Course Review Management System

For

College of Business Management

BY

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Orchid International College

A Summer Project Submitted to

Faculty of Management, Tribhuvan University

in partial fulfilment of the requirements for the degree of

Bachelor of Information Management

Kathmandu, August 2023

STUDENT DECLARATION

This is to certify that I have completed the Summer Project entitled "Course Review Management System" under the guidance of Er. Dhiraj Kumar Jha in partial fulfillment of the requirement for the degree of **Bachelor of Information Management** at Faculty of Management Tribhuvan University. This is my original work and I have not submitted it earlier elsewhere.

Name: Anita Dhanuk

Date: July, 2023

Signature:

CERTIFICATE FROM THE SUPERVISOR

This is to certify that the summer project entitled "Course Review Management System" is an academic work done by "Anita Dhanuk" submitted in partial fulfillment of the requirements for the degree of **Bachelor of Information Management** at Faculty of Management,Tribhuvan University under my guidance and supervision.To the best of my knowledge,the information presented by her in the summer project report has not been submitted earlier.

Signature of the Supervisor
Name: Er. Dhiraj Kumar Jha
Designation: Project Coordinator
Date: July, 2023

EXECUTIVE SUMMARY

The title of this project is "Course Review Management System".The project is complete as a part of requirement of Bachelor of Information Management course syllabus at Tribhuvan University.

The main objective of the project entitled "Course Review Management System" was to build a desktop based application for College of Business Management.The methodology used for building the system was the waterfall model. This system helps students to give feedback to the courses they have taken and helps teachers to improve their teaching methods & identify their strengths.

ACKNOWLEDGEMENTS

This summer project report has been prepared for the fulfillment of the requirement nc the degree of Bachelor in Information Management (BIM) under the faculty Management Tribhuvan University.

It has been a great opportunity to learn and gather practical knowledge due to University for including such a task in the curriculum of BIM. The environment of

Orchid International College has been supportive in all the stages of this project. **Er. Dhiraj Kumar Jha,** project coordinator has been supportive and inspirational to grow and develop the project.

The support of the Course Review Management System has been crucial and valuable with the opportunity to learn and know the different operations and also providing the required information of concerned matters.The entire team of CBM helped in providion the environment to complete and collect the information regarding the report.

As a whole, the direct and indirect help of all the people was valuable and crucialoe different stages of the project.This outcome is the result of their support encouragement.

Sincerely,

Anita Dhanuk

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LIST OF ABBREVIATIONS

Admin Administration

BIM Bachelor of Information Management

ER Entity-Relationship

CBM College of Business Management

OIC Orchid International College

OS Operating System

SP Summer Project

CRMS College Review Management System

TU Tribhuvan University

UC Use Case

Chapter I- Introduction

1.1. Background

A Course Review Management System (CRMS) is a project that manages reviews given by the students and admin can handle all the courses provided by the college. Teachers are able to see only the review list left by the students.

The "Course Review Management System " project is developed on a web base, which mainly focuses on student reviews. Its main goal is to design and implement an online course review system , where reviews are given by the student for college.

1.2 Introduction of the Organization

College of Business Management(CBM) was founded in 1997 under the affiliation to Tribhuvan University.The college plans to give the best facilities for their students so it is planning on going digital when it comes to review and rating of courses provided by college.The pandemic also pushed the college in doing so.

The main objective of CBM is to grant high quality of education which will assist students to cope with the current face of modern society and provide them a key to success.

1.3. Current Situation of the Organization

In the current situation, CBM uses manual systems. This results in extra expenses and delay in operation of the information retrieval.

1.4. Problem Statement of the Report

The Current scenario depicts that the TFS approach has problems like data redundancy, delay in information retrieval or security in data stored.

1.5 Objectives

The main objectives of the system are:

- To build web application that collect review from students about the courses they have taken
- To enhance student satisfaction
- To reduce manual effort and improve overall productivity

1.6 Literature Review

Course Review Management Systems have become increasingly important tools in educational institutes and colleges to gather valuable feedback and insights from students regarding their learning experiences. These systems aim to enhance the quality of courses and improve the overall educational environment.

Dr.Smith(2017) conducted a study on the impact of CRMS on course evaluation and improvement. The research focused on analyzing student reviews collected through the system and its influence on enhancing teaching methods and efficient reviews collection, enabling lectures to identify areas of improvement and make necessary adjustments to course content and delivery.

Dr.Lee(2019) explored the integration of data analytics in CRMS to extract meaningful patterns and trends from student reviews. The study employed machine learning algorithms to analyze large volumes of feedback data and identify common themes and sentiments. The outcomes indicated that data-driven insights derived from CRMS enhanced decision-making processes, enabling lecturers to address specific concerns and improve course quality effectively.

Dr.Chen(2021) investigated the integration of CRMS with learning management systems (LMS) to create a comprehensive course management platform. The study explored the benefits of combining these two systems, such as streamlined access to course materials,assignment submissions , and feedback collection. The results demonstrated improved efficiency and reduced administrative burden for both lectures and students.

1.7 Methodology

This chapter discusses the concept of methodology used to develop A Course Review Management System. This chapter also informs and describes about the System Development Life Cycle, software and hardware specification that are needed for implementation and development of the system.

1.7.1 Data Collection

For the collection of data,the primary and secondary methods of data collection i.e. search interview,field visit,and research based on Course Review Management system is used.

1.7.2 Introduction of Proposed Implementation Model

This chapter will explain methodology or step by step approaches used in developing projects and at the same time fulfill all the requirements that are needed to make sure this project is successful. The approach will certainly affect all the planning for system development therefore it plays a huge part in system development as a foundation of the system. Thus, development of A Course Review Management System is based on an incremental development model to achieve the entire objectives.

1.7.3 Incremental Development

Incremental development is based on the idea of developing an initial implementation, exposing this to user comment and evolving it through several versions until an adequate system has been developed. This methodology is used from the conception phase through to the delivery and end of life of a final software product.

1.7.4 Model Usage/Approach

The model or approach here is used in developing this project.

