A SYNOPSIS ON

Marks Evaluation System using Advanced Web-Based Technologies

Submitted in partial fulfilment of the requirement for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE & ENGINEERING (Software Engineering)

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CANDIDATE'S DECLARATION

We hereby certify that the work which is being presented in the Synopsis entitled **"Marks Evaluation System using Advanced Web-Based Technologies"** in partial fulfilment of the requirements for the award of the Degree of Bachelor of Technology in Computer Science and Engineering **(Software Engineering)** in the Department of Computer Science and Engineering of the Graphic Era (Deemed to be University), Dehradun shall be carried out by the undersigned under the supervision of **Ms. Tanusha Mittal, Assistant Professor**, Department of Computer Science and Engineering, Graphic Era (Deemed to be University), Dehradun.

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The above-mentioned students shall be working under the supervision of the undersigned on the **"Marks Evaluation System using Advanced Web-Based Technologies"**

Supervisor **Head of Department**

Internal Evaluation (By DPRC Committee)

Status of the Synopsis: Accepted / Rejected

Any Comments:

Name of the Committee Members: **Signature with Date**

1.

2.

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Chapter 1

Introduction and Problem Statement

In the following sections, a brief introduction and the problem statement for the work has been included.

1.1 Introduction

The primary purpose of assessment and evaluation is to improve student learning. Information gathered through assessment and evaluations helps teachers to identify students' difficulties as well as to detect weaknesses in particular subjects. Assessment and evaluations are important tools for adapting curriculum and instructional approaches to students' needs and for determining the overall effectiveness of programs and classroom practices. Assessment is the process of gathering information from a variety of sources (including assignments, projects, and a midterm) that accurately reflect how well students are achieving the curriculum expectations. As part of assessment, teachers provide students with descriptive feedback that guides their effort towards improvement.

Assessment and evaluation strategies are based on the provincial curriculum expectations and on the achievement level descriptions and categories in the achievement chart. Assessment and evaluation strategies are varied in nature, administered over a period of time and designed to provide opportunities for students to demonstrate the full range of their learning. In addition, teachers will use both their professional judgment and student observations in evaluating specific criteria and achievement

Information gathered through an assessment helps teachers determine students' strengths and weaknesses as well as their overall understanding of course material. In addition, an assessment helps educators adjust their teaching methods in order to insure the maximum amount of effective learning for each student.

An assessment is the process of gathering information from a variety of products, observations and conversations that accurately reflects how well a student is achieving the curriculum expectations in a course.

As part of an assessment, teachers provide students with descriptive feedback that guides their efforts towards improvement. Evaluation refers to the process of judging the quality

of student work on the basis of established criteria, and assigning a value to represent that quality. In Ontario secondary schools, the value assigned is in the form of a percentage grade.

1.2 Problem Statement

Manual calculation of marks is done at many institutions. Due to manual calculation there can be many human errors which may affect the final marks and grades in the end. Even if the error has been found out it becomes very difficult to search that error in the data of thousands of other students and rectify it.

This system admin can control the subjects, classes, type of examination and with many other functionalities which eases admin to enter details of the student. The admin has to just enter the marks and calculated results will be provided according to the class and the type of examination the student sat for.

Student evaluation process is a tedious work and it requires utmost concentration. One marks up or down can alter the final marks and percentage of that student. So, by developing this system the work gets easier and chances of error decreases by huge amount.

Chapter 2

Background/ Literature Survey

In the present times, research work is going on in context of computer science field and interests among the hobbyist, there has been a tremendous increase in the number of computer science courses offered at the universities as everything is going online. This project delivers a high-end working model for web-based evaluation system.

The findings from this study highlighted some of the problems faced by students in Saudi universities such as: lack of the portal content, lack in training and guidelines, lack interaction between students and their lecturers, and lack of awareness about using the portal. Thus, the recommendation for future work is to improve the student portal based on their needs.[1]

The UPUAI's assessment protocols demonstrate that a web portal's architectural design (i.e., navigation pathways connecting the portal's various services) and transactional functionality are the two most important factors determining student satisfaction vis-à-vis subjective assessment of a university web portal. Finally, it must be emphasised that soliciting the feedback and interaction of the aforementioned stakeholders should be a continuous exercise.[2]

This application eliminates the additional time and resources needed to plan and track the projects in institutions for the final year. We assign different the guides to the student groups to ease the process. It also offers a nice interface that is easy for users to understand and helps them adapt with the use of this web service.[3]

The framework of norms and incentives influencing academic work is changing in many countries academic audits and subject assessments provide some public confidence that universities subject to market competition are seriously attending to academic quality.[4]

System shows promise in preventing deterioration of resident teaching skills learned during an Ob-Gyn RATs program. The system also was effective in gaining resident and student insights to improve RATs programs. Because our intervention was built upon a commercially available program, our approach could prove useful to the large population of current subscribers.[5]

