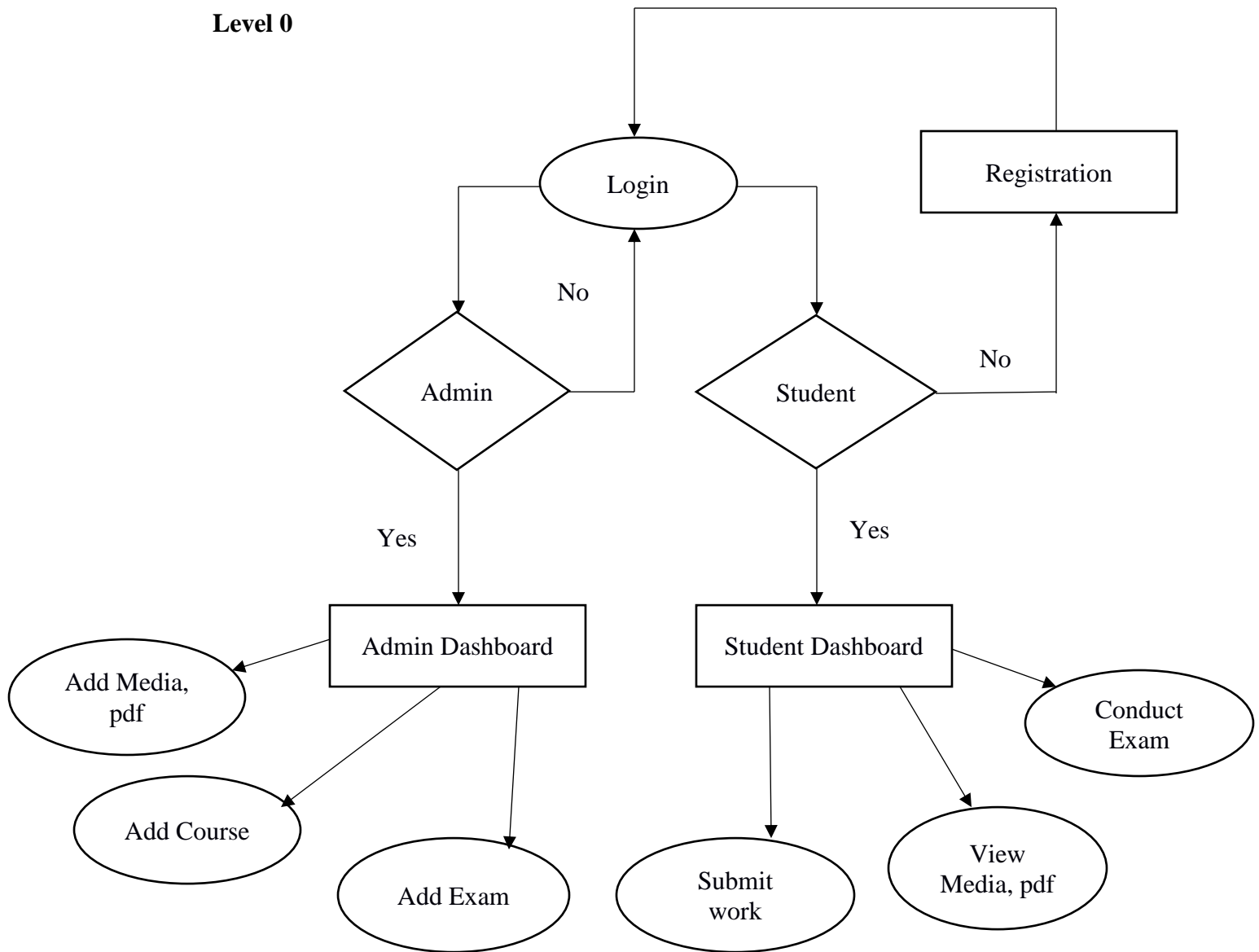


Figure DFD Level 0

Level 1

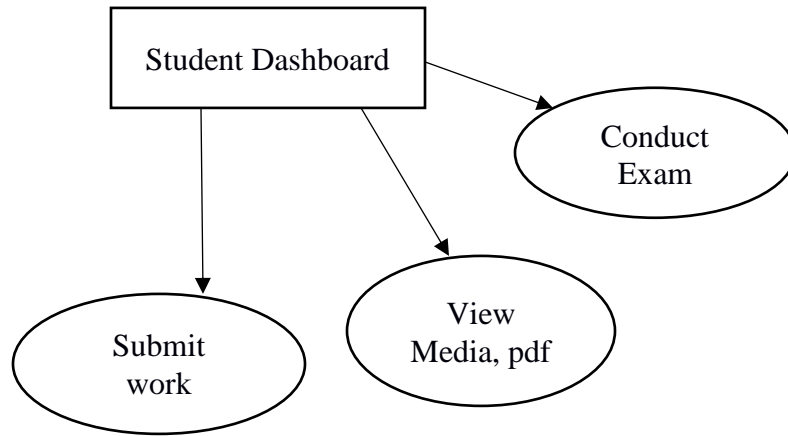


Figure DFD Level 1