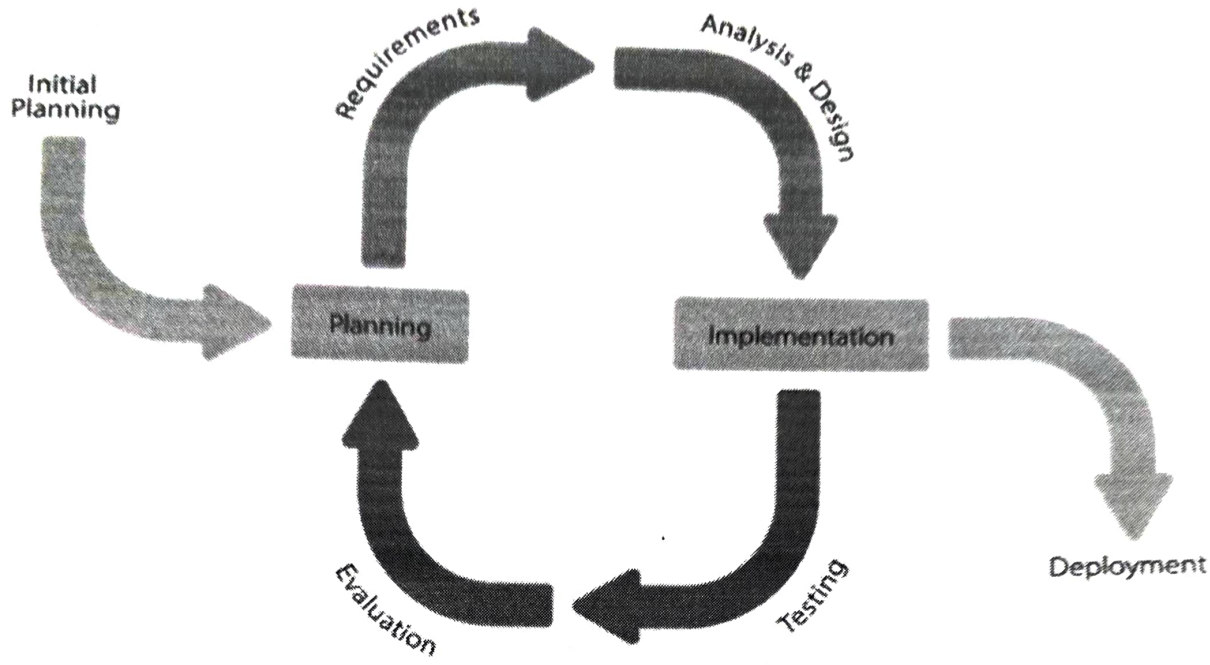

Figure 1.1 Incremental Development Model

The reason behind considering this methodology are:

- Frequent feedback and faster delivery
- Lower cost of changes

Specification

It is the first phase in an incremental model. Since my project is based on "Course Review Management System", the system requirement, use case diagram and feasibility were studied. The financial and technical feasibility of a system was analyzed and evaluated.

Development

In this stage, the system outlook was designed and a coding phase was carried out. The designs like architecture, interface, component and database were designed and implemented along with testing.

Validation

The verification and validation process was carried out to test if the system is as per the requirements. In this stage, the process involved in system development was verified if it is as per the specified process.

1.7.5 Tools Used

During the time of the project, different tools were used to develop the project. Since this project is web based. The following tools has been used:

Sublime:Sublime Text is a shareware text and source code editor available for Windows ,macOS,and Linux.It natively supports many programming languages and markup languages.

XAMPP: XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database and interpreters for scripts written in the PHP and Perl programming languages.

Draw.io: Designed by Seibert Media, draw.io is proprietary software for making diagrams and charts. The software allows you to choose from an automatic layout function, or create a custom layout. They have a large selection of shapes and hundreds of visual elements to make your diagram or chart one-of-a-kind. The drag-and-drop feature makes it simple to create a great looking diagram or chart.

1.6.6 Technique of the Project Report

- **Problem analysis**

The main problem of the organization is that they didn't have a computerized system to maintain records digitally.

- **Feasibility analysis**

The analysis of the project has led to the conclusion that the project is feasible with time and cost. The tools used for the development are almost Open Source and involve less cost and maintenance.

- **Technical feasibility**

This analysis helps to forecast the future movement.This system is built using Sublime , MySQL which are well familiar and stable to us.

- **Operational feasibility**

In this analysis the system is analyzed on how well the proposed system solves the problem and works in the real environment and how it satisfies the requirement analysis phase of the system development

Chapter II- Tasks and Activities Performed

2.1. Analysis of Tasks and Activities

Organization was visited for the requirement collection. After the requirements were collected, the major task was to break down the proper procedure and build the working framework. Organization visits helped to analyze various aspects of the organization and find out the problems that can be solved by the software build.

2.2. Analysis of Possible Solution

2.2.1. Requirement Analysis

The main objectives of requirement analysis are to identify and evaluate the requirement of the proposed system. It helps to know about user requirements, system requirements, functional requirements and non-functional requirements for 'Course Review Management System for College of Business Management'.

2.2.2. Functional Requirement

A Functional Requirement is a description of the service that the software must offer. It describes a software system or its components. A function is nothing but inputs to the software system, its behavior, and outputs. It can be a calculation, data manipulation, business process, user interaction, or any other specific functionality which defines what function a system is likely to perform. Functional Requirements is also called Functional Specification.

Functional Requirement can range from the high-level abstract statement of the sender's necessity to detailed mathematical functional requirement specifications. Functional software requirements help you to capture the intended behavior of the system.

It describes the functions of a system and its components. The 'Course Review Management System' shall contain the admin who could be able to view the details of students, teachers and courses.

Functional Requirements can be briefly described by the help of Use-Case Diagram which is shown below:

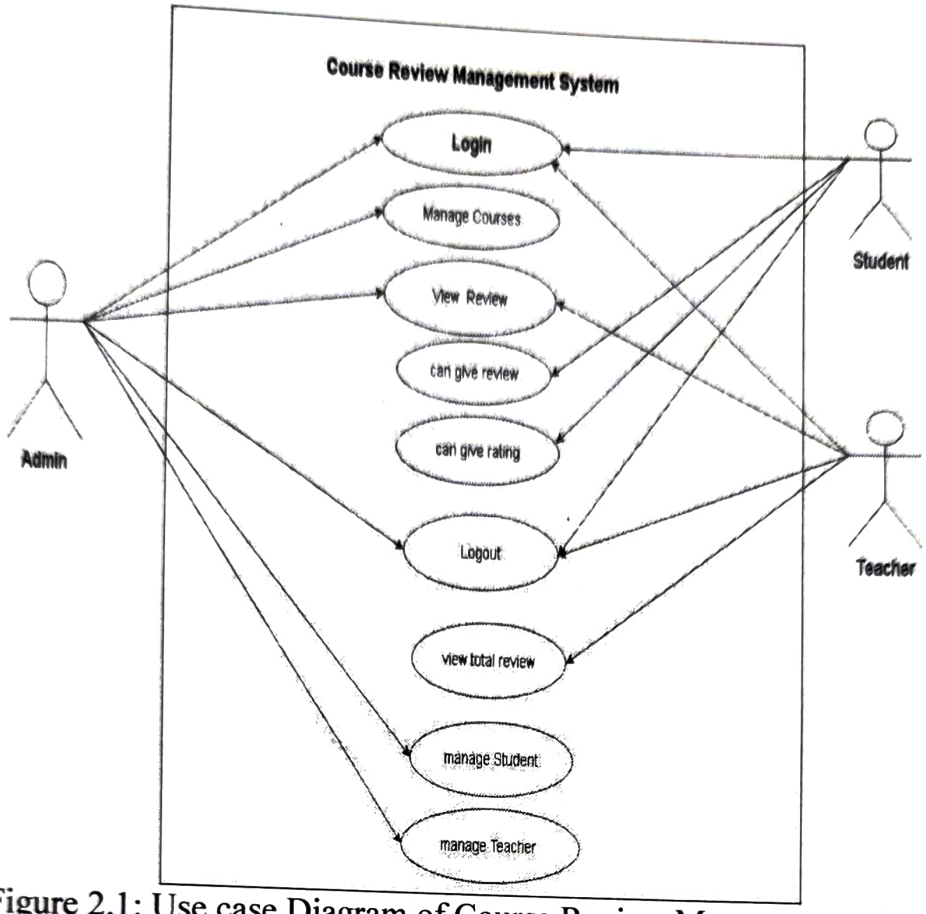

Figure 2.1: Use case Diagram of Course Review Management System

Table 2.1: Use-case Description (Login)

Use-case Identifier	UC01: Login
Primary Actor	Admin,Student ,Teacher
Secondary Actor	None
Description	The actor can login into the system. The actor should be registered in the database.
Pre-Condition	The actor must know the valid username and password..
Post-condition	The database must be updated.
Success Scenario	Login Success message should be displayed.
Failure Scenario	Login fail message should be displayed.

Table 2.2: Use-case Description (Manage Course)

Use-case Identifier	UC02: Manage Course
Primary Actor	Admin
Secondary Actor	None
Description	The actor will be able to manage the course.
Pre-Condition	The admin should be logged in.
Post-condition	The information about the course description should be shown.
Success Scenario	Success messages are shown.
Failure Scenario	The database is not connected or misconfigured.

Table 2.3: Use-case Description (Manage Student)

Use-case Identifier	UC03: Manage Student
Primary Actor	Admin
Secondary Actor	None
Description	The actor will be able to delete,add students and search the student records.
Pre-Condition	The admin should be logged in.
Post-condition	The database should be updated after add, delete action is performed.
Success Scenario	Success message is displayed.
Failure Scenario	The database is not connected or misconfigured.

Table 2.4: Use-case Description (Manage Teacher)

Use-case Identifier	UC04: Manage Teacher
Primary Actor	Admin
Secondary Actor	None
Description	The actor will be able to add, delete teachers and search teacher records.
Pre-Condition	The admin should be logged in.
Post-condition	The database should be updated after add, delete action is performed.
Success Scenario	Success message is displayed
Failure Scenario	The database is not connected or misconfigured.

Table 2.5: Use-case Description (View Review)

Use-case Identifier	UC05: View Review
Primary Actor	Admin ,Teacher
Secondary Actor	None
Description	The actor will be able to view reviews
Pre-Condition	The admin and teacher should be logged in.
Post-condition	Reviews Saved in the system
Success Scenario	System is redirected to the dashboard
Failure Scenario	The database is not connected or misconfigured.

Table 2.6 : Can give rating

Use-case Identifier	UC06 :Can give rating
Primary Actor	Student
Secondary Actor	None
Description	Students are able to rate courses
Pre-condition	User should be logged in into the system
Post-condition	Rating should be given
Success Scenario	Successfully given rating to the courses
Failure Scenario	Action failed message should be displayed

Table 2.7: Can give review

Use-case Identifier	UC07 :Can give review
Primary Actor	Student
Secondary Actor	None
Description	Students can give reviews on courses they have taken
Pre-condition	Students must be logged in into the system
Post-condition	Review should be saved in system
Success Scenario	System should be redirected to the system
Failure Scenario	Error in adding review

Table 2.8: View total review

Use-case Identifier	UC08: View total review
Primary Actor	Teacher
Secondary Actor	None
Description	User can view total number of review in each courses they have been assigned
Pre-Condition	User should be logged in into the system
Post-condition	Database should be updated
Success Scenario	Course review report viewed successfully
Failure Scenario	Action failed message should be displayed

Table 2.: Use-case Description (Logout)

Use-case Identifier	UC06: Logout
Primary Actor	Admin ,Teacher,Student
Secondary Actor	None
Description	The actor can logout from the system.
Pre-Condition	The admin,student and teacher should be logged in
Post-condition	The database should be updated.
Success Scenario	Successful logout message should be displayed.
Failure Scenario	The logout error message should be displayed.

2.2.3 Non-Functional Requirement

Non-Functional Requirement specifies the quality attribute of a software system. They judge the software system based on responsiveness, usability, security, portability and other non-functional standards that are critical to the success of the software system.

CRMS shall be easier to use with better GUI. It shall be maintainable which is how easy it is for a system to be supported, changed, enhanced and restructured over time. It shall be reliable; this quality attribute specifies how likely the system or its element would run without a failure for a given period of time under predefined conditions. It shall be secure; this non-functional requirement assures that all data inside the system or its part will be protected against malware attacks or unauthorized access. It shall be available; describes how likely the system is accessible for a user at a given point of time while it can be expressed as a probability percentage. It shall be portable; this attribute defines how a system or its element can be launched in one environment or another. It usually includes hardware, software, or other usage platform specifications.

2.2.4. Software Requirements

Table 2.7: Software Requirement

Software	**Purpose**
Sublime	In order to design layout and to write code.
MYSQL:	In order to establish communication between data and database.
Microsoft-word:	To write documentation of a project.
Draw.io:	In order to draw the ER-diagram, Use case, Sequence diagram, Class-diagram and so on.