By this we learn how to perform formative evaluation of systems, we believe that they are more likely to design usable and useful systems in the future. More importantly, one goal the instructor set for these students has been accomplished; they successfully learned to conduct a usability study in which they systematically contributed to the ongoing development of a software tool through usability engineering.[6]

Using the developed components and tools, the construction of learning materials for WBE was simplified in an important way, reducing the technical complexity to structure and to label the exams. The proposed scheme allows encapsulating of the relation Exam-Question, separating the examinations logic and its multimedia content in an efficient and coherent way.[7]

This study was about a new web-based framework for the role-based evaluation of online courses and Learning Management System. As a result of the evaluation, we can draw conclusions about the necessary improvements of the online courses covered and of the Learning Management System.[8]

This process of compiling, executing, and grading the programming assignments is currently done manually which takes a considerable amount of time and effort by the professors. An Online Grading System provides an efficient way of managing results by both professors. Professors can create courses, classes, type of examination etc and can compile the marks scored by the students. Students can view their results, marks and percentage scored only in view mode and can compare and see their area of improvement.

Chapter 3

Objectives

- The main object of the student evaluation system is to reduce manual work and time. It is difficult and time-consuming to manually compute final results, publishing them, and displaying results on notice boards. To avoid this problem, we have planned to mitigate this problem.
- To create evaluation system that is easy to create, delete or modify any data.
- Make an interactive Front end and a user-friendly experience.
- To give all the powers to admin to add, delete, modify data and student can only view data so that they know where they need to focus more.
- Contemporary website with dynamic, fast and ready to deliver information.

Chapter 4

Hardware and Software Requirement

4.1 Hardware Requirements

- 8 GB RAM
- Integrated GPU 2GB/4GB
- Processor: Intel i3/i5/i7 9 Gen and above
- Minimum 64 GB of space needed

4.2 Software Requirements

- Operating System: Windows/ Linux/Macintosh
- Minimum 32/64-bit Operating System
- Visual Studio Code Editor
- Google Chrome/Mozilla Firefox/Brave/Edge
- XAMPP

Chapter 5

Possible approaches / Algorithms

This section illustrates the design and functional phase of our application, The User accesses the web application where the platform is hosted. According to their permissions, the user can access three tiers as admin, faculty or student.

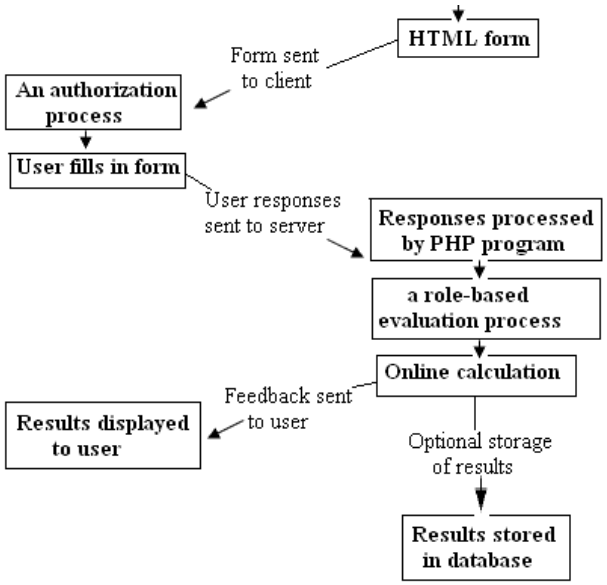

Fig.5.1 Data flow diagram of Web Base Evaluation

Let us go through a step-by-step process of how our application is going to work.

5.1 Front – End

This is the only layer that will be accessible to the end users. All the functionalities will be hidden from the end users.

- **Registration of Student in the Database**: Student data will be registered through admin details related to student is going to be inserted into the database their semester, curriculum and student information will be inserted accordingly so that student should be able to access their result fluidly and without any friction.
- **Student Login**: Student after getting registered will be able to access their records using their login credentials. Student then can see their records, semester result and many things more related to them in the website.

- **Admin Login**: Admin login portal is there that will ensure that admin will be able to edit the records and databases of students as per required. They are also responsible for posting notices and result online or any information related to website that is needed to be given to the students. Admin is also going to rectify defects if any in website.

5.2 Middleware

This section connects the Frontend of the application with the Backend and serves as the backbone of our application.

- **Scripting**: Web scripting is used to create dynamic content that allows for user interaction with a web page. Scripting is done to connect the front-end and back-end for efficient and smooth functioning of website it is also needed for adding features like effects, animations or graphics if any needed. Scripting is also very important for making a full stack website. In project scripting is used as middleware for adding functionalities and as a binding medium. In middleware we will include both client-side and server-side scripting.

