**GINA CODY School of Engineering and Computer Science**

**Department of Computer Science and Software Engineering**

**Concordia University**

**SOEN 342 - Project Phase 1**

Due: October 1, 2022

Team Name: Cypher

Team Members:

Victoria Castelli - 40117055 - VCastelli

Jiayi Chen - 40110997 - JIAYI615

Zayneb Mehdi - 40109417 - BrainOverfl0w

Carson Senthilkumar - 40173515 - CarsonSSk

Khaled Owaida - 40119268 - KhaledOwaida

Wassim Nijaoui - 40121366 - Nijaoui-Wassim

Haris Mahmood - 40135271 - haris2055

Ziyi Wang - 40167122 - Zeebruh326

Louisa-Lina Meziane - 40133119 - Louisa-Lina

Zachary Bruce – 40136585 – z-bruce

**Abstract**

The goal of this project is to develop an interface for a unique e-learning platform that pairs students in need of tutors with compatible tutors. The first step in developing such an e-learning platform is to determine the requirements the platform should fulfill. In order to do so, a market analysis was performed; the analysis consisted of a platform analysis of three existing e-learning platforms and a comparative analysis. The three existing platforms examined were Wizeprep.com, TutorMe.com, and Successclolaire.ca. The comparative analysis allowed us to elicit what e-learning requirements and features currently exist in the market and how we can innovate them to develop a unique and high-quality product. Lastly, we present our E-Academy platform by providing a layout of the features to be implemented and highlighting what makes our platform unique.

**Part I: Market analysis**

****

*Figure 1: Feature Comparison Across Site*

For the market analysis, our team has decided to focus on the following three existing platforms: Wizeprep.com, TutorMe.com and Successcolaire.ca. The following market analysis will consist of a brief description of each of the three aforementioned platforms. In addition, we have provided an analysis of the features offered by all three e-learning platforms organized by features offered per type of user: guest, student, tutor and administrator.

Wizeprep.com is an e-learning platform that focuses on offering students a simple and collaborative learning experience. The platform provides students with instant access to course material of interest for a large variety of school levels and subjects. It offers access to well-structured recorded and live video lessons and exam preparation sessions during which groups of students can learn from professional tutors to enhance their knowledge of their courses of interest.

1. **Features Provided to Guests**
2. **Features Provided to Students**

The student is the most important user that e-learning platforms try to accommodate. Typically, e-learning platforms grant these user accounts the ability to fulfill certain basic requirements, such as allowing students to request tutoring lessons in a certain subject, while also rewarding these accounts with additional and unique functionalities, like allowing students to access a whiteboard or subject-related extension tools.

After having analyzed Wizeprep.com, TutorMe.com and Successclolaire.ca, many features were found to be common among the three e-learning platforms. For example, all three platforms allow students to create their user accounts and sign into the site as a student to access their student accounts. Moreover, all three platforms allow students to sign up for group tutoring lessons, download files, get access to the lesson material that they have purchased and watch recorded video lessons. Lastly, all three platforms provide the student with the ability to submit tutor evaluations and for them to receive notifications about communications with the tutors or any updated course material. Since all the features were implemented in each of the three examined platforms, it can be concluded that these features may be crucial in creating the essence of an e-learning platform which focuses on supplying compatible tutors to students in need of tutoring. In other words, these common features, implemented in similar manners, may be considered core features that should be implemented in the platform we aim to develop.

On the other hand, the variety in the features across the platforms is what keeps each e-learning platform unique and competitive. As Wizeprep.com is a platform with a focus on group-tutoring and exam preparation, it was the only e-learning platform of the three analyzed that offered students the ability to attend live group-tutoring sessions, attend live group exam preparation sessions. These features are valuable; however, due to the platform’s focus on group tutoring and lesson consumption, Wizeprep.com could not allow students to request for and attend live one-on-one tutoring sessions. Moreover, Wizeprep.com does not allow students to upload files, nor does it provide students with the ability to use certain learning tools, such as whiteboards or calculators, which could be beneficial to a student’s learning. TutorMe.com and Successcolaire.ca, on the other hand, have implemented these features for students, making them more suitable platforms for personalized tutoring. Wizprep.com and Successcolaire.ca both allow students to browse through their course material or material provided to them by their tutor, and they allow students to download written lessons or documents that can be utilized for teaching purposes. It is likely a shortfall that TutorMe.com does not allow these functionalities since going back to visit and download completed lessons and assignments can be quite vital in a student’s learning process. On the other hand, one of TutorMe.com’s main advantages is that it is the only platform of the three examined that provides students access to Google Workspace and provides students with subject-related extension tools, like online compilers. These unique functionalities may be very beneficial in a student’s learning process as they may allow students and tutors to collaborate in various online shared workspaces geared towards the subject they are focusing on.