2.2.5 Entity Relationship Diag

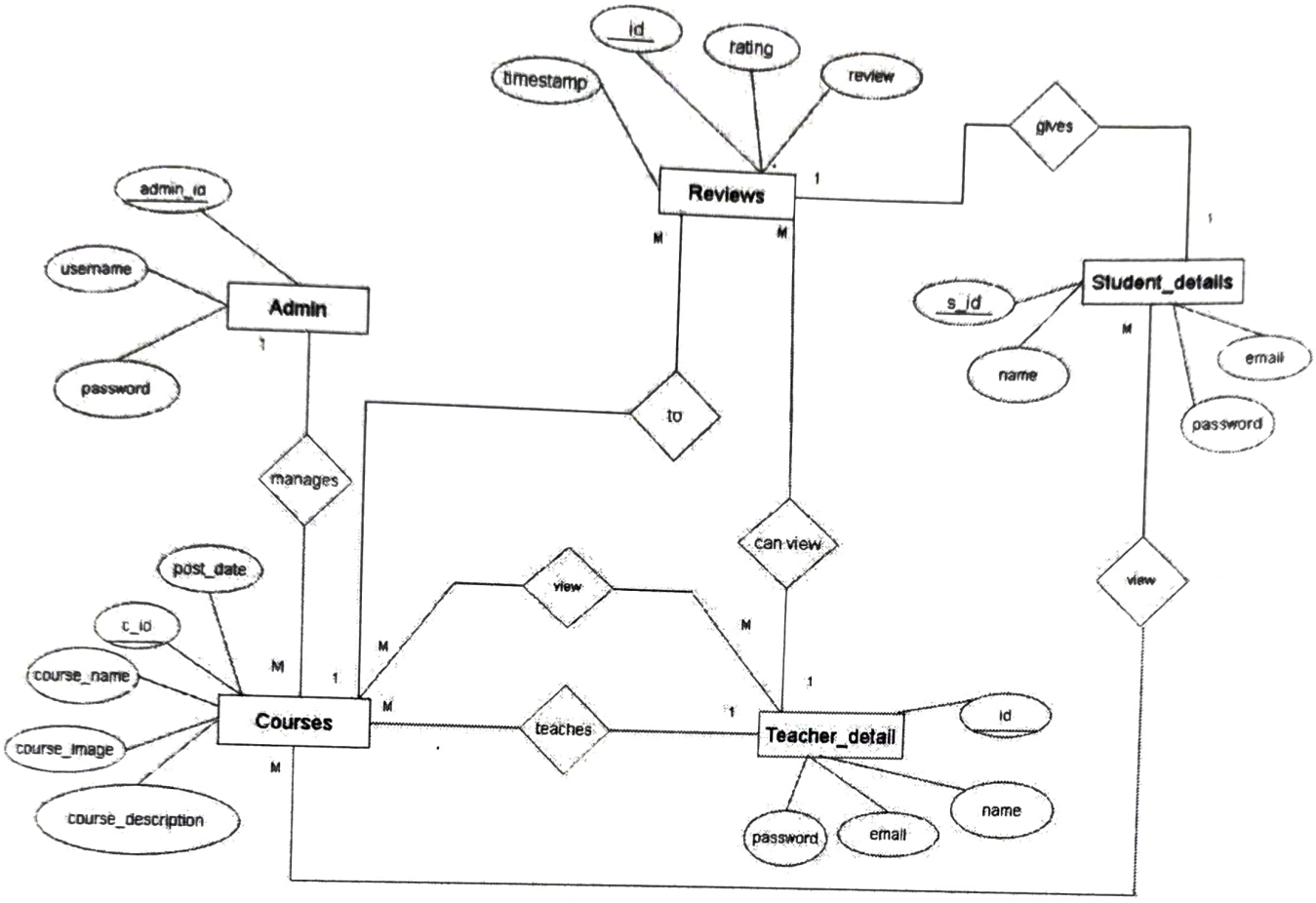

Figure 2.2: Entity Relationship Diagram of Course Review Management System

2.2.6. Relational Model

Relational Model is conceptual basis of relational database (Somerville, I. 2011). It is a UML diagram that shows a static view of a system.

Relational Model is described in the figure which is shown below:

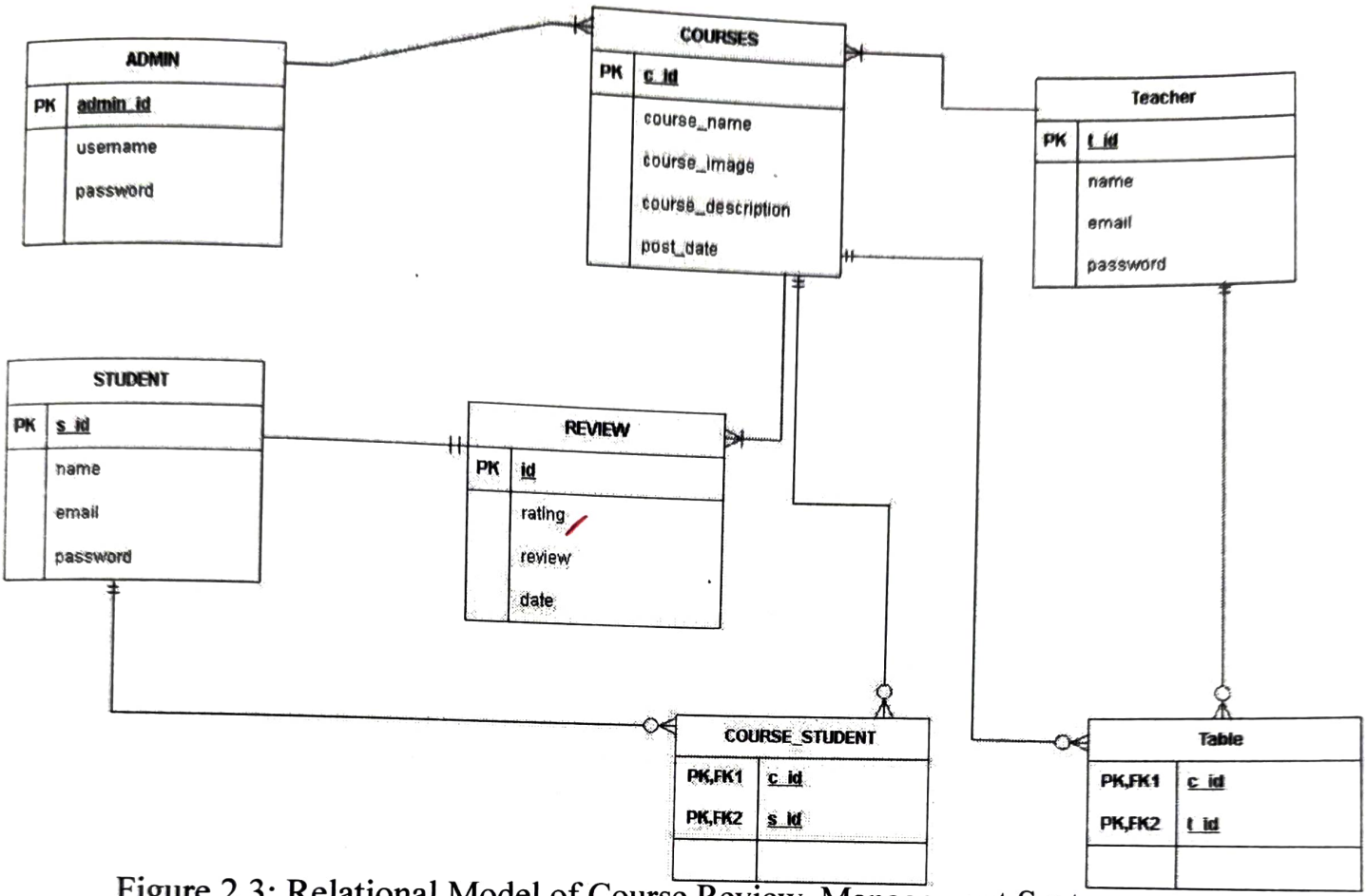

Figure 2.3: Relational Model of Course Review Management System

2.2.7 Class-diagram

Class diagram is a UML diagram that represents a static view of a system. It is the composition of different classes which are linked to each other through association.