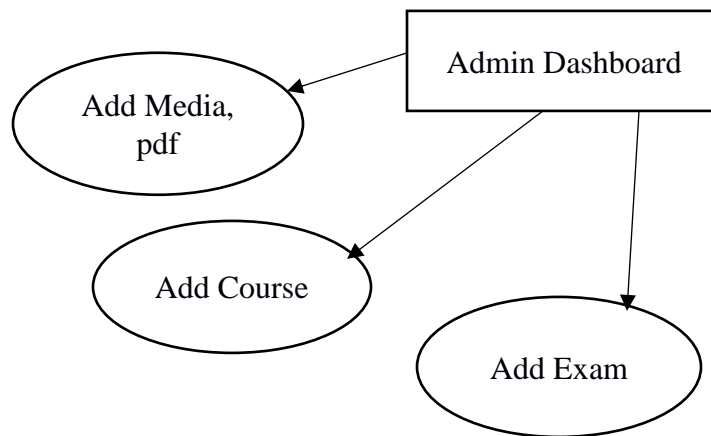


Figure DFD Level 1

Level 2

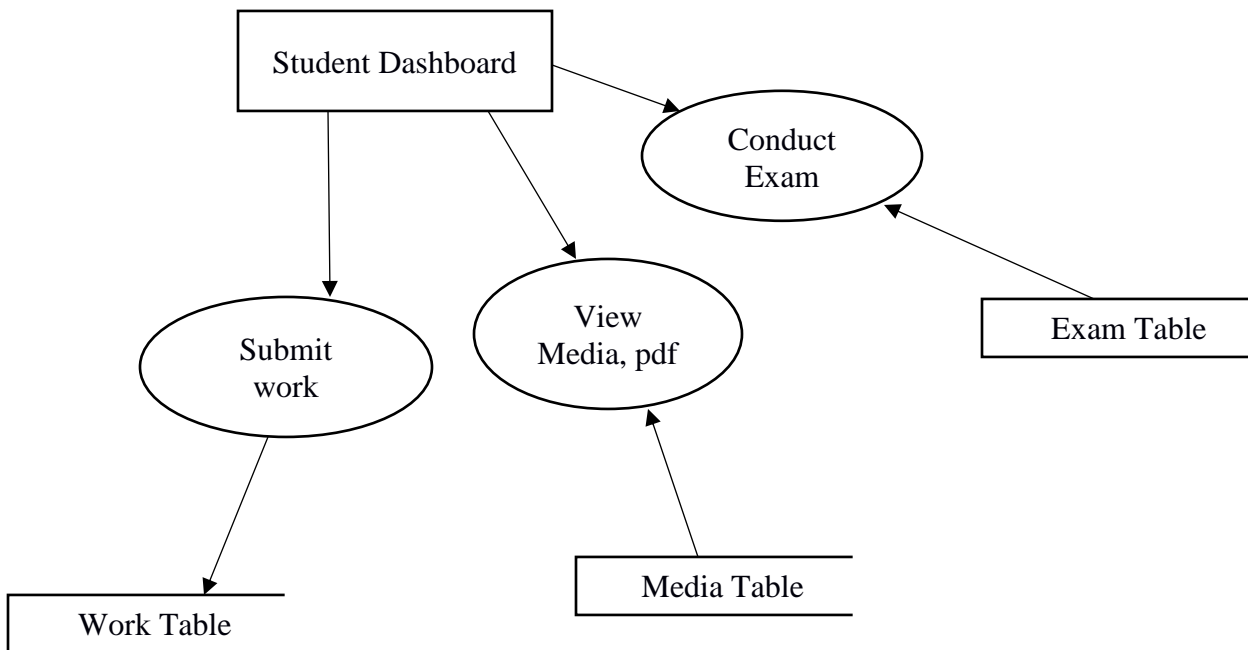
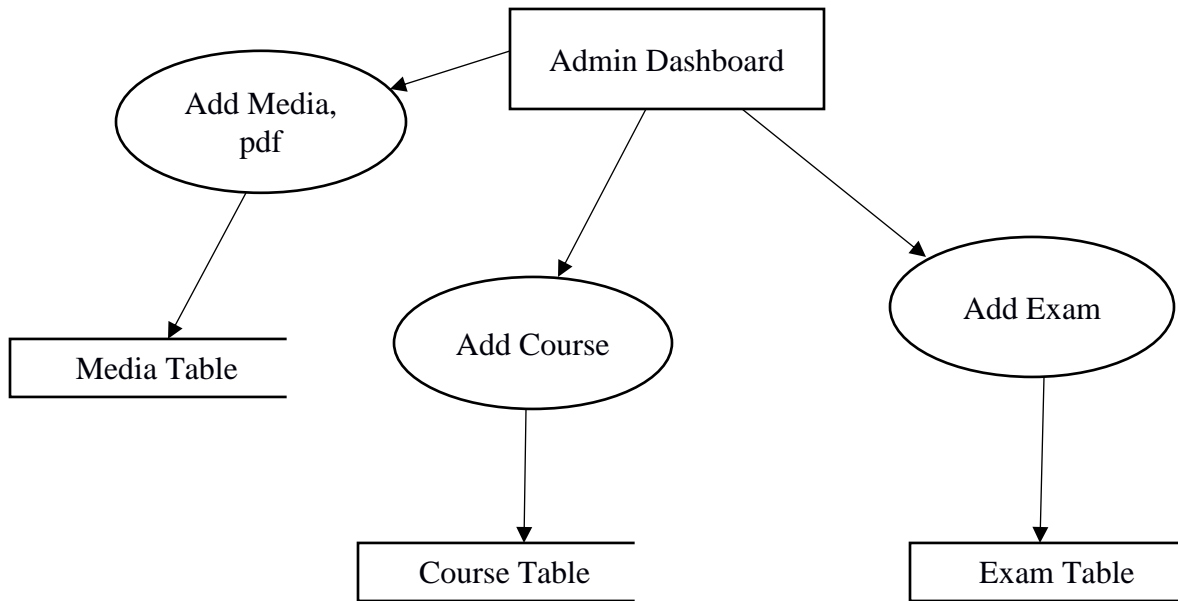