Lastly, some student features that we felt were missing from or being underutilized by all three platforms studied are access to a calendar or student progress review page and access to a tutor at any time, whether it be through live 24/7 Q&A chats or community discussion forums. These features could be beneficial to the success of such e-learning platforms as they provide support and motivation to students working through course material. While they are not features currently implemented by the three existing platforms studied, they are features that we feel may improve our platform and benefit our future student clients.

1. **Features Provided to Tutors**
2. **Features Provided to Administrators**

Administrators play an essential role in online platforms. They are responsible for handling the various requests from users and for maintaining and updating the website. The tutoring websites need administrators to organize the courses, tutors, and students. They make sure that there are no scheduling conflicts and that all activities are in order.

Based on how we assume the examined e-learning platforms work, administrators should all have the ability to select tutors, handle tutor requests, handle student requests, manage tutors, manage courses, etc. These features ensure the daily running of the platforms. As we are not privy to administrator functioning, we cannot go into great depth about specific similarities or assume differences between the features offered to administrators, but we can assume that the features offered to administrators will differ and depend highly on the features offered to guests, tutors and students.

**Part II: E-Academy presentation**

* Users
  + Students/parent
  + Tutors
  + Administrators/managers
  + Guests
* Proposed features:



*Figure 2: Our System*

**Guest Features**

**-Request to register / apply as a tutor:**  This feature allows the guest to create an account and sign into the E-academy community as a tutor. In this step of the process, the user fills in his information, agrees to the term and condition of the E-academy community and provide the required document to ensure the validity of his credentials.

**-Request to register / apply as a student:** This feature allows the guest to create an account and sign into the E-academy community as a student. In this step of the process, the user fills in his personal information and agrees to the term and condition of the E-academy community.

**-Orientation/How it works:** This feature provides the guest with two instructive videos depending on their choice of roles. The videos show all the features used by the guests according to their role. It provides them with a step-by-step process on how to register and navigate throughout the website.

**-Access to general sections:** This feature gives guest access to the general sections of the website to give them a general idea of the E-Academy concept**.**

**-Access to a course preview:** This feature gives guests access to a detailed overview of the course using an interactive video format.

**-Access to course info:** This feature provides the guest with an outline of the course, the tutor’s resume and reviews given by previous students.

**-Live Contact Us / Get Help Chat:** This feature provides guest with an online chat to voice their concerns and get answers to their questions.

**-Trial Access:** This feature allows guest to experience one free session with one of our tutors, for a course of their choice.

**Students Features**

-**Request for tutoring lessons:** Involves signing up for a course with a tutor. This feature will allow users to enrol with a tutor of their choosing. Lessons will be one on one live lessons, covering material of a course, having exam prep lessons to better prepare the student/parent.

**-Sign in as Student:** Common functionality, allowing user to sign in as a student/parent after signing up as one. It allows user to get certain functionalities to what would be useful for them, providing a more specific service to their needs.

-**Connects to shared board:** Providing access to students to their registered lesson boards, where the course content, recorded lectures, tests and any document shared will be provided on. Benefit is improved organization of course content.

-**Chat with Instructors:** Provides access to tutors and students to connect, to address any concerns, updating the instructor on any future topic needed to be address, asking questions regarding lessons or homework.

-**Calendar View:** This feature allows for students to view their tutors’ availabilities and request for a session during a certain day of the week.

-**Parental update for minors/Parental Mode:** This feature allows for students who are determined to be minor to have their parents updated on their progress.

-**Search for courses:** This functionality allows for specific searches for courses they would like to view and possibly register for.

-**Uploaded files:** Allows for student to upload their assignments or homework’s.

-**Download files:** Allows for students to download any course content.

-**Tutor evaluation**: Asked to be filled by the student, to rate the professor on the site.

-**Notifications:** Via email to notify the student of their upcoming meeting and time with their tutor. Additionally, it informs them of any cancelation or of any message by the tutor.

-**Membership:** Allows for different options for students. For the basic plan we will give access to student for 5 hours a week. For the premium plan we will provide 10 hours a week, for those who need more coverage and aid for their desired course. Finally, on demand plan is for those who would like to pay per hour or specific question they want to clear up with one of our tutors.

**-Report problem:** If the student finds that there is an issue with their instructor that require admin to come in to settle a dispute or for disciplinary action, they will have the option to report. Additionally, if there is a problem with the site it can be reported through this feature.

**-Student performance measurement:** Allows student to track their progress and see where they are having difficulties and possibly require more help in. This can be done in terms of grades.