Solution Design can be described with help of shown Class Diagram:

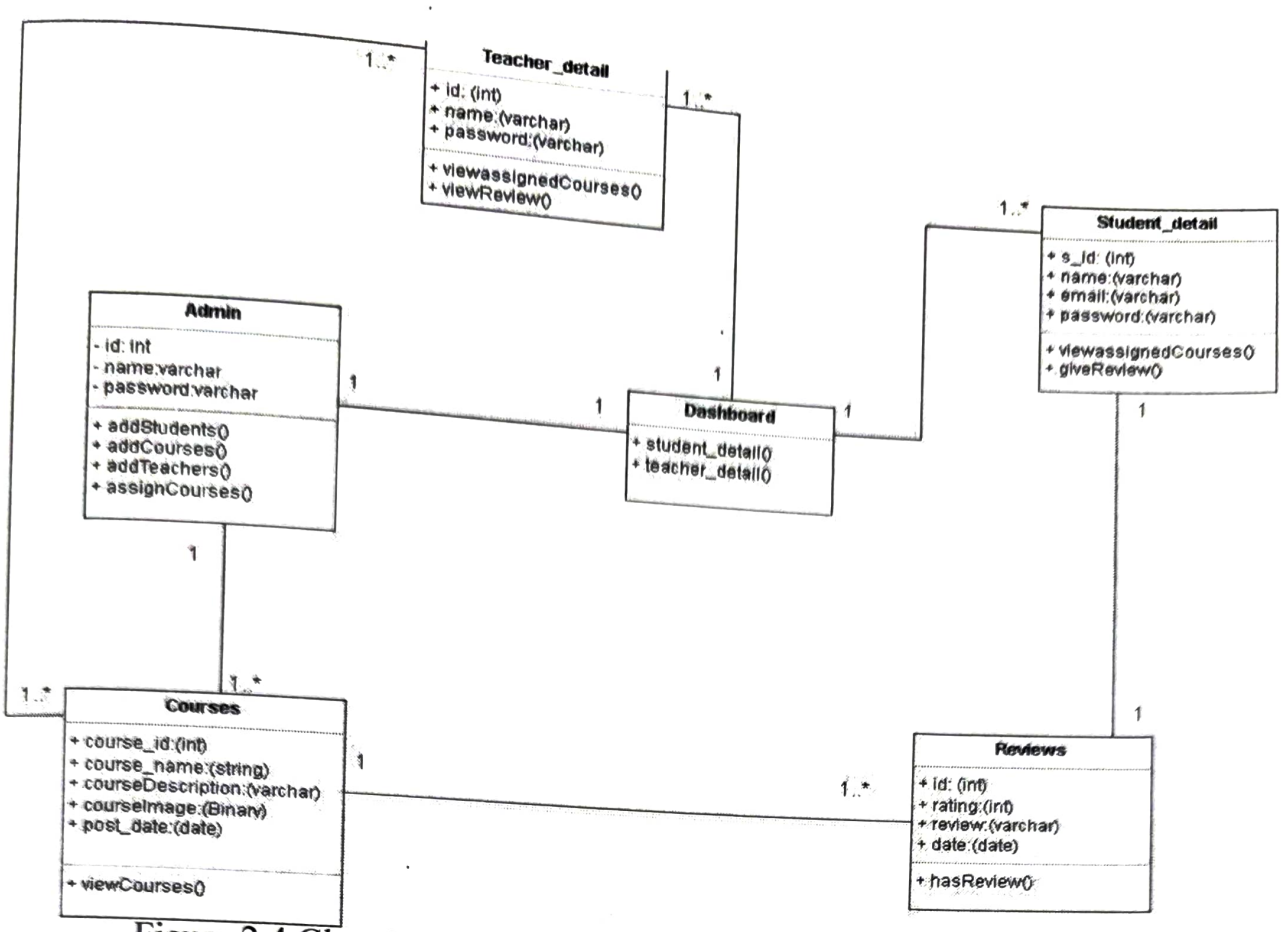

Figure 2.4 Class Diagram of Course Review Management System

2.2.8 Activity Diagram

An activity diagram is a behavioral diagram i.e. it depicts the behavior of a system. An activity diagram portrays the control flow from a start point to a finish point showing the various decision paths that exist while the activity is being executed. An activity diagram represents a series of actions or flow of control in a system like flowchart or a data flow diagram. They also describe the steps in a use case diagram. Given diagram demonstrates one of the activity in this system:

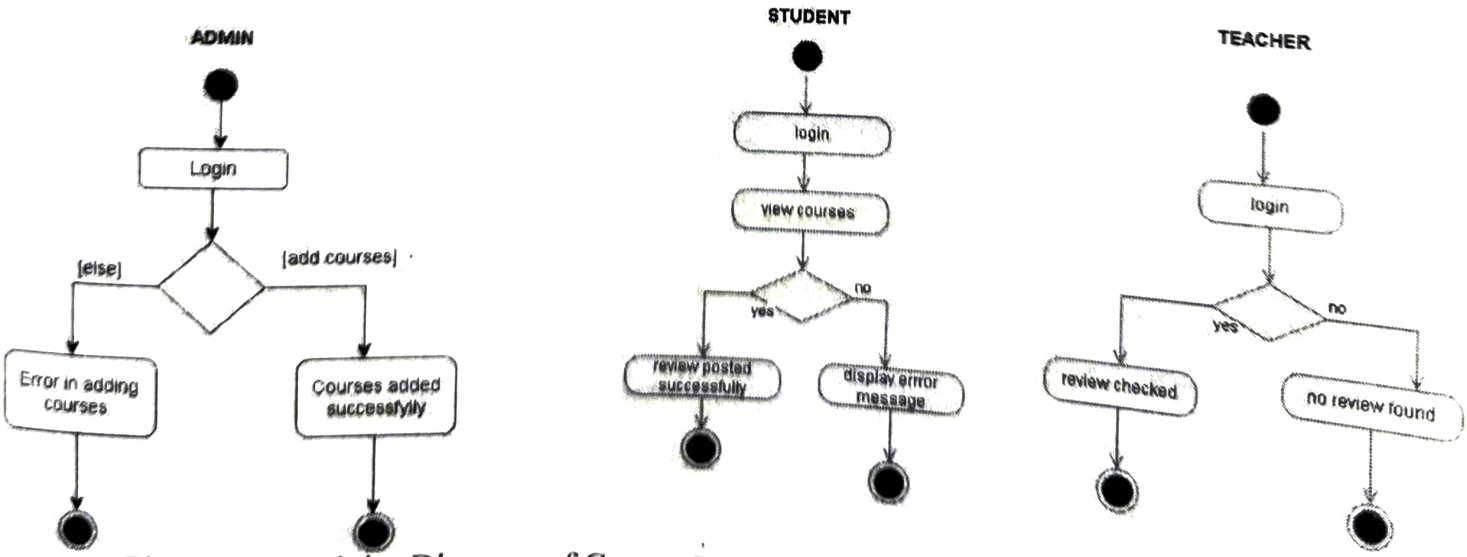

Figure 2.5 Activity Diagram of Course Review Management System

2.2.9 Sequence Diagram

Sequence diagrams are dynamic modeling approaches used in object oriented based projects. The sequence diagram shows the communication between the system objects or classes. A sequence diagram simply depicts interaction between objects in a sequential order i.e. the order in which these interactions take place. We can also use the terms event diagrams or event scenarios to refer to a sequence diagram. Sequence diagrams describe how and in what order the objects in a system function. These below:

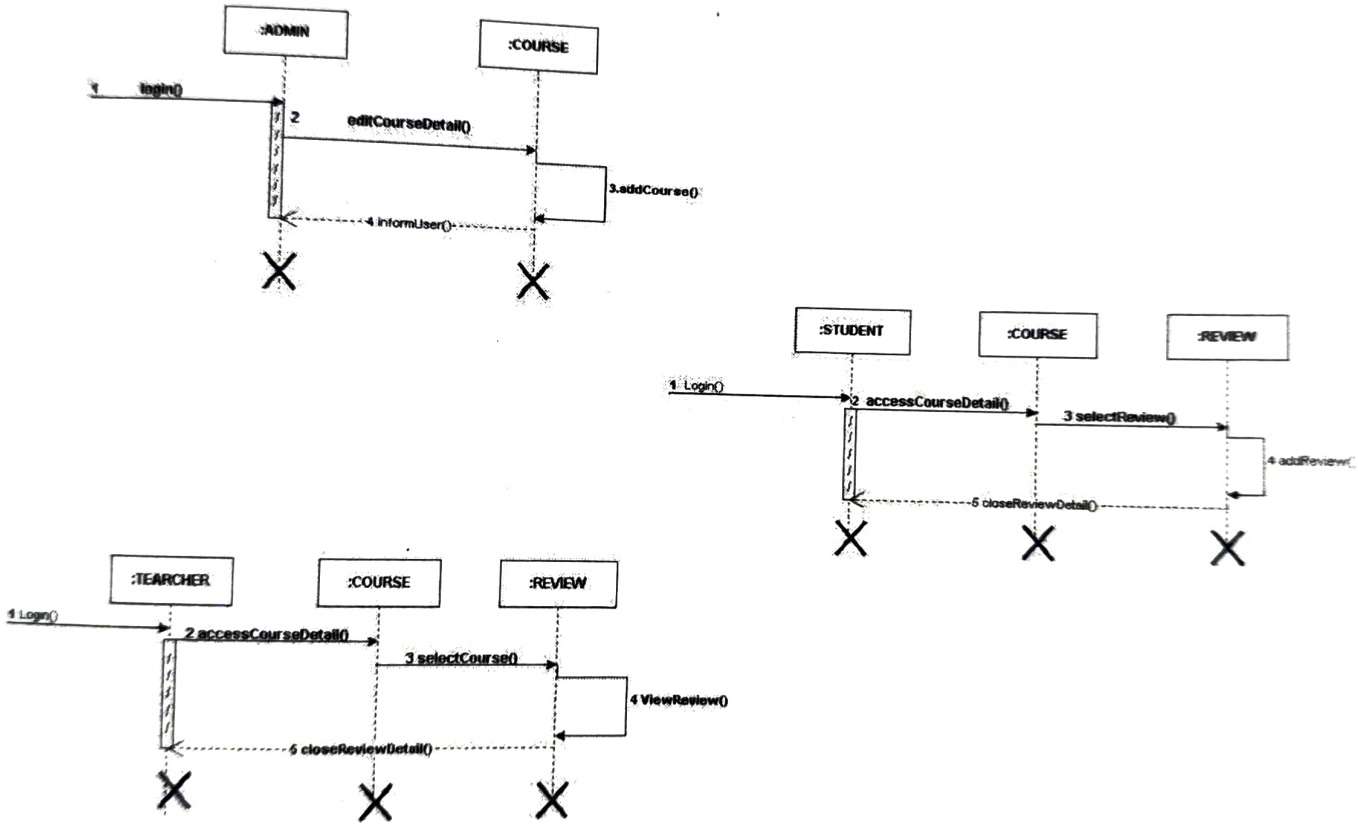

Figure 2.6 Sequence Diagram of Course Review Management System

We have three different sequence diagrams.In the first diagram, admin can get logged into the system and can add courses and get updated . In the second diagram , students get logged in and get access to the courses that they have studied and add their reviews and finally they close the review section . Lastly , in the third diagram , teachers get logged in & get access to the courses that they have been assigned and they can view the reviews that are left by the students and they close the review section.

2.2.10. Testing

In testing, the different inputs were tested as input to GUI forms which can be shown below with the help of table as well as showing the figure:

Table 2.8: Testing Table For Login

Unit Effected	Test Input Data	Actual Result	Expected Result	Remarks
Admin Login	Username=admin password= aa	Login error message is displayed.	Logged in.	Fail

Table 2.9: Add Students

Unit Effected	Test Input Data	Actual Result	Expected Result	Remarks
Add Student	username= bhunto Password =	Password field is empty.	Password field is empty.	Fail

Table 3.0: Add Teachers

Unit Effected	Test Input Data	Actual Result	Expected Result	Remarks
Add Teacher	Name= Password =sita123	Username field is empty.	Username field is empty.	Fail

Table 3.1: Add Course

Unit Effected	Test Input Data	Actual Result	Expected Result	Remarks
Add Course	Name = java Description = image= select img	Description field is empty.	Description field is empty.	Fail

2.3. Findings

After analyzing the problems of the organization, it was found that using the old techniques may increase overall cost of organization as well as may be difficult to handle. If organizations use this software for recording and managing the reviews of students ,it will help them to maintain record effectively and efficiently with reduction of time and cost.

Chapter III- Discussion and Conclusion

3.1 Discussion

The project covers the problem that was identified during the organization visit and the solution to the problem was solved by developing software. The system can provide information like courses, student and teacher management, reviews etc related to CBM. The system is assumed to be very helpful to the Course Review Management system.

