

SOFTWARE DESIGN PROPOSAL

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Software Design COMS3009

FindMeTutor Android Application

Proposed idea by:

Shaneel James-719238

Jadon Manilal-815050

Jared Naidoo - 719238

Krupa Prag - 782681

Nivek Ranjith - 802119

Purpose and overview of our proposed idea

The purpose of the FindMeTutor application is to provide a convenient means for tutors and students who are looking for tutors to be able to connect within a particular tertiary institute.

The system can be described to facilitate the following problem: Currently, there are many students in search of tutors to help them with particular courses with which they require some support, as well as fellow students or tutors who are available to tutor particular courses of study. However, the problem that is faced on hand is that either pool (students and tutors) are struggling to find each other.

FindMeTutor app will be a platform through which students and tutors can meet. There are three possible registration categories:

1. Student looking for tutors they are able to register to the app with merely some personal details (Name, email address, Skype name (if applicable) and courses enrolled in).
2. Tutor - those who would like to tutor can register on the app by simply filling in some details.
3. Student and tutor those who are looking for tutors as well as able to tutor particular courses.

If you signed up to be a tutor you will be able to upload material on your vlog/blog page, which will be utilised when students search course topics that they require assistance with.

Students are able to request a tutor, sending a request to all who have registered to tutor that particular course. Once a tutor accepts a request, a notification is sent to the student. The student is now able to utilise the messaging system which will allow for communication between the student and the tutor to finalise venue, time of meeting and section in which he/she requires assistance. Students are also given the option of requesting an 'Emergency tutorial session', this is if the student requires a tutorial on a specific topic within 48 hours. An 'Urgent request' is sent out to the appropriate tutors. Once a tutor accepts this request, the tutor can communicate via the messaging system with the student and is further given a Skype option if a physical meeting is not convenient in the limited

time on hand. This entails having a Skype call over which the tutor can try and assist the student on the particular section of difficulty .

For instance, there is a student - Joe Soap - who is currently doing his 3rd year of study in computer science. Joe would like to generate some income from tutoring first and second year mathematics modules. However, Joe is also looking for a 3rd year Mathematics tutor to help him with some of his mathematics courses. We also know that the student, Mary Smith, is a first year astronomy student who is looking for a mathematics tutor. The FindMeTutor app will be ideal to resolve the problems faced in this particular scenario. Joe will register on the application as a student and as a tutor, on registering, he will select what he is capable and willing to tutor - first and second year mathematics. On the other hand, we will have Mary register as a student. Mary will then be able to search for the course she needs assistance in, for example Calculus I; any tutors who have uploaded material on this particular topic (Calculus I) will come up. Mary may find these resources useful, but if Mary does not get the assistance she requires from the material available, and would like to seek a personal tutor, Mary will click the 'Request tutor' button and this will send a request to all those who have registered to tutor Calculus I. Joe Soap will be part of the list of tutors approached. Joe accepts the request. Mary is notified of this and is now able to communicate with Joe to make further arrangements of time of meeting, venue and also to flag him of what sections she needs assistance in. On the other hand, Joe requires an 'Emergency lesson' this is a last minute lesson before his test which is scheduled to take place in a day's time. Tutors eligible to tutor Joe's course will be sent an 'Urgent request'. A tutor that accepts this request will communicate with Joe through the messaging facility which is made available. If the only possible means of having a lesson before the test is to Skype each other, then the tutor and Joe will be redirected to a skype page which will facilitate this conference.

A recommended hourly rate will be provided the tutors and students can further address method and rate on the messaging system. The app will facilitate payment via PayPal and EFT, while direct cash payment or alternative means can be discussed.

FindMeTutor will be an accessible means for students and tutors who would like to render tutoring services in order to generate some income. Most tutors, being students themselves, do not have time to advertise their

services. The app will be a feasible means for tutors to earn some money without investing too much of time or money in advertising, as well as a more promisable manner to generate some income in a substantially secure environment.

The hope to bring a more connected student and tutor network will hopefully lead to more successes in terms of student academics as it is a convenient medium for students to find assistance, as well as a manner for those who would like to use tutoring services as a means to gain some income without having to go through much effort of marketing.

With these objectives in mind, as a dynamic team, we hope to implement this system for our chosen tertiary institute University of the Witwatersrand . Each member of our team, having various skills and experiences, will be able to contribute to making this idea a reality through an android application.

Tools and resources

We will be using various tools and resources in our application. Below is a list of these:

- Java
- HTML
- Android studio/Eclipse
- Adobe Illustrator
- GitHub

Challenges

A few challenges that we envision on our journey of creating this project include building a user interface which is user friendly, as well as a software which has reduced coupling in the design this will allow for flexibility and room for improvement (if necessary at a later stage) to essentially build a reliable and secure database.