Figure DFD Level 2

Entity Relationship Diagrams

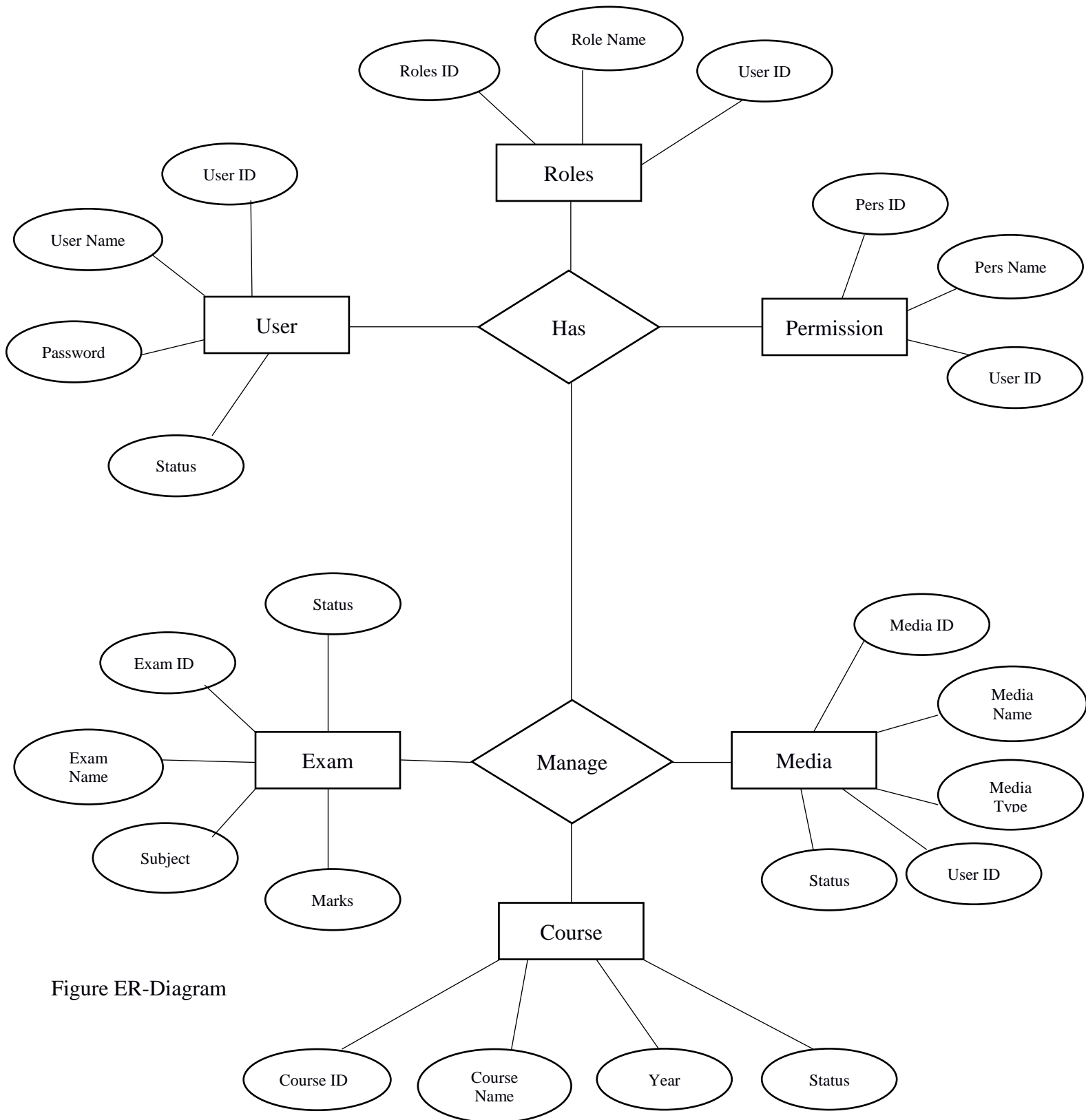


Figure ER-Diagram

UML Diagrams

Use Case Diagram



Figure use case diagram

Sequence Diagram

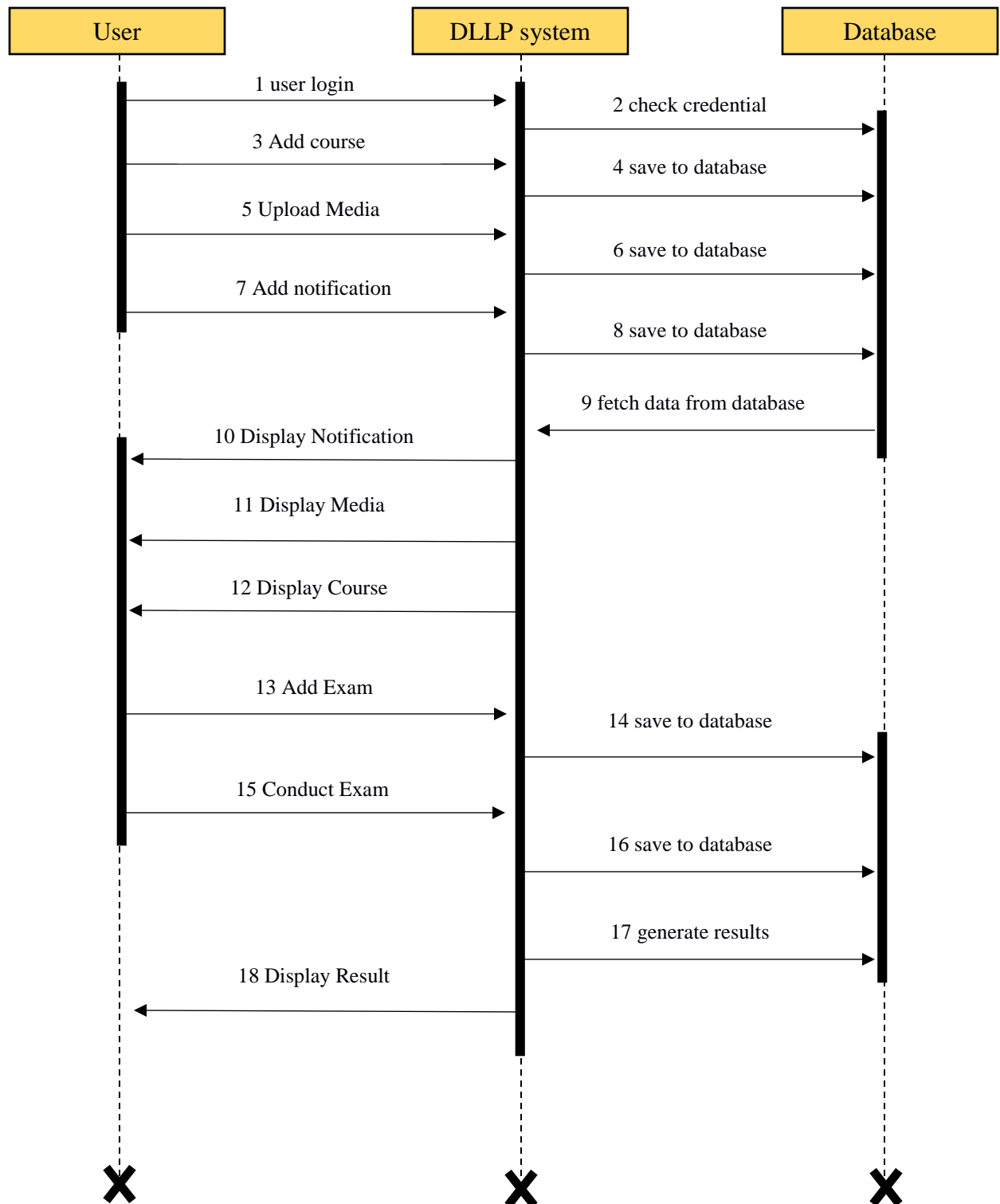


Figure Sequence Diagram

Component Diagram

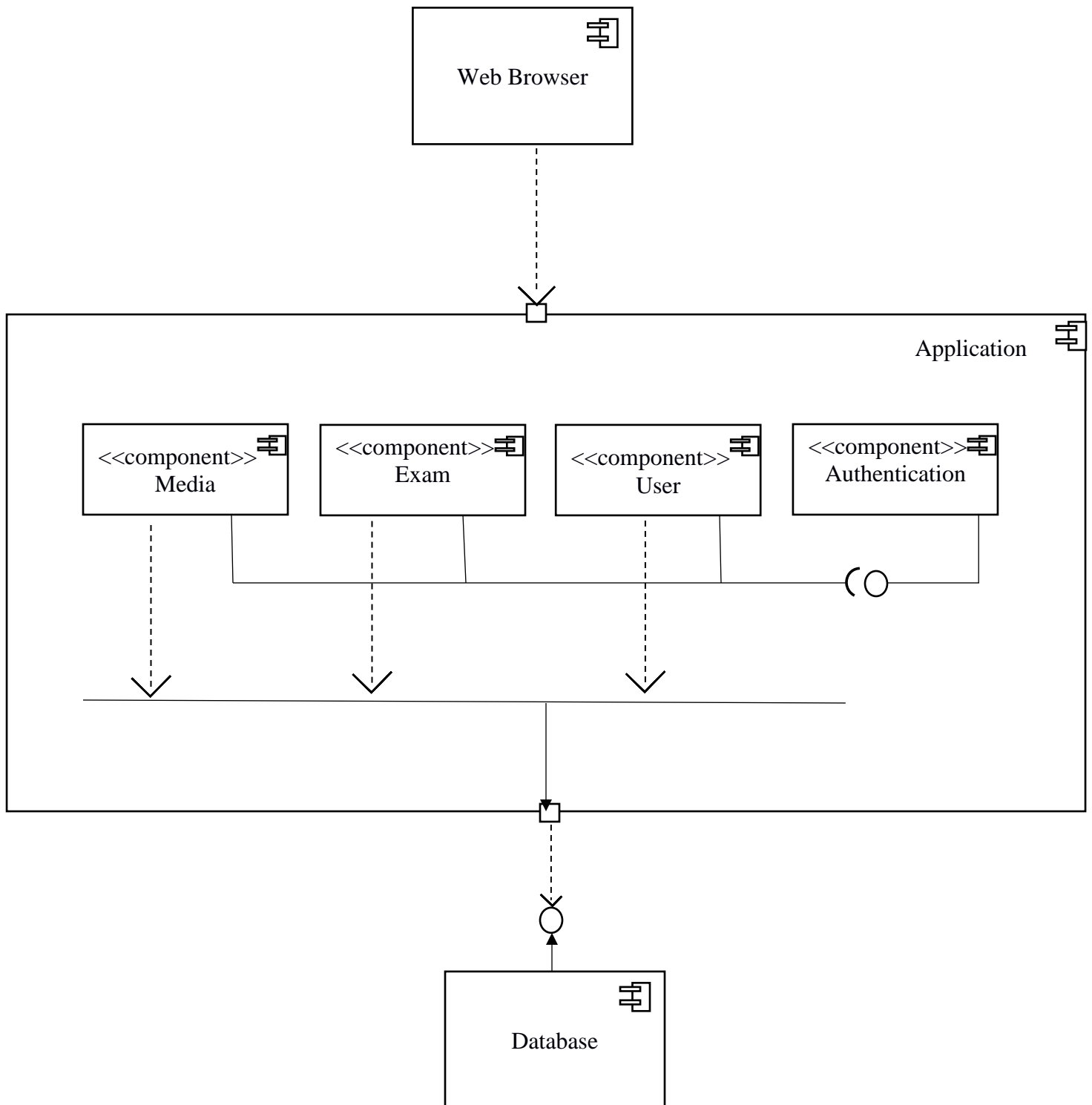


Figure Component Diagram

Deployment Diagram

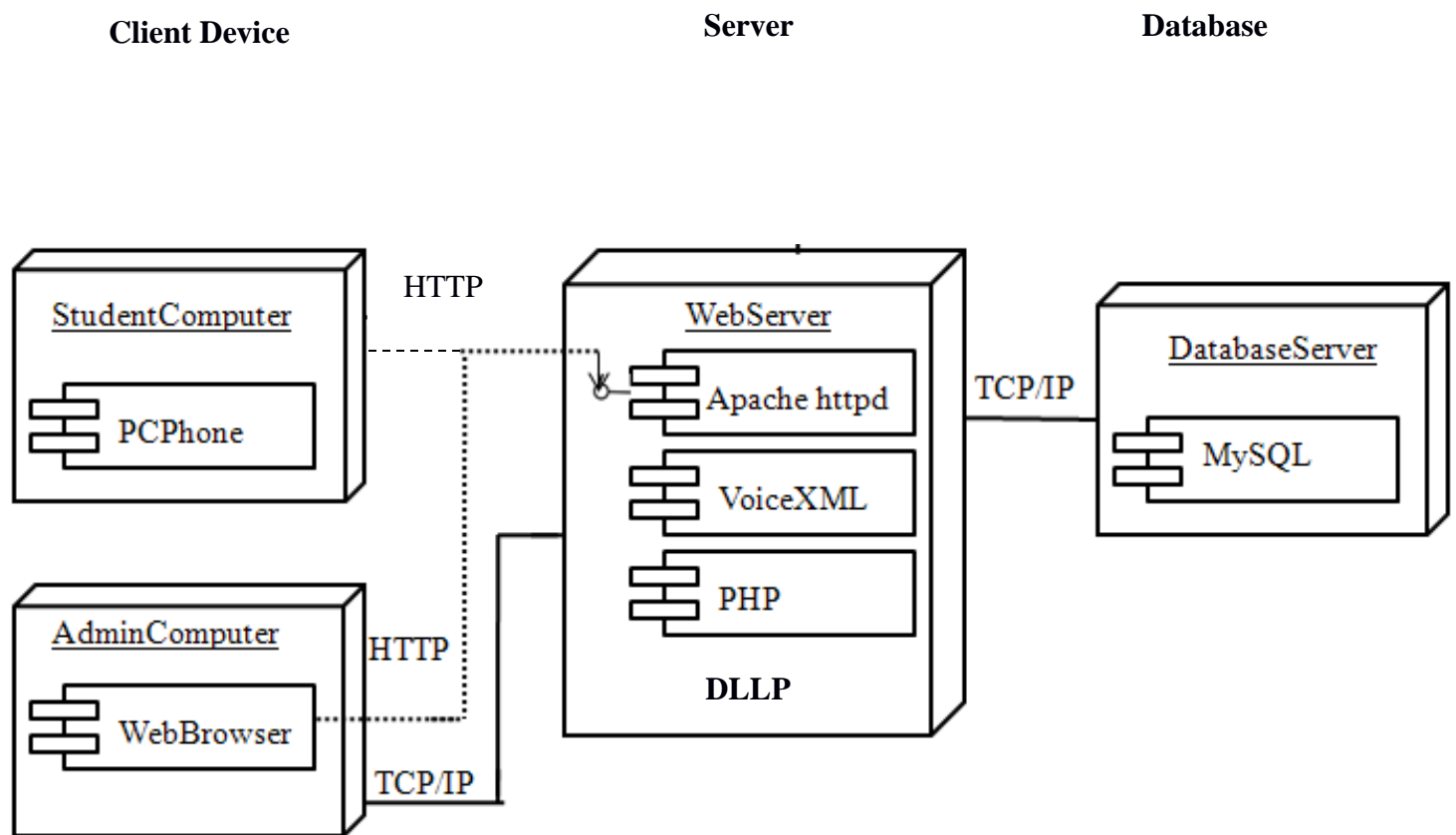


Figure Deployment Diagram

Class Diagram

