571 Final Report

A educational content delivery system

Group 14
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1 Abstract

We created this website to help facilitate the transfer of knowledge from educator to student. It can be difficult to effectively deliver educational materials, so by creating a website that provides an interactive user interface for uploading and viewing educational videos we believe we can help overcome some of the obstacles educators and students may face. Our website allows educators the ability to upload educational videos and test their students based on the content provided. It also provides a content management system to help educators manage their content and ensure the content is correct. students have the ability to search and view educational content based on a video title, topic or educator. students will also be able to rate the content and this rating will reflect how an educators content will be displayed in the search results.

2 System Architecture

To create our user interface we used HTML, CSS, and Javascript as our frontend. For our backend we used PHP to interact with an MySQLi database. We also used PHPMyAdmin to manage our database and help test our websites endpoints.

3 Introduction

As society shifts towards virtual learning the need for new and innovative ways of delivering this information grows. The online learning industry is one of the fastest growing markets in the world and that trend is expected to grow due to the new obstacles we face as a society. We have developed a platform called IQ Transfer that will facilitate a knowledge transfer from educators to students. We believe that IQ Transfer is a simple and interactive way to learn, but will also greatly increase the success of the students.

4 Overview

We took many steps in creating IQ Transfer. First step was to create an user interface where our users could eventually view content that would be on the site. When we had the interface working we were able to create our registration and login systems. The login and registration systems are very important because it makes sure that only members can access IQ Transfer content. Since this is an educational site we need two types of members. The two types of members are an educator and a student. The educator is responsible for uploading videos, managing video and testing the student. The students responsible for watching the educational videos that are provided and taking the tests that are connected to the videos.

Now that users can register we need to store their information somewhere. To do this we connected a database to our interface. By doing this it gives IQ Transfer a record of all its members it has by storing the members username and passwords in the database. The database is able to store the video information and student data, we were able to create an interface that would allow users to upload, delete and edit their video content.

Within IQ Transfer we wanted a way to motivate students and educators to be committed and engaged with the content of the site. We decided that the best way to do that is by creating three different rating systems. The three rating systems are for the videos, the educators and the students. The ratings are calculated for each video, educator and students, the result from each calculation will get put on to a ranking page for all members to see. The ranking page is ordered from the best rating at the top and the worst rating at the bottom.

We all know that it can be hard sometimes to stay focused while watching videos. So we wanted a way to make sure that the students had a purpose to actually listen and pay attention to what the video is trying to teach you. When an educator uploads a video they will add five true or false questions about the video, which creates a short test for the students. Once the students finish watching the video, there is a button where students can take the test. Also give more incentive we made it so students can only take the test once.

With any site you want an easy way for members to find what they are looking for. For us we create a search page where students and educators can go type in a keyword that they want and videos that contain that keyword will be shown to them.

What happens when the video they are looking for doesn't exist? Well the student will create a request for that kind of video that they want, and then a notification will be sent to all the educators. The notification will tell educators that a student is looking for a video that doesn't exist. Once an educator has a video that matches one of the students requests, that student will be notified that there is a video that matches.

5 Discussion

5.1 Interface

Our homepage provides an introduction to the site and its functionalities. It also displays the top five recently posted videos, top five rated videos and the top five most viewed videos. Our navigation header will display options based on if a user is an educator or student. An educator header will provide navigation to the home, search, requested videos, upload video, manage videos and rankings pages. A student header will provide navigation to the home, search, rankings, grades and video request/notification pages.

5.2 Login and Register Systems

On our login page, there is an option to enter a username and password, or create a free account. If the user is already a member of the website they can login by entering their username and password. If they are not a member of the website then they can click the create free account button and they will be redirected to a user registration page. On the registration page it asks the user to pick if they are a student or an educator. A student is a user who watches the videos and learns from the content provided by educators. An educator is responsible for uploading videos and creating content for the students. The user can also enter their choice of username and password, and then they are done creating their account. Once a user has successfully created an account they can then enter their username and password on the login page, and then they will be able to access the website's content.

5.3 Database

Our database contains 6 tables in order to store the websites content data. These 6 tables are complete, request, tests, testscore, users, and video. The complete table tracks information about which requested videos have been completed by educators. The request table stores information about requested videos made by students. The tests table stores the quiz questions and answers to each video that is uploaded. The testscore table stores the test score for each test that a student completes. The users table stores all user data needed by the site such as username, password, ranking and user type. The video table stores all the video data needed by the site such as title, topic, path to the video, path to the video thumbnail, number of views, rating, postdate, and the user id of the uploader.

