



AUXILIO – A TUTOR BASED APP

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Abstract

This paper tells in detail about our application i.e Android application for finding tutors. In today's world the increasing trend of private/tuitions has made it difficult for any parent to find a perfect tutor for his/her child. The process of finding a tutor is time consuming because of the competition going on. The rise in educational standards has led to the need for additional coaching. An Android application for finding tutors can help a parent find tutors without consulting any third party. We all know and have experienced this in our school and college life - 'a friend teaching before exam is the best teacher who teaches the whole subject in one day' and you understand better when you try to teach another individual. In this paper, we focus on making learning and teaching experience of an individual better. An individual who loves his/her field and has expertise in his field or in few subjects can provide a helping hand to another individual who is weak in the same subject. A tutor can be a graduate and working employee in some company or an under-graduate studying in some college. As android applications have become more and more powerful and distributive, mobile computing has greatly changed our daily life. Hence our android app 'Auxilio' which means 'Helping Hand' will connect a student who is in search for a tutor with affordable fees rather than expensive classes and a tutor who wants to earn a second pocket money by helping a junior in his/her particular expertise.

Keywords: Tutoring, Android, Sql Lite, Data Mining, Schedule, Timetable

I. INTRODUCTION

Every student often face difficulties in some or the other subject and opt for coaching classes. Out of these students few of them find the fees not affordable and some don't appreciate the teaching in classes. Such students don't opt for classes, start hating that particular subject, start getting low marks consistently. The way a particular student doesn't like a subject, another student may like it. If a student who is good at one subject and the other student is weak in the same subject, the first student can help or teach the second student. The student who has experienced the same subject can share his experience, the way he/she studied the subject and coped up with everything related to the subject in college life. For a new student to know a senior student's point of view is always helpful. Engineering exams are conducted in such a way that exams of two subjects are scheduled which have four to five days break in between them. This makes students to procrastinate that we will study in those five days break. In the end students study less which results in scoring low grades, some even tend to fail. To solve this problem a day wise personalized study schedule should be made for the preparation leave before the exams. Auxilio is a platform for collaboration and interaction between students, where one can help the other in academics, providing a cheaper substitute for tuitions and educational classes. An individual who needs help in a particular subject can use this app to search for a tutor who can help him/her. The individual can filter the search by the subject he/she wants to help, area preferable, credits earned by tutor, fees offered by the tutor. The individual can also sort his/her search. The individual can go to any tutor's profile and check tutor's qualifications and history. He can contact the tutor and ask him if he/she can help.

Auxilio also has extra feature to create a day wise personalized study schedule. A user needs to input the starting date of his study plan, date of last exam, list of exams with the respected dates, priority of exams and type of study time.

II. LITERATURE SURVEY

A. Tutor.com

Tutor.com is an online tutoring company that connects students to tutors in an online classroom. The service offers on-demand and schedule tutoring to students in grades 4 through 12 and college. Users can connect with live tutors online in more than 40 subjects including math, science, essay writing, foreign language and test prep. Since launching in 1998, the company has facilitated over 11 million tutoring sessions with approximately 3,000 tutors.

Features:

On-demand and schedule tutoring to students in grades 4 through 12 and college.

Users can connect with live tutors online in more than 40 subjects including math, science, essay writing, foreign language and test prep.

Completely online tutoring.

Available online as website and on Android/iOS as apps

Gooroo.com

Gooroo is a mobile app that connects tutors and students. We're a trusted community marketplace for users to share their talents and discover new ones – all from their mobile phones.

Features

Helps you get connected to students or tutors near you.

Tutor can teach online and offline, both are possible.

III. PROPOSED PLAN

A. Proposed Idea

An undergraduate student also can become a tutor and help a junior in preferred subject.

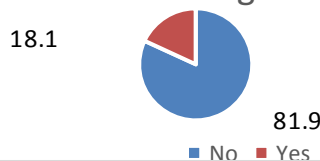
App will provide personalized study schedule for preparation leave before exams by entering starting date (to start studying), date of last exam, list of exams with dates, priority of dates & type of study time. One can refer previous question papers of Mumbai University. One can upload their college's term test question papers, viva questions.

One can sell his/her notes through app (like OLX or Quikr). Student can take help for free from the tutor if both agree on the app.