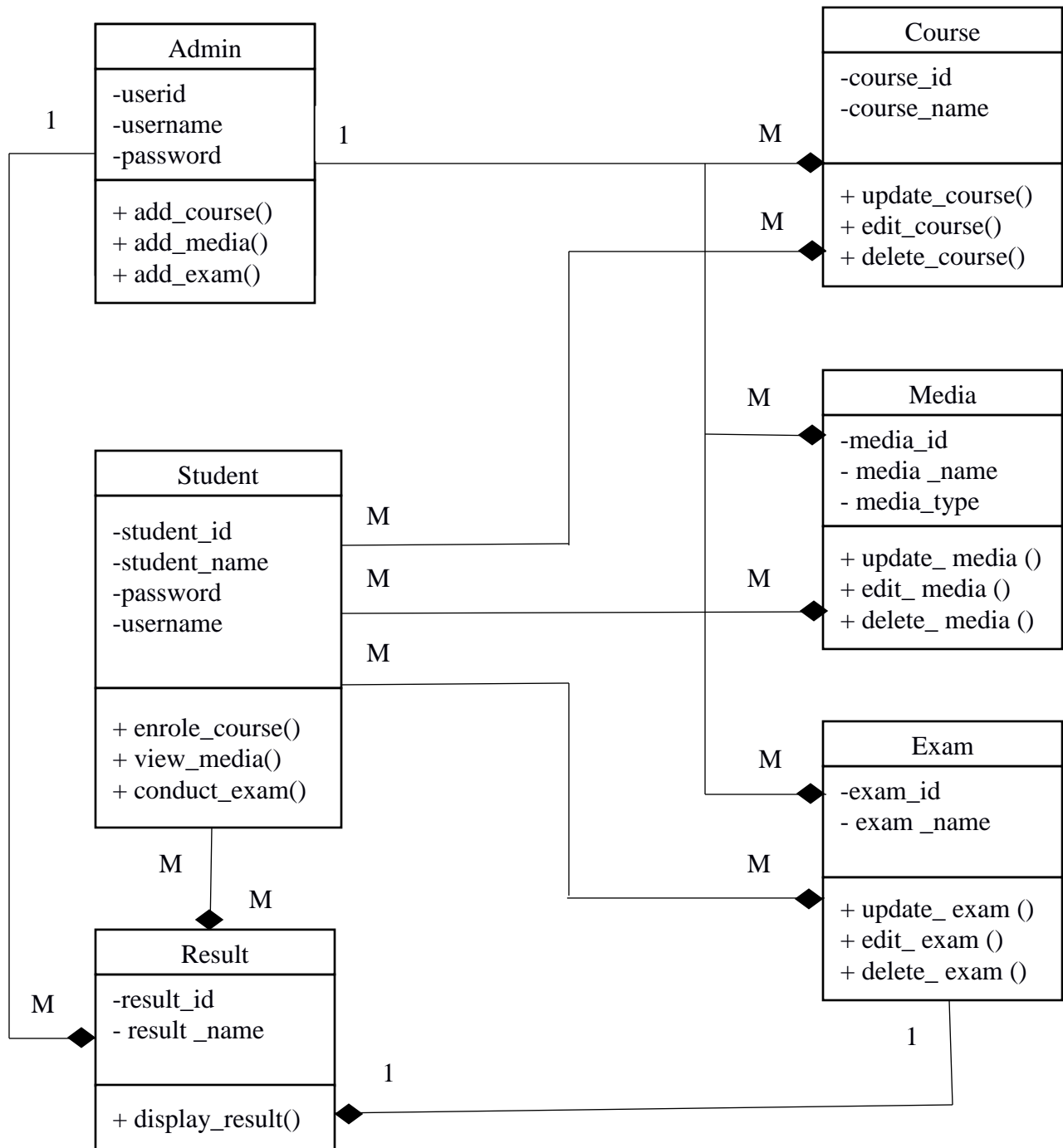


Figure Class Diagram

DATABASE TABLES

admin_login

Name	Collation	Attributes	Null	Default	Comments
id	int(20)			No	None
a_username	varchar(200)	latin1_swedish_ci		No	None
a_password	varchar(200)	latin1_swedish_ci		No	None

course_document

Name	Collation	Attributes	Null	Default	Comments
document_id	int(20)			No	None
upload_date	varchar(100)	latin1_swedish_ci		No	None
course_id	int(20)			No	None
