

METU, Department Of Computer Engineering
Graduation Project
Proposal Form

Project Information

Title

Keep Me Aware

Target

Public [✓]

Proposer Information

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IP (Intellectual Property) Information

IP belong to project proposers.

Project Description and Background Information

Description

KeepMeAware is a web and mobile application for Students, Academic Staff and University Events Organizers. This application automatically fetches data from user's University (not only METU, but others as well) account (from METU OIBS like systems) and creates a unique schedule according to this information.

Based on data obtained, app shows user's schedule of taken courses, course details, exam dates, homeworks, deadlines, events, and notifies user about any changes or upcoming occasions. Students and Instructors can easily communicate and exchange information between each other. "Events" feature helps users to manage their leisure time by showing most recent Campus/University Events (Invited Speakers, Performers, Musicians, Interviews etc.) and providing opportunity to add it (event) to his/her own schedule. In addition, app is highly customizable in order to satisfy needs of each user.

Similar Products/Projects

There are several application with similar features:

1. SRS (Bilkent University Student Review System)
2. ODTUClass (new learning management system)
3. METU Events (Academic/External Events)
4. ODTU OIBS (METU Student Information System)
5. To Do Reminder
6. Sunrise
7. Cal

Justification of the proposal

The purpose is to develop application where people can come for free information, which will help them to advance in their professional and academic lives and help them to save time and enhance their focus on more important things.

The problem that we have noticed as students of Middle East Technical University is that most of students in order to be aware of our academic schedule, homeworks, quizzes, exam and lecture times we have to permanently check and recheck our emails and so on. By checking and rechecking we waste lots of time nonetheless miss important dates. Moreover, a lot of interesting events are held in our university but we cannot attend them because we do not usually see all the advertisements or sometimes forget about events we wanted to attend.

Problems we aim to solve:

1. Do not miss important dates and activities.
2. Be aware of activities and social events going around, explore and create them.
3. Save time.
4. Help event organizers reach their audience more effectively.

Contributions, Innovation and Originality Aspects of the Project

Our Advantages and Features:

1. Everything is a single app
2. Automated, Customizable, Academic Schedule
3. Academic, External Events
4. Create Own/Private events
5. Send Notes/Messages
6. Customizable Notifications
7. Simplistic, User Friendly design

Universities with every passing year contribute more and more time, sources in advertising and merchandising their ways of education, using technological innovations and technology to promote and rise authority in this race. Since nowadays information becomes more digitized, we believe that our application will accelerate technological growth of well-established Universities and give a nudge to those not currently compliant with modern standards of information sharing.

In the case of successive launch, we would like to extend our application for wider audience from different Universities of Turkey and other countries.

Moreover, collecting statistics about user behavior can initiate researches in many areas, like psychology, sociology, marketing, user experience interaction process, etc.

In case of gaining more trust from Universities' data providers, wider spectrum of researches (based on more private user data, like GPA, Grades, and taken courses) will be available.

Technical Aspects of the Project

In our project we plan to use modern tools and technology (listed below) that shall help us in developing the app more rapidly and concentrating on program logic more than on platform differences.

Our main concentration will be not only on basic CRUD database operations, but on collecting and analyzing user interaction information and providing relevant data according to it.

For these purposes we plan to create Intelligent Notification System (INS), which analytically chooses the very best time for non-urgent notifications to be shown. Those that are critical to the user will be independent of this strategy. This will be achieved by collecting different types of user statistics and making conclusions out of it in order to enhance user experience and study their behavior.

Mobile Application User will be able to:

- a) Log in Securely and without providing University Account Password
- b) Accessing and monitoring:
 1. Their courses.
 2. Exams and homework deadlines.
 3. Events, events' statistics and shared comments.
 4. Notifications, set/configure/delete/add different notifications for all calendar events (exams, homeworks, events).
 5. Filter events based on location and personal preferences.
Note: these adjustments will be recorded and the app will learn what types of events are most suitable for the particular user.
- c) Users will also be able to use the application as guests but with limitations.
- d) Create and Share:
 1. Events – set duration, notes, participants, time & date. Invite participants.
 2. Schedule – sequence of events in time.
 3. Notes regarding particular course, section.
- e) User can Subscribe to Event Organizer's future events and will be notified when any event of particular event organizer will be published.
- f) Application can be accessed in offline mode.
- g) Instructors and Assistants will be able to:
 1. Do all the things mentioned above
 2. Send messages to all students of their sections, or each individual section.
 3. Share notes and links with their students

Note: students not using app will be instead automatically notified with help of academic email.