3.2 Conclusion

The system was successfully completed in time as per the objectives. After the evaluation of the system within the CBM, the system is expected to fulfill all the requirements and prove to be beneficial for staff and students. The evaluation from users of this system in CBM proved that the system will turn out very effective and convenient to use. The incremental model used in this system is helpful to check in every phase after each coding.

3.3 Future Enhancements

This project was started with the aim of keeping systematic records of students, teachers ,reviews and courses. The system was successfully built and is said to be kept updated with the resources available and keep the records for future uses which helps to maintain accountability.

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APPENDICES

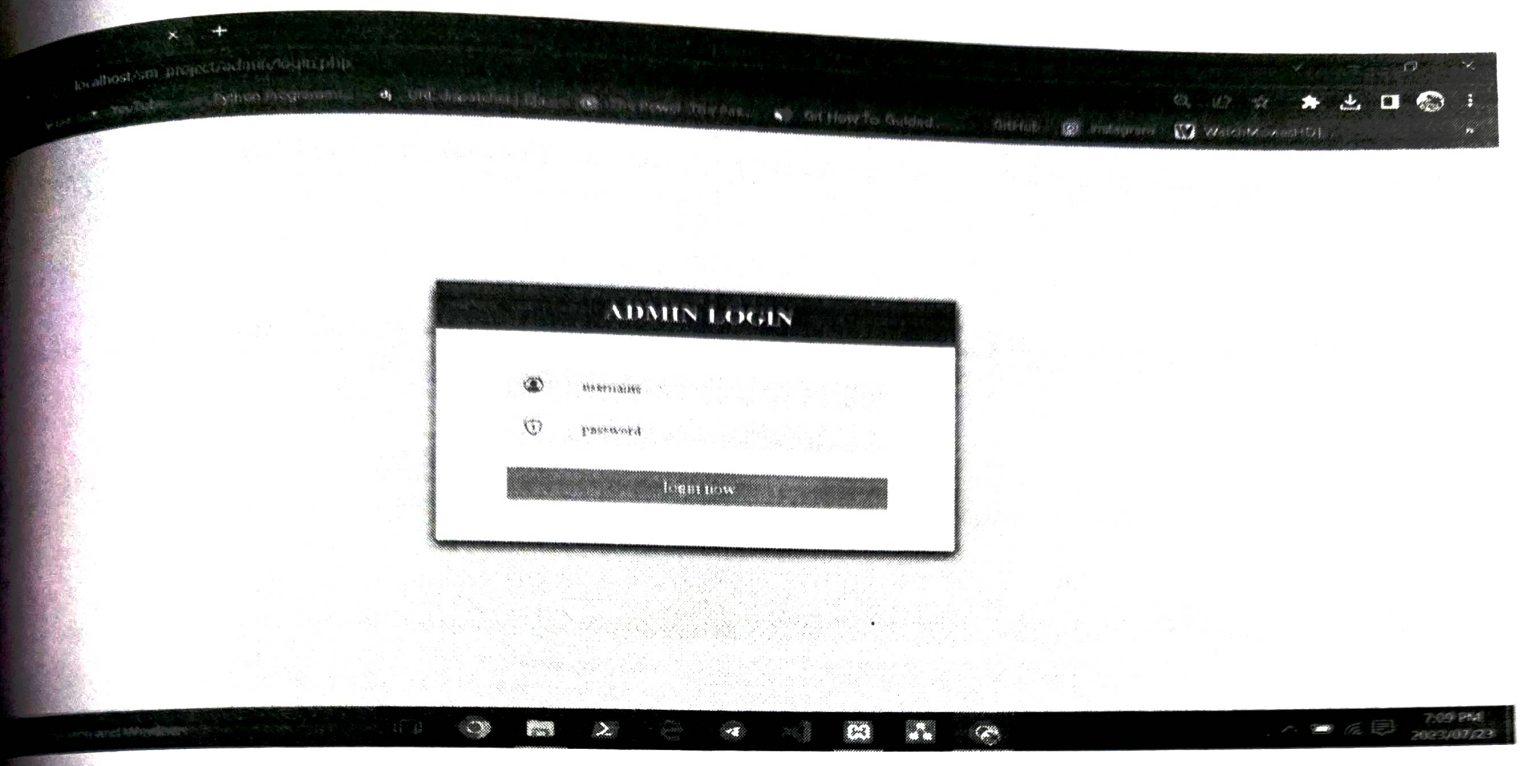

Fig:3.1 :Admin login

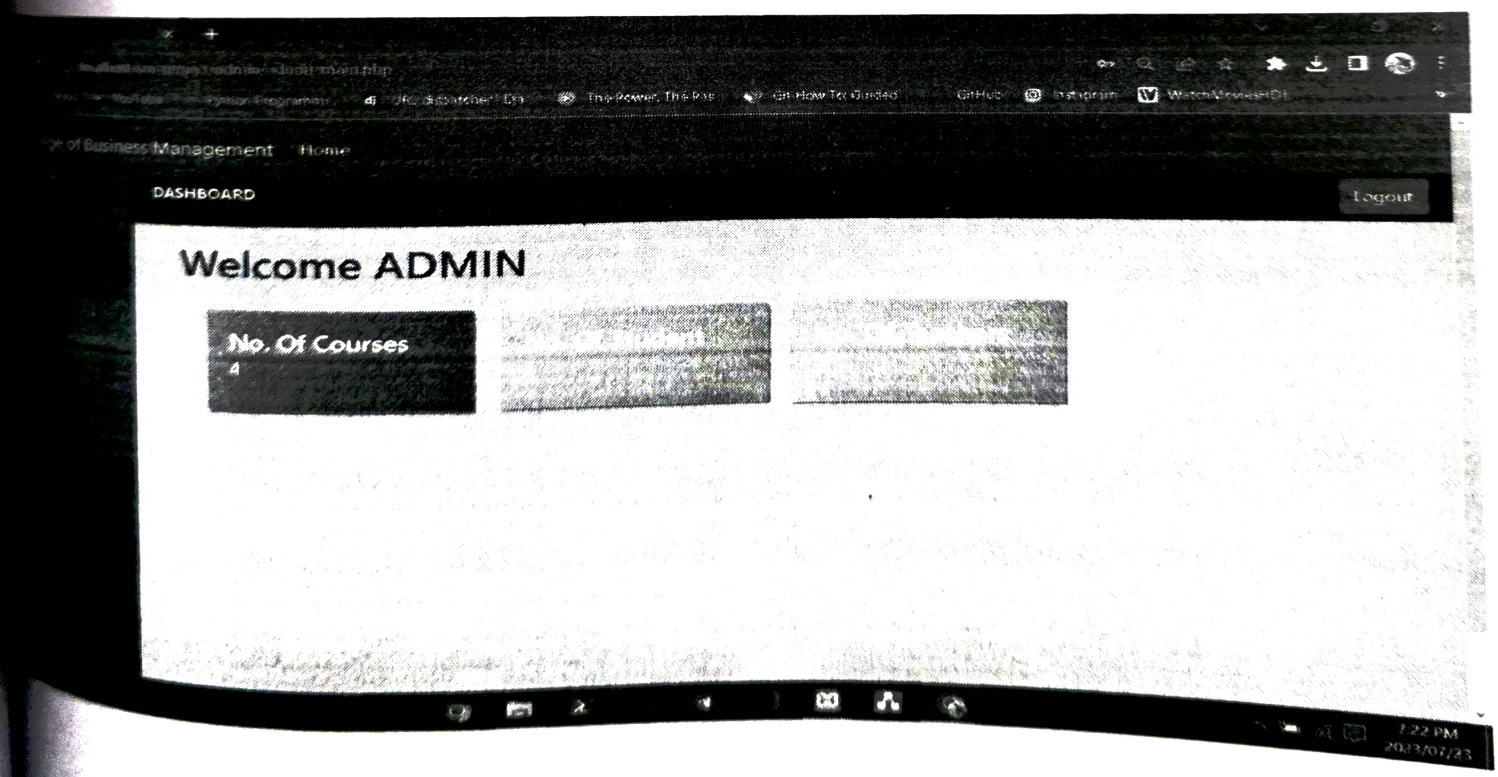

Fig 3.2: Dashboard

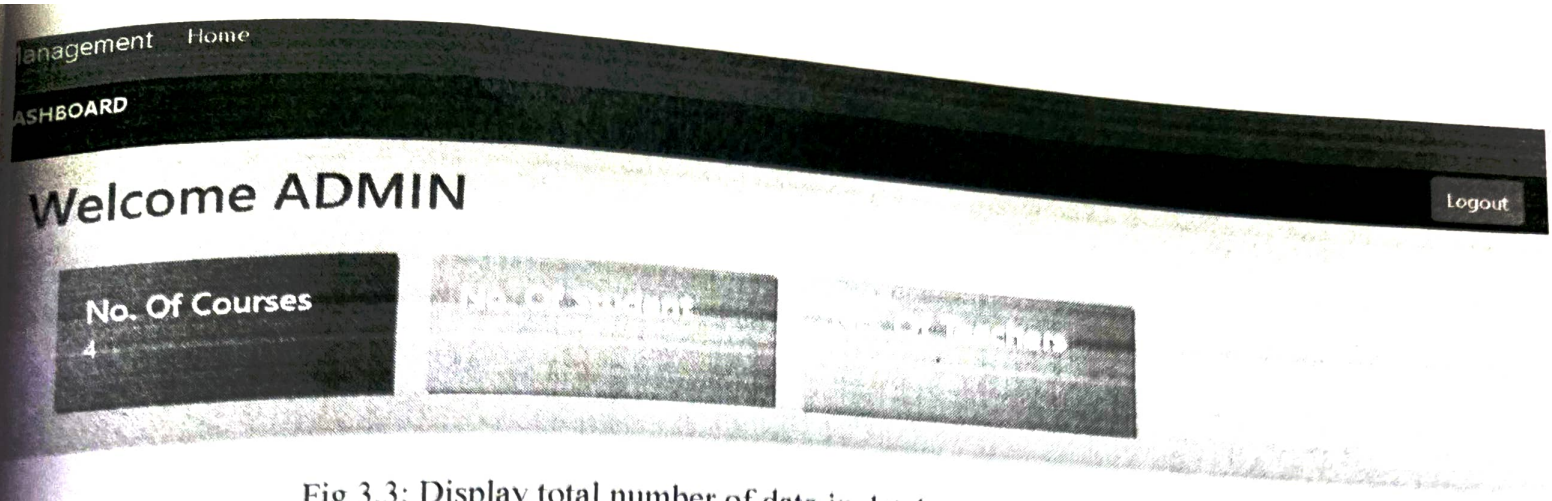

Fig 3.3: Display total number of data in database

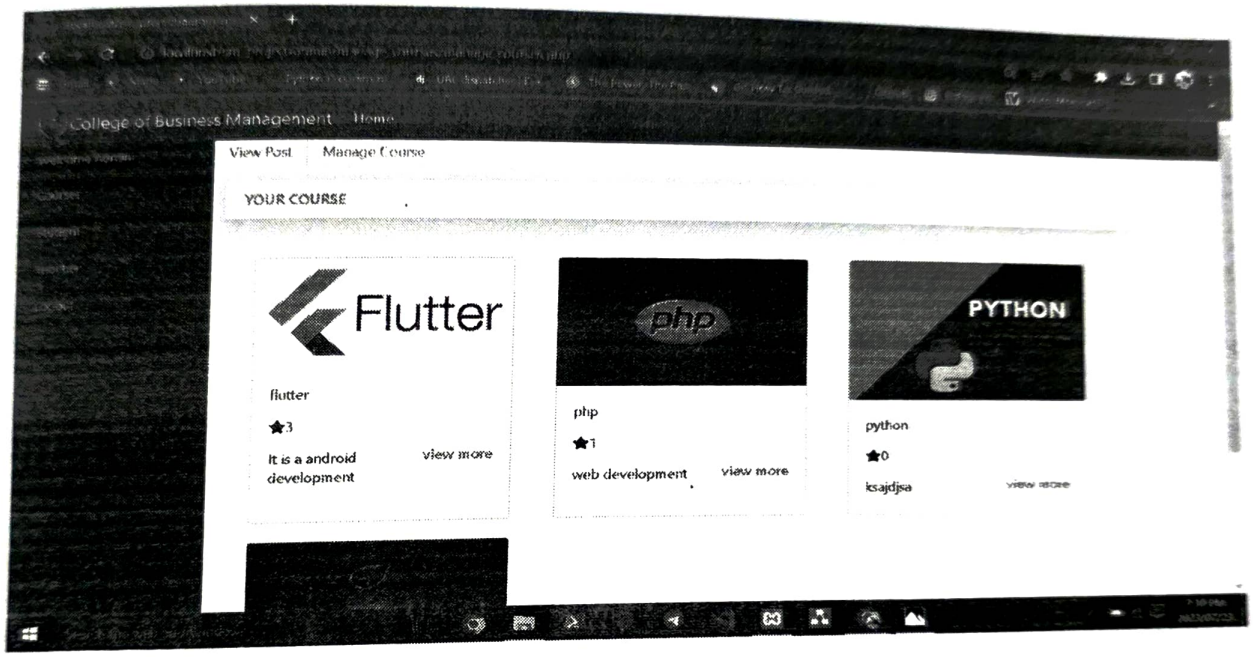

Fig 3.4:Displaying courses

Fig 3.5:Students Reviews