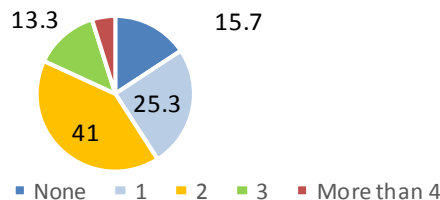
B. Need for this Proposed Plan

Here are some statistics of a small survey conducted amongst few FE, SE, TE & BE students of Rizvi College of Engineering. Here are some statistics or results we got:

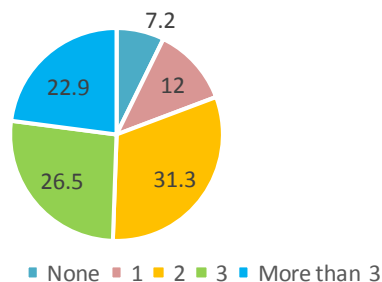
Students who prefer going coaching classes



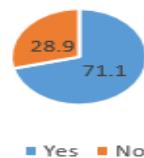
4.8 Number of Subjects a Student finds Difficult in any Semester



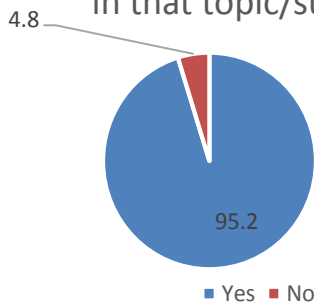
Number of Subjects a Student finds Easy in any Semester



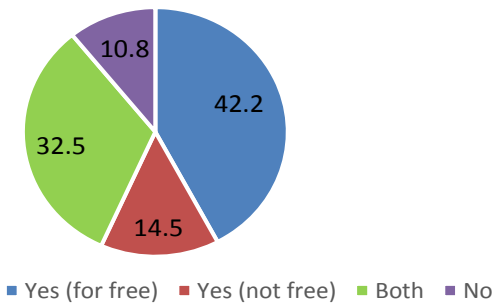
Students agreeing on 'a friend teaching before exam is the best teacher who teaches the whole subject in one day'



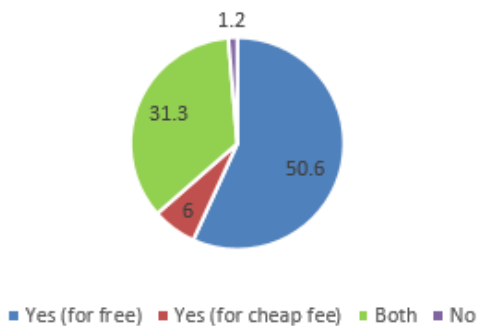
Students who agree
'When you teach
someone, you get better
in that topic/subject'



Students who will be able
to help a junior in studies
to earn or for free



Students who will love to
accept help from a senior



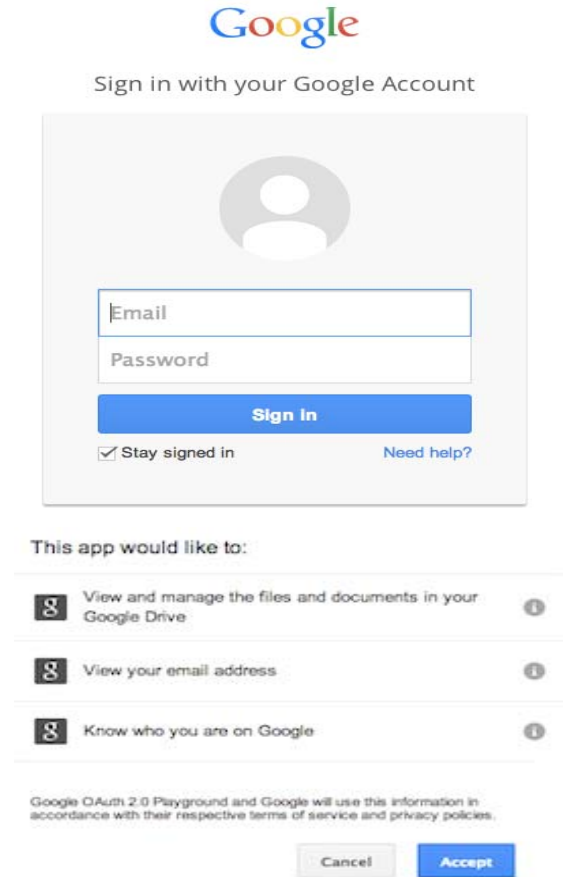
IV. Module Description

A. Direct Registration:

OpenID provides a safe, elegant and easy way for people to login into your website without having to fill in a registration form. They just have to have an account to one OpenID provider, a Google account for instance, and they will login into your site with this account.