**-Access to whiteboard**: Allows for students to use a whiteboard digitally to write out their question, practice or solve a given question, and finally even ask the tutor about a certain problem.

**-Access to general sections:** This feature gives users access to the general section of the page that encompasses home page, support page, info page, and course page.

**-Access to lessons purchased:** Students having access to the course they purchased.

**Tutor Features**

-**Access to student list:** This feature allows the tutors to have visibility on the number of students they have. The tutor in question can use this list to get basic information on a student like their email for example.

**-Access to general sections:** This feature provides tutors with the access to the home page, support page, info page, and the course page.

**-Sign in as Tutor:** Common functionality, allowing user to sign in as a tutor after signing up as one. It allows user to get certain functionalities to what would be useful for them, providing a more specific service to their needs.

**-Sign up as Tutor:** This feature allows a user to sign up as a tutor by providing valid documentation to showcase their knowledge on the chosen subject. The sign-up page will replicate an application form. One part of the application form will ask the user to provide a video of them explaining a somewhat complex concept in respect to their chosen subject. The information will then be processed and evaluated by the admins for the final decision.

-**Add/edit sections:** This feature allows the tutor to add to or edit existing sections from the tutor page template that is provided on account creation. This allows the tutor to organize their own page and modify any information they deem invalid.

-**Download files:** Allows tutors to download the work of their respective students.

-**Upload files:** Allows tutors to upload assignments, exams, and their respective solutions to their page in any desired section. The tutor will also be able and requested to upload the corrected version of a student’s work.

-**Notifications:** The notifications will be automated and sent via email to notify the tutor of their upcoming meeting and time with their student. Tutors will also be notified if a student cancels a session or if any user messages them.

-**Editing files**: This feature will allow the tutor to change an uploaded file.

-**Grading tools**: This feature provides the tutor with a grade calculator that uses the grading scheme provided by the tutor to produce the current grade of a student. The grading scheme involves assignments, quizzes, and exams.

-**Report problem**: This feature allows the tutor to report a problem and will be handled by the admins. This can be due to a problem with a student or a technical problem regarding the website itself.

-**Content organization**: This feature is built into the tutor’s page and will promote the tutors to add their material under the respective weeks when they were taught.

-**Live chat with students:** Provides access to tutors and students to connect, to address any concerns, updating the instructor on any future topic needed to be address, asking questions regarding lessons or homework.

**-Access to whiteboard**: This feature will allow the tutor to work with the student through collaboration and both individuals can better understand each other’s thought process. The tutor and the student will be able to write on the same whiteboard.

-**Setting up meetings/Calendar View:** This feature allows the tutor to create meetings with students based on the calendar. This feature allows for tutors to also view their scheduled sessions with students. The tutor will also have the option to view their availabilities and the availabilities of their students.

**-Accessing student portfolio:** This feature allows the tutor to view the student’s portfolio page and see the student’s contact info, age, and level of education.

-**Generating weekly report**: This feature is a weekly questionnaire and commentary form for the tutor to fill out about their students. This is where the tutor can communicate if a student has been absent for example.

**Administrator Features**

**-Handle tutor requests:** This feature allows to approve or deny any request from guests who wish to register as tutors by assessing their eligibility.

**-Handle student requests:** This feature allows to approve or deny any request from guests who wish to register as students by assessing their eligibility.

**-Managing courses:** This feature allows to approve or deny tutor requests regarding the addition of a course they are interested in teaching.

**-Verification of tutor ID:** This feature allows to check and authenticate each tutor’s ID as a security and safety measure for both the tutors and the students.

**-Reviewing reported problems:** This feature allows to evaluate the complaints issued by a student or an instructor and assess the necessity of acting in response to the problem.

**-Weekly report review:** This feature allows to view the reports that are generated by the tutors regarding the student(s) they cater to at the end of each week.

**-Accessing student list:** This feature allows the admin to view a list of all the students that are currently registered as well as any information regarding a specific student.

**-Accessing tutor list:** This feature allows the admin to view a list of all the tutors that are currently registered as well as any information regarding a specific tutor.

* Project value:

We analyzed 3 websites: Wizeprep, TutorMe and SchoolSuccess and compared them with our website to better understand future user’s interest regarding our website. Our website has 3 additional features compared to TutorMe and SchoolSuccess namely: **An access to tutor** **reviews**, **an access to course preview** and the **access to a free trial**. Our website has 2 additional features compared to Wizeprep that after comparison analysis were determined to be our closest competitor in terms of guest functionalities. Our unique functionalities are namely: **apply as a tutor** and **access to a free trial**. However, **apply as a tutor** is a feature common for both TutorMe and SchoolSuccess. We can conclude that our website distinguishes itself by the addition of a **free trial for guest**, surpassing all concurrence.