document_title	varchar(200)	latin1_swedish_ci		No	None
document_description	varchar(500)	latin1_swedish_ci		No	None
document_path	varchar(300)	latin1_swedish_ci		No	None

Course_meeting

Name	Collation	Attributes	Null	Default	Comments
meeting_id	int(20)			No	None
meeting_date	varchar(45)	latin1_swedish_ci		No	None
course_id	int(20)			No	None
course_name	varchar(200)	latin1_swedish_ci		No	None
meeting_time	varchar(45)	latin1_swedish_ci		No	None
meeting_zoomid	varchar(500)	latin1_swedish_ci		No	None
meeting_password	varchar(200)	latin1_swedish_ci		No	None
status	varchar(100)	latin1_swedish_ci		No	None

Course_registration

Name	Collation	Attributes	Null	Default	Comments
registration_id	int(20)			No	None
registration_date	varchar(100)	latin1_swedish_ci		No	None
student_name	varchar(200)	latin1_swedish_ci		No	None
mobile_no	varchar(45)	latin1_swedish_ci		No	None
email_id	varchar(200)	latin1_swedish_ci		No	None
qualification	varchar(200)	latin1_swedish_ci		No	None
full_address	varchar(2000)	latin1_swedish_ci		No	None
status	varchar(200)	latin1_swedish_ci		No	None
username	varchar(200)	latin1_swedish_ci		No	None
password	varchar(200)	latin1_swedish_ci		No	None

Exam

Name	Collation	Attributes	Null	Default	Comments
exam_id	int(20)			No	<i>None</i>
student_id	int(20)			No	<i>None</i>
test_id	int(20)			No	<i>None</i>
exam_date	varchar(100)	latin1_swedish_ci		No	<i>None</i>

