SUYOGYA RATNA TAMRAKAR
ID: 121334

IDEA 1: Blood Bank (Health Care)

Organizations like Red Cross and hospitals can keep track of availability of fresh blood. This application manages the contact addresses, phone numbers and location (optional) of the potential donors and help them match with the hospital where the blood is needed.

ATTRIBUTES

Availability	Performance	Security	Usability	Portability
H	L	H	M	M

REASONS

As it falls under a health care domain, its availability matters the most and we need to make sure that its uptime should not be compromised. It will contain lots of personal details of people such as contact number, addresses, hence end-to-end security methods should be applied in the operations. With taking security into consideration, there will be some tradeoffs for usability and performance, for example in one hand if some complicated encryption algorithms are used to boost security, in other hand, performance will surely degrade. As for portability, it will basically be a responsive web application which will run through browsers only and does not require native mobile applications. However, web UI in the desktop and mobile should be handled properly.

Idea 2: Bid Buy Sell (E-commerce)

Its idea is like any e-commerce platform in which buying and selling of goods are done. But the core addition will be the system of bidding before buying anything. The products added will be subjected to certain time frame where users most probably buyers will be allowed to bid on their products and are able to buy the product once the bid time closes or when there are no other bidders. In case of AIT, this platform can be used to sell the used items. More than one person could be interested in the same product, but with this system, there will be a sense of competition as one person bids over another user's bid and at the same time, the product value will also increase.

ATTRIBUTES

Availability	Performance	Security	Usability	Scalability
M	M	H	H	L

REASONS

This system should be available most of the times, but it consists of transaction of lots of users concurrently, so there will be some tradeoffs in it. This app will be connected with a powerful database server that can handle almost all the requests in no time as with increased number of users and their data about products and details, performance improvement needs to be considered. Although it cannot have full-fledged performance, payment transactions with payment gateways will be incorporated so storing all the credit card information of the users, hence requiring high level of security mechanisms. As this is a platform which will be used mostly by clients all the time, users should be able to navigate quite easily through different steps to have their job done and to get satisfied with the application giving high priority for usability. This app can be made vertically scalable when there is lack of memory storage.

Idea 3: Course Activity Tracker (Educational)

Different instructors use different kind of platforms to get the assignments and activities of the students such as Google classroom, Basecamp, Slack, etc. The idea is to create one-for-all platform where instructors/teachers can post assignments and tasks and students can submit their assigned tasks. Interesting part will be the 'achievements' feature, like a game where student can earn badges upon completing targeted goals like, submitting assignments always on time, increased interactions, excellent participation etc. And these badges will be featured on the student profile for showcasing their progress in the course or tasks. This also creates a sense of competition among students where they will be thriving to earn achievements.

ATTRIBUTES

Availability	Performance	Security	Usability	Portability	Modifiability
L	M	M	H	H	H

REASONS

Here in this application, availability is not a huge issue, for temporary case if any failure occurs, during the time it happens, some alternatives can be used to achieve the task. However, the system is like a institutional-social-network of teachers and students which will have most of the features like login, enroll, uploading, commenting (private and public), logging and so on. Having lots of features, users need to be quite clear on what they do and what they are trying to achieve. So, there needs to be a very user-friendly user interface so that using the application will be easier and at a same time interesting too. The mid-level of security is just okay for this kind of application, as it does not incorporate financial transactions, however user accounts need to be secured to some level such as two-factor-authentication can be used to login to the system, which is acceptable to preserve data integrity. Since there will be lots of small modules to work on in this application such as sign in and sign out, posting and commenting, achievement area, course detail management, this system needs to be highly modifiable. Taking into consideration high level of modifiability will degrade some performance. Regarding the portability, this kind of application need to have a mobile application too, which are a great way to get the important notifications right away and do smaller jobs more easily.