A link will be provided to a Google page in which the user will:

1. Give his credentials (or not, if he is already logged on Gmail for instance)
2. Give the authorization to Google to give you some his personal data that you request:



Then the user will be redirect to a page of the website, that you chose, and you will be able to retrieve his personal data.

B. Profile creation

Profile creation means creating a profile where people can see your information and access it for their use. In this module we have two categories:

1- Profile creation for a Tutor

Here the tutor has to enter his Name, Address, contact number qualifications, achievements (if any), teaching experience (if any), his subject expertise, preferred subjects, salary/ stipend expected, internships, photograph, passing certificates of each semester, recommendation letters. Free teaching(according to choice/ student)

2-Profile creation for a Student

Here the student will have to enter his Name, Address and contact number, number of KT's so far(also Golden kt if any), sgpa, college/university, current year of learning.

Profile will help the student as well as the tutor to get to know about each other in a jiffy. They need not call or text to get to know each other's grades or scores. The tutors profile will be public whereas the students profile will be private unless he selects a tutor for himself.

C. Searching for matching profiles

This searching for matching module is the module/part where the student will search and find a tutor according to his personal needs and preferences. This module appears after the user has created his account as a STUDENT and later wants to search a tutor for himself.

The searching technique/filters used here should be as simple as possible so as to help the student find the best tutor to his specific needs. It will search the whole domain/list of tutors available on the application. Just like any normal searching techniques, this will also contain some categories on the basis of which the search will take place, these categories are called as FILTERS.

Later on basis of these filters the list available can be modified by redefining it. Filters such as Name, Area(Location), Subject/Topic Preference and Credits. Along with these filter, list can be redefined by sorting them according to Price/Cost: Low to High & High to Low, Credits: Low to High & High to Low OR Range of credits, Popularity. Searching techniques used will be Linear Search, Binary Search and Sequential Search. Sorting techniques used will be Bubble Sort, Quick Sort and Insertion Sort.

D. Payment:

When a student selects a tutor who charges some fee and the tutor agrees to help the student, the student can pay the fee first to the app through payment gateway. In the beginning the 25% amount will be further transferred to the tutor and after the student confirms that the tutor has helped him/her successfully then the other 75% amount of the fee will be transferred from the app to the tutor.

A payment gateway is a merchant service provided by an e-commerce application service provider that authorizes credit card or direct payments processing for e-businesses, online retailers, bricks and clicks, or traditional brick and mortar. The payment gateway may be provided by a bank to its customers, but can be provided by a specialized financial service provider as a separate service. A payment gateway facilitates a payment transaction by the transfer of information between a payment portal (such as a website, mobile phone or interactive voice response service) and the front end processor or acquiring bank.

E. Security:

This module is used to encrypt and decrypt data to maintain the user's privacy. We are proposing to use algorithms like blowfish, AES, DES, etc.

Certain personal details of any type of user will be kept private from other user.

V. REQUIREMENTS

Hardware Requirements :

- i. Android 4.1 : 32-bit ARMv7, MIPS or x86 architecture processor.
- ii. Android 4.1 : 512 MB RAM for devices with low density screens & 1 GB for devices with high density screens.
- iii. Storage Space : 500 MB.
- iv. Camera : Minimum 5 Mega-Pixels.

Software Requirements :

- i. Android 4.1 Jelly Bean (API level 16).
- ii. Google Account (GMAIL).
- iii. Java Runtime Environment 1.6.
- iv. Java SE JDK v6.0.
- v. Android SDK tools 22.0.5.

VI. CONCLUSION AND FUTURE SCOPE

In future this app could very well expand its domain and increase its range of reachability towards the customers. Since this app is currently limited to only one specific operating system, it will further expand and become available to other major operating systems such as iOS, Blackberry OS, Windows etc. Further advancements could be major UI changes, the

interface can be made more interactive and innovative as app should look good and user friendly. The more it is good in all aspects the more it will be used by people which will increase its popularity among the users and more and more users will be using the app. This app could also be later used for other educational fields. Not only limiting it to engineering field and its aspects, but also get into other fields/streams such as science, commerce, arts, architecture, law, management and so on.

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3. APPs:

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- iii. Collegedekho