Web based application User will be able to:

- a) Access all of the mobile application functionality in browser environment.
- b) If user is an event organizer, s/he is able to:
 1. Register with Facebook and other social networks, or with email.
 2. Create events and customize targeted user segment, location as well as different statistical data to be collected and analyzed.
 3. Manage secure payment process.

4. Access Events Organizer's Admin panel with cumulative events statistics and derived conclusions based on this data.
 5. Get notifications about approved/disapproved events and subscribers.
 6. Configuration of all notifications mentioned in 5.
- c) Manager's Admin Panel features:
1. Approve/disapprove/add note to submitted events.
 2. See statistics of all events, their audience, this audiences' behavior and preferences.
 3. Event organizers' statistics: subscribers number, their interest rate, activity, etc.
 4. Ratio of university's students registered to number of all the students in selected (not only METU) University.
 5. Etc.
- d) All users' data will be stored on our servers and provided to user on demand.

Targeted Output, Targeted User/Domain Profile

The user will log in to the system with his/her academic email (no password needed). After security check and activation process we will generate user schedule according to his/her academic profile. Then user is free to explore/add/delete/share/edit Events, monitor schedule and configure the system according to his/her needs.

Event Organizers will register in our system to be able to create their events. After validation and approval process they will have access to event statistics, conversion rates, etc. of their events to adjust their marketing strategy.

Success metrics:

1. Total number of users of the system. (more than 50% of university members of METU and possibly other universities)
2. User growth rate (the number of new users every month - 1000 users a month)
3. Average duration of user interactions with the app daily. (25 – 30 minutes)
4. Average number of times user opens the app daily. (3 – 10 times)

Our target group includes 3 main customer segments in KeepMeAware project.

They are composed of:

1. University students
2. Academic Faculty Members
3. Event Organizations

University students use the app to organize their academic life as well as their leisure time.

Academic Faculty Members, in addition, can easily maintain their classes and keep students aware of any activities that are important.

Event Organizers will be able to promote their events and reach larger audience with our customizable events builder website.

Project Development Environment

Hardware:

1. Server: Amazon cloud servers for maintaining the database and application logic.
2. Devices: different phones, tablets (Android, IOS) to test the product.

Software:

1. Programming Languages:

Mainly JavaScript, maybe with some C/C++ for custom Node.js modules, CSS - mainly SASS for styling and HTML for the markup.

2. Technologies:

Ionic framework - The Ionic Platform is the first full-stack service platform for building and scaling mobile apps with HTML5 and web technologies like AngularJS.

Apache Cordova - Native mobile apps with HTML, CSS & JS Target multiple platforms with one code base

Node.js - JavaScript runtime built on Chrome's V8 JavaScript engine, for server side programming.

MongoDB - NoSQL, open source, document-oriented database.

AngularJS - an open-source web application framework maintained by Google.

Socket.io - a JavaScript library for real-time web applications. It enables real-time, bi-directional communication between web clients and servers.

External Support

Server: DigitalOcean Cloud Hosting.

References

Competitors:

<https://stars.bilkent.edu.tr/srs/> - Bilkent Student Academic Information Registration System (SRS)

<http://todoreminder.com/> - To Do Reminder Android and IOS app.

https://oibs2.metu.edu.tr/Menu_Program_0/ - Middle East Technical University

Student Affairs Information System

<http://metuevents.com/> - Academic/External Events

<https://odtuclass.metu.edu.tr/> - a new learning management system

<https://calendar.sunrise.am/> - Calendar application for desktop and mobile

<https://www.any.do/cal/> -Mobile application