5.4 Upload Video

Upload video is only available for the educators because it is their responsibility to create content for IQ Transfer. When an educator is ready to upload a video to IQ Transfer, they click the Upload Video button in the header menu or the Upload Video button on the Manage Video page. When uploading a video the educator needs to fill in a few sections. Educators need to pick a topic from the topic list that is given, a title that will go with their video, a thumbnail image, and the video. Educators also have to create five questions that will go along with their video, and select if the answer to the questions is either true or false. Once educators have finished completing all these fields they can upload the video to IQ Transfer.

5.5 Manage Video

Manage video is only available for the educators because it is their responsibility to manage their content that they have uploaded for IQ Transfer. Educators can see all the videos that they have uploaded and there is a button at the top left of the page that educators can click to upload more videos. Educators can either edit or delete the video that they have already uploaded to IQ Transfer. When educators choose to edit their video, they can only change the topic, title, the questions and the answer to the questions. They are not able to change the

thumbnail or the video. When delete is selected by the educator, it will delete that video from the database and the information that went with the video.

5.6 Test

We created a short five question test that students will take when they are ready, after they finish watching a video. Each question is created by the educator and these questions are only true and false. So students have a 50/50 chance of getting the question correct, if they actually listened and paid attention to the contents of the video. Students are able to watch the video as many times as they would like, but they can only take the test once. Hopefully students are ready when they choose to take the test, because how they do on the test affects their student ranking. Since the test can only be taken once, students need to pay attention to the videos if they want a good grade.

5.7 Rating Systems

Within IQ Transfer we have created three different rating systems. The first rating system is video rating, video rating happens when the students finish the test and are asked at the bottom of the test page to rate the video out of five stars. Each video's rating is calculated by finding the average rating from all the video ratings that have been done by students. Next rating system is for the students, when the students finish taking the test, they are given a grade on how they did on that test. The student's rating is calculated by finding the average of all their grades so far. Finally we have educator's rating system, when the videos get rated by students those ratings get taken into account when figuring out the educators rating. The educators rating is calculated by taking the video rating of each of their videos and averaging them all together to get the rating for the educator. All of these ratings get put to the ranking page. The ranking page displaces the rating from all the videos, students and educators. The ratings are ordered from best to worst, so the top videos, students and educators are at the top of the lists and worsts are at the bottom. This ranking page is available for all educators and students to see. Students also have a grade page that shows them what grades they got on each test they have taken. The student's grades are

private, so no other students or educators can see what they got on the tests that they have taken.

5.8 Search Page

The search page allows students and educators to type whatever keyword they like into the search bar. Then search will return all videos that have that keyword in their information. The search results are ordered by video ranking, so videos with higher star ranking will show up at the top and ones with low star ranking will be at the bottom. Search is handy when educators or students are looking for certain videos, topics, or educators.

5.9 Notification

There is a chance that students are looking for a video on a certain topic that has not been added to IQ Transfer by the educators yet. Students can request a video be created on a certain topic if it doesn't exist or if they can't find what they are looking for. That request will get sent to all the educators, then the educators can see what kind of videos are being requested by students. When an educator has a video that matches the student's request, they will go to the video request and say that the request has been completed by attaching the video that satisfies the request. Once the request has been satisfied the student will be notified that their request has been filled. Then the student can go watch and learn from the video that they have requested.

6 Summary

We have created a working solution for the project topic we chose. All features that were promised in the project proposal were accomplished. By taking the website in steps and diving out the work has made it possible to create the IQ Transfer that exists today. The main learning experiences we gained from this project include how to connect a database to a website, how to effectively parse user input and insert that into our tables, and how to display information from across all of our tables for the users of the site. Another takeaway was that spending the extra time fine tuning the style can

make a massive difference in the presentation and feel of the end product. Overall we are proud of what we developed with IQ Transfer turned out and we could potentially see us actually making it a real life site for people to use and educate themselves.

7 System Requirements and How to Run

1. Code can be downloaded from https://github.com/brettkaliel/Video-Sharing-Platform (Repository will be set to private after marking is complete)
2. Install XAMPP (https://www.apachefriends.org/download.html). Once the download is complete, run it and start all servers.
3. Place provided website code folder in the XAMPP htdoc folder.
4. Open your browser and enter the following url "http://localhost/phpmyadmin/".
5. Once you are inside PHPMyAdmin create a new database called "571p". Then select the 571p database and then go into the import section.
6. Once inside the import section click on browse for import file and select the sql backup file we have provided. You can also copy and paste the tables in directly.
7. Then click go and then the database should be uploaded.The website should now be fully functional and can be accessed by entering the following url "http://localhost/571p/".

8 References

1) **https://www.udemy.com/**
2) **https://www.khanacademy.org/**
3) **https://www.coursera.org**

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