5.3 Backend

This phase is the backend of our application where all the queries and requests made by the end users are put and resolve. This consists of the database and the encryption part of the application.

- **Database**: User database is stored in database. In order to make our application efficient we need something that fetches data fast and instantly and is reliable. For this purpose, we use a SQL database. Details like name, gender, Unique Id are stored in database. SQL is the proposed database to be used and PHP library to interact with the database in order to create, manage and export schemas.
- **Server Hosting**: Apache is being is used for server hosting basically XAMPP is going to be used in order to host a local host using Apache and the whole website will be on the local host. Apache is being used in the project as it is customizable and has a vast library of resources for the user.

Striving to provide end users with exceptional UI for their feasibility and to make the application as efficient as possible below are **some of the proposed UI components and functionalities so that the end users are going to get (the actual application will differ)**. With such functionalities they will get a tremendous experience.

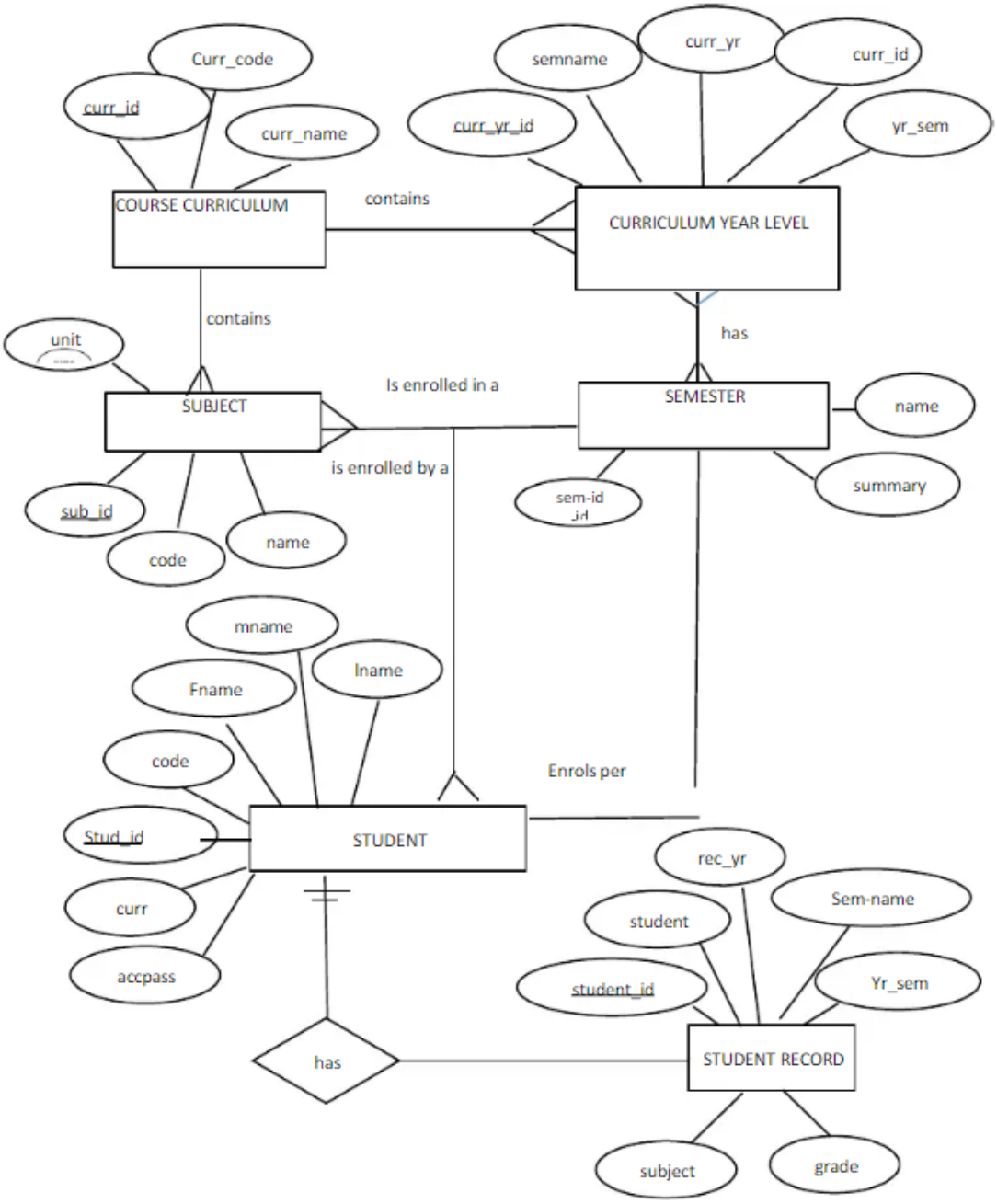

Fig.5.2 Entity Relationship Diagram of Evaluation System

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