SOEN342: Software Requirements and Specifications section I

Phase I
Group A

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Abstract

On our E-Academy platform (Sturdy), teachers, and students can get the help they need to access online tutoring. The website connects tutors who wish to help with students or parents in need of guidance. A comparative study was conducted on the different available systems on the market. What provides a competitive advantage in the market is product differentiation. The platform offers features that are unmatched by any other products on the market. The main difference between Sturdy and other E-Academy platforms is that users (students and parents) can post reviews of their learning experiences with tutors. This function will enhance the user experience and assist tutors in improving their performance as teachers. Analyzing and collecting data from stakeholders about the needs of a system will ensure Sturdy's ability to meet all the requirements of its users. Information from stakeholders will be gathered using two different requirements elicitation techniques. The first technique of elicitation is interviews, and by asking questions we can develop a better understanding of the requirements. The second elicitation technique is observations giving us the ability to analyze and evaluate how users perform activities, tasks, and use resources.

Part I: Comparative study (Market analysis)

Type of User	Features
Guests	- Can watch pre-recorded video lectures for a variety of subjects - Can contact support center for additional information or help
Teacher / Tutor	- Can become a teacher/tutor for an existing course - Can create its own course with evaluations such as quizzes, assignments, and projects - Can access all information about individual students registered to their [the teacher / tutor] courses - Can track and provide feedback of students' projects and submitted work - Can manage who has access to their course
Students	- Can access classroom with unique given code - Can watch pre-recorded video lectures for a variety of subjects - Can track their own progress and see feedback given by Teacher / Tutor - Can access their profile information and edit/change it to their liking at any given time - Can test their knowledge by doing worksheets/assignments with solutions
Parents	- Can enroll their child in a class - Can verify the child's progress - Can contact the teacher/tutor to discuss their child - Can administrate a child's account to limit what they can and can't see

Khan Academy

Other	- Intuitive and clean user interface - Search bar to navigate through website and course contents - 3 Types of accounts (Student/Parent/Teacher) - Content organized in a clear and concise manner

superprof	
Type of users	**Features**
Student	- Can keep a list of favorited tutors to book again at another time - Can choose from a very wide selection of different private tutors - Can choose tutoring for over 1000 subjects - Can direct message tutor for 1 on 1 help and feedback
Teacher/ Tutor	- Can upload degree and scholar certification to display competences - Can create ads to easily display themselves to students in need of help - Can add an auto-descriptive video so potential students can get an idea of what to expect - Can choose when to get paid - Can choose from a wide variety of languages to teach in, whatever the tutor is comfortable with
Other	- Can pay for extra advertisement visibility to increase exposure, ultimately increasing sales - Can get advertisement performance reports - Intuitive and clean user interface - Easy signup with a wide variety of accounts to choose from

Type of users	Feature
Users	- Can request a tutor through a chat based on individual needs - Can personalize profile information such as academic level, coarse subject, parent/student - Can check for progress and feedback given by tutor - Can book tutor sessions in real life or online based on personal preference
Tutors	- Can easily set up regular meeting times with students - Can meet in person with the student for a closer interaction with student - Can track statistics based on other tutors, how many students looking for tutors, grade improvement - Can provide feedback to students based on their performance throughout the sessions
Other	- Offers various services such as online revisions 24/7 tutoring, summer classes, enrichment and remedial classes. - 24/7 chat support

Part II: Sturd E-Academy presentation (product presentation)

- *Users*
  - o *Guests:* Can request to register as any other type of user (except Admin). Has access to view the tutors courses and the main page.
  - o *Students :* The students are going to be able to search for a subject that they need help with. From that search, they will be able to select a tutor from a variety of people that offer the service. They can leave a review on the tutor's profile in order to help fellow students choose.
  - o *Parents :* Parents are going to have the same features as the students. When they register, they can be assigned to a student as their parent which gives them access to chatting with the tutor.
  - o *Tutors :* They can post their profile as well as all the subjects that they can help with. They will be able to view their messages and decide on an appointment. Tutors can send feedback on each session to the parent if the student is a young child, or if the student is an adult the feedback for each session is sent directly to them to assess their progress.
  - o *Administrators/managers :* Can view the reported accounts and will be able to move forward with the ban or not. For example, if someone is reported for being disrespectful, the admin can decide whether to ban the account or not.
- *Proposed features*
  - o *Accounts creation:* The users can create their accounts and select an account type from the list mentioned above. They need to input their email address, and create a new password as well as give their phone number as a contacting point. Tutors will need

to include their skill set, upload any certificate, fill their education and work experience.

