EDUAMP

By

Team 48

Team Members:

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Problem Statement:

A good amount of money is demanded in online courses platforms such as Coursera or edx so the college students who usually rely on their pocket money find it difficult to add some courses and tools in their skillset. Often there are private tutors who want to teach on online platforms but are not able to because they are not representing any recognized university. There are students who are good in some courses and can help the professors in teaching, grading the students, doubts clearing but they don't get such opportunities in their ongoing college or job. There are platforms such as NPTEL where students can learn for free but it does not provide private tutors to teach and teaching assistants to earn and help the professors.

Idea:

We are designing an online course platform that will help students solve this problem as this platform will not charge any fees if students want to learn from a recognized university's professor. Our platform also gives an opportunity to the private tutors who want to teach and also earn money. The professors from recognized universities and teaching assistants get their earnings from government funds (as the government wants skilled youth). The private tutor charges some money from the students.

Our idea comprises the implementation of an education and learning portal in which students can choose multiple courses from an optimal pool of catalogue of various universities and private tutors who are registered on this platform. Along with this, we facilitate Teaching Assistants to join the platform for helping out professors in their respective courses and provide assistance in managing the course. This portal will be of extreme help for students to enhance their skills at the comfort of their home and the collection of the data online will come in handy and will make it easily manageable for universities too. EDUAMP has an upper hand when compared to other commonly used learning platforms in terms of some of the valid points mentioned below.

How are portal differs from the existing ones ?

We did a comparison with NPTEL portal and listed a few differences

NPTEL	EDUAMP
Provides free education to students and demands money if a student wants a grade in his/her course.	Provides free education and also gives the grade to the students without any cost (with the help of advertisement revenue and government funds).
Does not provide any opportunity for teaching assistants.	Provides an opportunity for college or graduate students to earn some money by helping professors as teaching assistants.
Does not provide private tutors with an opportunity to teach.	Provides private tutors with a talent to teach their mastery skills to students for an amount of money which they(tutor) decide in limits.

Weekly Progress:

Week 1:

Identification of entities:

1.) **Student-** A student is a person who wishes to study courses to hone the persisting skills and increment the knowledge to completely master the subject.
2.) **Courses-** A set of classes or a plan of study which results in an exam and is usually graded.
3.) **Professor-** A person who professionally teaches a subject and inculcates the knowledge to the students.
4.) **University-** A high-level educational institution in which students study for degrees and academic research is done.
5.) **Teaching assistant-**A person who teaches a subject and is employed to help a professor teach.
6.) **Private tutor-**A person who teaches a subject without being associated with an institution.
7.) **Administrator-**Administrator is responsible for the management and coordination of the portal.
8.) **User-** A person or institution who operates and wields the benefits of the portal.

Week 2:

Stakeholders Queries:

The project assists these following probable stakeholders:

STUDENT	Students enrol for a particular or multiple courses from the catalogue of courses provided by either a university or a private tutor. 1.) Can students update and increment their persisting academic skills? 2.) Can students enrol in multiple courses? 3.) Can students clear their doubts by reaching teaching assistants? 4.) Can students contact particular universities to get their grades? 5.) Can students repeat a course if they want to improve their grade?
PROFESSOR	Professor belongs to a university that is associated with a teaching assistant and teaches enrolled students. 1.) Are professors able to teach every enrolled student? 2.) Are professors assisted by teaching assistants? 3.) Does a particular professor belong to a specific university? 4.) Can professors assign grades? 5.) Can professors take up multiple courses?
UNIVERSITY	University hires professors to teach courses to a student who's enrolled in a course offered by University. 1.) Does the university offer the required course? 2.) Does the university contain a particular professor? 3.) Does the information regarding the university is provided? 4.) Can the student contact the University? 5.) Does the university keep the record of the students?
PRIVATE TUTOR	A private tutor is not associated with any University. The tutor contributes to the portal by teaching the students on an independent basis.

	1.) Are private tutors able to teach every enrolled student? 2.) Can private tutors take up multiple courses? 3.) Are private tutors assisted by teaching assistants? 4.) Can private tutors assign grades? 5.) Can the students contact the private tutors?
TEACHING ASSISTANT	The role of the teaching assistant is to assist professors in the course and help in the grading of students. 1.) Are teaching assistants able to manage every enrolled student? 2.) Can a single Teaching assistant take multiple courses? 3.) Can teaching assistants access professors regarding courses? 4.) Does the particular teaching assistant belong to the particular University? 5.) Can the teaching assistants assign grades?
ADMINISTRATOR	The administrator commands and controls the portal and is responsible for its maintenance. 1.) Can the administrator add a user? 2.) Can the administrator get the user's email address? 3.) Can the administrator get the user's name? 4.) Can the administrator manage the portal? 5.) Can the administrator access users passwords?

Week 3:

Identified weak entities and relationships:

Following are the weak entities in our database:

1. Student
2. University
3. Teaching Assistant
4. Professor
5. University
6. Private Tutor
7. Administrator

The above entities are weak because they do not have their own primary key. These are connected with the ISA relationship with the USER entity which has their primary key.

Entity relationship(s):

Following are the relations:

Entity 1	**Entity 2**	**Relationship Explanation**	**Relationship**
Student	**User**	The student makes an account by providing the necessary detail and is adjoined with the user on an *is-a* relationship basis.	**ISA**
Student	**Course**	A student can register for one/multiple courses and the registration depends on necessary requirements. And vice versa one course could have multiple students.	**Many to Many**

Student	**Professor**	One student can be taught by multiple professors and one professor can teach multiple students.	**Many to Many**
Student	**Private tutors**	The Student-tutor relationship is similar to the student-professor relationship.	**Many to Many**
Student	**Teaching assistant**	Students are graded and guided by teaching assistants.	**Many to Many**
Course	**Professor**	Professor takes up courses and teaches them to students.	**One to One**
Professor	**University**	The professor is employed by the university.	**Many to one**
Professor	**Teaching assistant**	Professor is assisted and helped by the teaching assistant.	**Many to many**
Professor	**User**	Professor makes an account by providing necessary details and shares with an *is-a* relationship with the user.	**ISA**
University	**User**	University makes an account by providing necessary details and shares with an *is-a* relationship with the user.	**ISA**
Private tutor	**User**	A private tutor makes an account by providing necessary details and shares	**ISA**

		with an *is-a* relationship with the user.	
Teaching assistant	**User**	The teaching assistant makes an account by providing necessary details and shares with an *is-a* relationship with the user.	**ISA**
Administrator	**User**	The administrator is responsible for adding the user.	**Many to many**

Link to Lucidchart ER Diagram:

ER Diagram

Week 4:

Relational Schema was created with Ashmeet sharing the screen along with other members contributing from the meet call.

Week 5:

The tables were made with MySQL and data was stored in the tables. The work in progress document was finalized.

Individual Contributions:

All the project progress was done on google meet on a weekly basis. The ER Diagram was done through Lucidchart on which everyone can collaborate at the same time. The relational schema was created with Ashmeet sharing his screen and everyone else guiding him through google meet.

Name	**Contribution**
Ashmeet Singh	Deciding idea and entities, ER Diagram, Relational Schema, SQL Table, Data Filling
Vidhi Sharma	Deciding idea and entities, ER Diagram, Relational Schema, SQL Table, Data Filling
Raghav Bhalla	Deciding idea and entities, ER Diagram, Relational Schema, SQL Table, Data Filling
Vikram Malik	Deciding idea and entities, ER Diagram, Relational Schema, SQL Table, Data Filling
Priyansh Anand	Deciding idea and entities, ER Diagram, Relational Schema, SQL Table, Data Filling