Lecture_video

Name	Collation	Attributes	Null	Default	Comments
lecture_video_id	int(20)			No	<i>None</i>
upload_date	varchar(100)	latin1_swedish_ci		No	<i>None</i>
course_id	int(20)			No	<i>None</i>
video_title	varchar(200)	latin1_swedish_ci		No	<i>None</i>
video_description	varchar(500)	latin1_swedish_ci		No	<i>None</i>
video_path	varchar(200)	latin1_swedish_ci		No	<i>None</i>

Notification

Name	Collation	Attributes	Null	Default	Comments
notification_id	int(20)			No	<i>None</i>
upload_date	varchar(100)	latin1_swedish_ci		No	<i>None</i>
text_message	varchar(500)	latin1_swedish_ci		No	<i>None</i>
status	varchar(200)	latin1_swedish_ci		No	<i>None</i>

Questions

Name	Collation	Attributes	Null	Default	Comments
question_id	int(20)			No	<i>None</i>
test_id	int(20)			No	<i>None</i>
question	varchar(500)	latin1_swedish_ci		No	<i>None</i>
option_a	varchar(500)	latin1_swedish_ci		No	<i>None</i>
option_b	varchar(500)	latin1_swedish_ci		No	<i>None</i>
option_c	varchar(500)	latin1_swedish_ci		No	<i>None</i>
option_d	varchar(500)	latin1_swedish_ci		No	<i>None</i>
answer	varchar(200)	latin1_swedish_ci		No	<i>None</i>
mark	varchar(200)	latin1_swedish_ci		No	<i>None</i>

Result

Name	Collation	Attributes	Null	Default	Comments
result_id	int(20)			No	<i>None</i>
exam_id	int(20)			No	<i>None</i>
student_id	int(20)			No	<i>None</i>
result_date	varchar(200)	latin1_swedish_ci		No	<i>None</i>
total_question	varchar(200)	latin1_swedish_ci		No	<i>None</i>
correct_answer	varchar(200)	latin1_swedish_ci		No	<i>None</i>
worng_answer	varchar(200)	latin1_swedish_ci		No	<i>None</i>
total_marks	varchar(200)	latin1_swedish_ci		No	<i>None</i>
outof_marks	varchar(200)	latin1_swedish_ci		No	<i>None</i>
percentage	varchar(200)	latin1_swedish_ci		No	<i>None</i>
grade	varchar(200)	latin1_swedish_ci		No	<i>None</i>

Saved_answer

Type	Collation	Attributes	Null	Default	Comments
save_id	int(20)			No	<i>None</i>
exam_id	int(20)			No	<i>None</i>
test_id	int(20)			No	<i>None</i>
question_id	int(20)			No	<i>None</i>
saved_option	varchar(20)	latin1_swedish_ci		No	<i>None</i>
correct_answer	varchar(20)	latin1_swedish_ci		No	<i>None</i>
marks	varchar(200)	latin1_swedish_ci		No	<i>None</i>

Test

Name	Collation	Attributes	Null	Default	Comments
test_id	int(20)			No	<i>None</i>
create_date	varchar(100)	latin1_swedish_ci		No	<i>None</i>
exam_title	varchar(200)	latin1_swedish_ci		No	<i>None</i>
subject_name	varchar(200)	latin1_swedish_ci		No	<i>None</i>
no_of_question	varchar(200)	latin1_swedish_ci		No	<i>None</i>
total_marks	varchar(200)	latin1_swedish_ci		No	<i>None</i>
exam_timing	varchar(200)	latin1_swedish_ci		No	<i>None</i>
status	varchar(200)	latin1_swedish_ci		No	<i>None</i>

OTHER SPECIFICATION

Advantages

- **Avoid data loss:** This system will help to avoid data loss like students assignment/manual
- **Anytime anywhere:** This portal can be used and accessed anytime and anywhere by students to complete their assignments and submit it.
- **Time saving:** Students can individually login to the portal and submit thier assignments.
- **Paperless:** This system helps to achieve 100% paperless work.

Limitations

- All PCs should be in a network.
- When PCs are not in same network, internet is required for the connection.
- Poor internet connection may affect the speed of the S/W.

Applications

- Schools
- Colleges
- Institutes
- Universities

CONCLUSIONS & FUTURE WORK

Based on the analysis and design of Digital Language Lab Portal, it can be concluded into several points. First, with Online Learning, students have no difficulty in learning. It is because the material can be obtained through this Digital Language Lab Portal (DLLP). These learning materials can be accessed on the portal. Second, in Online Learning, the progress of the learning process can be measured through the features of lesson and quiz. Then, the learning outcomes can be viewed through member dashboard. For further research, the DLLP can be expanded. For example, it can have discussion forum for users to discuss learning materials. Moreover, the future researcher can add online compiler to check the students' answer.

REFERENCES

Appendix A: Al-Marroof, R. A. S., & Al-Emran, M. (2018). Students' acceptance of google classroom: An exploratory study using PLS-SEM approach. *International Journal of Emerging Technologies in Learning*, 13(6), 112-123.

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