Our site offers common student functionalities among the sites we compared previously, as well as unique features that make our site a competitive and more student-centred choice.

To begin the common functionalities, our site offers **one on one tutoring request** that were also found in both TutorMe and SchoolSuccess but not in Wizeprep. **Signing in as a student**, was offered by our site and among all sites as it is a common criterion. **Live exam preparation** was offered with Wizeprep out of all other sites, however for us it was included as a part of our lessons. **Live one on one tutoring** was made available with SchoolSuccess and TutorMe but not Wizeprep, but our site, live lessons is the core of getting students to learn and understand and being more engaged. **Recorded lessons** are provided by our site and by all sites. **Providing written notes** are offered by our site, Wizeprep and SchoolSuccess. **Chat access to instructor** is provided by our site as well as TutorMe, but not the other two sites. **Whiteboard** was a common feature found in our site as well as TutorMe and SchoolSuccess but not Wizeprep. **Upload files** was found to be common with our site as well as TutorMe and SchoolSuccess but not Wizeprep. **Downloading files**, **tutor evaluation**, **access to lessons purchased**, **notification** was common among our site as well as all the other sites. These features make our site on par if not offer more as certain website don’t have some of the features while they may have others. Our site aims to encompass all the necessary tools needed for success.

Our site offers unique functionalities as well, which includes **Calendars** to have the student be able to book a meeting by viewing the tutor availabilities. As well as serves as a visual reminder. This provides great benefit as it allows for easy transition of booking, as well as having the option of having a flexible schedule to your needs. **Membership** which provided the student of having the choice to pick a price plan that best fits their needs, offering variety of services encompassing all possible students. **Report problem**, that allows student to have the ability to report any issue they may be having which is essential to feel comfortable in a learning environment. **Student performance measurement** allows the student to keep track of their progress and to address their weak points. **Parental mode**, which allows to keep parents updated for minors. It provides comfort and assurance to parents to be able to be given an update on the students progress as well as their tasks.

Our site doesn’t include calculator or access to google workspace, as our site already incorporates a document saving board. As for calculator, it is required for the student or professor to be using theirs to follow along with the live lesson, instead of being distracted by one found on our site. Overall making our site for student functionalities on par with other sites. Additionally, making it even more enticing by offering unique features that other sites don’t have.

Furthermore, our site offers functionalities for tutors that are also found in the previously mentioned sites and provides unique features that help tutors with their work. The commonly used features between our site, Wizeprep, TutorMe and SchoolSuccess are access to a **student list**, **access to general sections of the site**, **sign in as a tutor**, **sign up as a tutor**, **downloading and uploading files**, and **the notifications feature**.

The unique features that our site offers are editing files, grading tools, reporting a problem, organizing content by date, live chat with students, access to a shared whiteboard, Settings meetings with a calendar view, and accessing student portfolio. The **editing files** feature is very helpful for tutors since it allows them to make a correction to the uploaded files. This helps our site be more user-friendly compared to our competitors. The **grading tools** feature provides tutors with additional functions that help them grade their students in an efficient manner. This helps the tutors save time and be less apt to make a calculation error. The **report problem** allows tutors to have the ability to report any issue they may be having which is essential to feel comfortable in a learning environment. This involves technical problems that can happen for the user. The **content organization** feature helps the tutor stay organized and keeps the posted material in chronological order. The **live chat** feature between tutor and students promotes communication and makes it easier for the two parties to be on the same page. The access to a shared **whiteboard** feature helps the tutor to properly assess the student’s knowledge and understanding. The **setting meetings and calendar view** feature helps the tutor create and keep track of their meetings. The **accessing student portfolio** provides the tutor with essential information like the student’s age and the student’s level of education so that the tutor can properly create the curriculum. Finally, the **generating a weekly report** feature helps the tutor assess the student’s implication to the program and provides visibility to the admins.

Additionally, our site offers common administrator functionalities among the sites stated previously, as well as unique features that make our site stand out and give more control to the admins. Our common features are essentially **handling tutor requests**, **handling student requests, managing courses**, and **verification of tutor ID** which are all features found in Wizeprep, TutorMe and SchoolSuccess.

On the other hand, our site includes 2 unique features, namely **reviewing reported problems** from students and/or tutors which allows the admins to have control over the security of the people involved and to keep our site a safe environment for everyone. As well as **weekly report review** which allows the admins to keep track of students’ attendance and academic progress in general. As for **accessing student list** and **accessing tutor list**, it was not possible for us to see if these features were in effect in other sites since it requires special admin permission. Nonetheless, we still offer them as tools for the admins to keep track of all registered students and tutors.