- o *Requests management:* Students/Parents can request lessons from tutors.
- o *Chat System:* Chat system between a tutor and a student OR parent when a lesson is requested.
- o *Payment System:* In case the lesson is taken online, a payment is made by the Parent/Student to the Tutor. Funds get locked until the lesson is started and is completed.
- o *Report Account System:* Can be done by anyone. Admins can decide which actions to take on the reported account.

- *Project value*

- o *Learning :* Students will use this feature to better understand subjects and get educated.
- o *Commitment/Discipline :* Students and tutors will be committed to working together to improve the student's understanding of the subject. They will have to commit to weekly sessions.
- o *Respect :* Students and tutors will have to keep a certain level of respect between each other. Students must know that private tutoring is a privilege and that the tutor is giving them their time. On the other hand, tutors must know that the student is in need of tutoring and that he needs patience in order to understand.

Comparison with other platforms (how it is different from the existing products)

Our platform will offer a better and easy-to-use UI than most of the other platforms. The platform will have 24/7 monitoring thanks to automated logs that will be sent to an administrator email. For example, when a tutor signs up to offer his classes, the gig will be sent to an email with the details of the gig. The platform will be much more secure than the other ones thanks to the monitoring and the ability to report any wrongdoing seen on it. The platform will have a secure and easy-to-use payment system between the two involved parties allowing for a variety of payment methods (cash app, PayPal, credit card, etc.). The chat will be censored from any bad words which will help keep the environment clean and friendly.

Requirements Elicitation techniques used in this project

We conducted research and discovered a variety of requirements elicitation methods and techniques that could assist us in gathering information from stakeholders and understanding their requirements. And here are the two techniques that we will employ:

Elicitation technique #1 – *Interviews*:

In order to develop effective and strong requirements, we need to understand what our stakeholders and users understand and believe. Interviews assist us to better grasp their perspectives, understandings, and needs. This technique provides an efficient way to quickly obtain a lot of information and is easy to incorporate. Note that since it is not possible to speak with all the stakeholders, representatives from different groups are chosen based on their experience and reputation (the TA in our case).

The results of interviews, such as the value of the information gathered, can vary significantly depending on the interviewer's skill. That's why in order to succeed as interviewers we will have to understand the following:

-        Always maintain a live interview. You know your meeting is over when you are unable to ask why any longer without getting stuck in a cycle.

-        recognise how structured or open-ended we should make our interview according on the interviewee.

-        and note that:

> 1-   There is no predetermined agenda for open-ended interviews. To better comprehend the issue, contextless questions might be asked. Our discussions should be sufficiently planned to ensure that we have covered all of the main questions and have not strayed too far from the subject while being sufficiently unstructured to ensure that we have successfully mined our interviewee's knowledge base.

> 2-   An agenda of reasonably open questions is established for a structured interview. There are situations when an appropriate interview questionnaire is created.

> In a structured interview, a list of relatively open-ended questions is created. For the interview, a suitable questionnaire may occasionally be designed.

During the interview, we will do our best to cover the most important Five Ws and One H questions during the interview such as: "Who will use the E-Academy platform? ", "What is the goal of this service? ", "Where will the service be used?" ,"When will this service be used?" ,"Why will tutors be interested in this particular platform?" ,"How can someone use this service?", etc.…

Elicitation technique #2 – *Observation* :

The primary application of observation sessions is to document what already exists and understanding the activity, task, tools utilized, and events carried out by others. The observation plan makes sure that everyone involved is aware of the session's goals, that everyone is on the same page regarding what should happen, and that everyone is satisfied with the results.

Observation sessions offer various advantages, including the ability to quickly identify improvement areas and gain a practical understanding of the task.

However, it also has a lot of disadvantages, such as the potential for participant disruption or the likelihood that participants may alter their methods of operation while being observed, which could prevent the observer from getting a clear image. In addition. activities based on knowledge cannot be seen.

To be able to reproduce the experience, the observer should keep track of all the tasks that were completed and the time it took during the observation session. Then the head of the session will review the outcomes following the session and follow up with the team.

Note that both active and passive forms of observation are possible.

Now, active observation entails asking questions and making an effort to follow others' lead.

While passive observation refers to quiet observation, such as when you sit with people and observe their activities without assuming anything about them.

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