**RV College of Engineering®, Bengaluru – 59**

**Department of Computer Science and Engineering**

**Database Design Laboratory (18CS53)**

**Synopsis**

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| **TITLE: ONLINE COURSES DATABASE AND RECOMMENDATION SYSTEM** | | |
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1. **Introduction**

The Online Courses Database and recommendation System is an application that ranks online courses available on different platforms in each category( both paid and unpaid) and allows users to select the best course based on user reviews and his proficiency. Online education has been a popular source of education since quite some time but after the COVID-19 pandemic it has become inevitable. There are so many platforms that offer such courses in almost every stream that it’s become tough for a user to choose which course or platform is best for him. This application makes this process very simple, easy and quick as it tries to provide the best courses on the basis of past reviews given by other users and the number of enrolled users. Further, it also provides the facility to rate the courses which help the system to provide more accurate results. Moreover, this system minimizes the search time for courses of a user and provides information for both paid and unpaid courses.

1. **Existing System**

Currently, we see people spending their major chunk of time in the searching the best course and sometimes they don’t even find a suitable course. Searching course online is a time-consuming task as there are so many options available for each domain and there is no fixed rating criteria across all platforms.

Furthermore, there is no such system that exists on the internet, that provides a dynamic catalogue of courses across all major platforms. In simple words this is a cross-platform course database and rating system.

1. **Proposed System**

We have proposed a system that makes use of databases to improve the user experience and reduce the time spent on the process. The features of the proposed system are as follows:

* An authentication system is provided that guards the application
* Users can provide the rating for the courses.
* The user can also have the option to comment on any course.
* The courses will be ranked dynamically based on current reviews.
* The application will have all courses from all major online platforms.
* User can update their password and courses finished.
* The number of positive and negative reviews will be displayed for each course
* User can filter courses according to his requirements, proficiency, prerequisites etc.
* There is scope for adding an intelligent system that recommends a course for the user based on his past enrollments, knowledge, previous results, similar users etc.

1. **Relational Database Structure**

Since structured data is stored in a relational database, we have identified the following entities and their attributes that will be stored in a relational database:

* **User:** User ID, Name, E-mail ID, Password, Phone number, Address, University, Academic details, Enrollments, Interests etc.
* **User Enrolled Courses**: User Id, Platform, Course, Domain, Category, rating, comments.
* **Platform:** Name, web address, description.
* **Course :** Course ID, Name, Prerequisites, ratings, Enrollments, comments, category.
* **Domain:** Domain ID, Domain name, Platform, Description.
* **Category:** Category ID, Category Name, Domain, Description.
* **Comments :** User ID, Course ID.

1. **RDBMS and NoSQL Integration**

NoSQL databases are non-tabular, and store data differently than relational tables. Hence, we use NoSQL database to store information such as reviews and feedback from users. This information can be used by other customers to choose best course. Semantic transformation and SQL parsing are two methods that can be adopted to integrate RDBMS and NoSQL.

1. **Societal Concern**

In this ever advancing world it’s important to keep ourselves updated with these advancement especially students. Since COVID-19 pandemic it has become difficult for everyone to get traditional class room schooling, So online courses have become very popular and infact inevitable. But still finding a suitable course online is a tedious task. This application makes this process very simple, easy and quick as it tries to provide the best courses on the basis of past reviews given by other users and the number of enrolled users. Further, it also provides the facility to rate the courses which help the system to provide more accurate results. Moreover, this system minimizes the search time for courses of a user and provides information for both paid and unpaid courses.