



Your Business Assistant

Course: Software Engineering

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Submitted To:

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1. PROBLEM DOMAIN

1.1 Background to the Problem

There are a total 1315 Businesses and Services according to yellow pages listing in Bangladesh. Among them the core problem is the distribution of work from Corporates to agencies. One of the top problem agencies are facing initially when they come to market is to get enough leads and proper work. And on the corporate side one of the top problems their managers face is finding a competitive and good agency who can do their work properly. More times than not, Service seekers find it difficult to get their bearings about where to start from, if they are to seek any service provider. It has been observed that there is a lack of listing or coherent arrangement of service providers and this makes it harder for firms or businesses to make informed decisions. And lack of exposure also affects small and new service holders. Another big problem in the industry is “Client Acquisition”. A large sum of money and time is spent in acquisition of clients which sometimes might prove to be futile. This leads up the opportunity cost. And because of lack of visibility companies are running on 30% efficiency rate.

So, From the all the analysis the main problem that occurs if we listed down:

1. No complete List of corporates and agencies available online
2. No way for Businesses to make informed decisions
3. New and small firms have lack of visibility
4. Late payments

So, from all the core problem is:

“Lack of efficiency, connectivity and transparency amongst service seekers and service providers in the B2B ecosystem.”

1.2 Solution to the Problem

After analyzing the problems, the solutions require is a bridge between corporates and agencies where they can communicate and share their work neutrally. So we are proposing a platform named YBA (Your Business Assistant). Our goal is to bring down the lead generation cost for each company through a YBA. Our solution is to deal with the problem is:

- Allow large and small companies to access prices and compare
- Provide a neutral platform for sellers to showcase their services
- Facilitate financial transactions between seekers and providers
- Provide efficient management processes
- Facilitate exposure for small and new business owners to potential clients
- Decrease opportunity cost - less time, less money; make sure that sellers don't have to spend more time on getting clients but instead can utilize said time on operations or ideation.
- Provide a learning center for the initial starters and startups in the market.

But this is not in total a new solution to the market. There is existing softwares which provides these kinds of services:

1. Yellow pages
2. Clutch.co
3. UPcity

But they are not our direct competitor because all of them help corporates and agencies to get listed online. They don't solve the core issue of "Lead generation Cost and Financials". Our services unique value is to aid in decreasing lead generation cost and also getting payments easily and in a secured way. YBA is providing a one stop solution for all kinds of lead generation, visibility and payments related problems.

2. Solution Description

2.1 System Features:

User Category:

1. Corporates/Businesses: who is willing to post their work
2. Agencies: who will get the work
3. Admin

Features of the system:

Admin:

Admin Register: The first admin/ owner of the system will be able to register to the admin section after then he can add multiple admin. But no new admin can register directly to the system.

Admin Login: Admin will be able to login to the system with the password given to the admin

Remove User: Admin will have all the power to remove/ban users from the system.

Hierarchical system for admin:

There are different roles for admin:

- a. **Owner/Admin of the system:** Who will be able to monitor and control all the system and add/remove another admin, moderator and user.
- b. **Moderator:** He will be able to monitor and control the update delete and create any field in blog/content. And will be able to delete/ban users from the system.
- c. **Content Editor:** He will be able to view all the analytics of the content part and edit the contents to the system but not be able to delete/ban any user.

Verification of the users: With each registration admin will verify manually both corporate and agencies and then add them to the system.

Validate the posted work by the corporates: Moderators and Admins both will validate the work posted by the corporates.

Corporates/Businesses:

Register: Corporates will have to register to the system to get access. Email Authentication will be confirmed by email and also verification of their trade license.

Two factor Authentication: During the registration users will be questioned if they want to enable two factor authentication or not if they enable it. System will ask them three personal questions so that it can verify if they forgot username/email and password.

Login: After registering and authentication they will be able to login to the system. They will have to login to the system using their email and password.

Forget Password: If they forgot the password there will be a section to recover their password using their email.

Get a tour: Before registering on the landing page they will be able to get a free tour about the working of the system.

List of work: Without registering to the system corporates/businesses will be able to see top 3 agency portfolios and their list of work but if they want to hire them they will have to register in the system.

Dashboard: Each corporate will have a dashboard. In the dashboard they will be able to:

- a. Create their business profile
- b. In the profile they can upload a work and post it to the system.
- c. They can manage the selected pitches and contact with the agencies through YBA platform.
- d. Manage their financials
- e. Watch the work performance and manage the timeline online.

Post a Work: In the platform they can post a work according to the given instructions and provide details files and attachments.

Manage the agencies: They will be able to manage the agencies they are pitching. And Select the best one according to their choice and contact with them through the portal.

Payment: Corporates will be able to manage their payment system using our platform using provided online banking agents.

Give Feedback and ratings to agencies: According to agencies work performance corporates will be able to give proper feedback with ratings.

Agencies:

Register: Agencies will have to register in the system with proper documents. After verification by the admin they will be listed to the system.

Two factor Authentication: During the registration users will be questioned if they want to enable two factor authentication or not if they enable it. System will ask them three personal questions so that it can verify if they forgot username/email and password.

Login: After registering and authentication they will be able to login to the system. They will have to login to the system using their email and password.

Forget Password: If they forgot the password there will be a section to recover their password using their email.

Packages: There will be three packages to for the agencies:

Free Subscription: Agencies will be able to subscribe and get listed free for 3 months by providing their email address. In free section agencies will be able to:

- a. Get listed using their organic ratings and according to work feedback.
- b. Get a cloud space for showcasing their work and portfolio
- c. Can be able to work with 5 different companies and 22 projects.

Featured/Premium Subscription: Agencies will have to pay a certain amount and milestones for getting the following features:

- a. Get listed using organic and also pay YBA to be in the top section
- b. Get a cloud space for showcasing their work and portfolio
- c. YBA will provide their social media posts (static and infographic)
- d. YBA Leaning platform will be enabled specifically for their employees.

Platinum:

- a. Get listed using organic and also pay YBA to be in the top section
- b. Get a cloud space for showcasing their work and portfolio
- c. YBA will provide their social media posts (static and infographic)
- d. YBA Leaning platform will be enabled specifically for their employees.
- e. Blog Post that will be visible in the landing page
- f. Listed and visible in the landing page to the corporates.
- g. Details analysis of their social media and YBA platform will be given.

Dashboard: Each agency will have a dashboard. In the dashboard they will be able to:

- a. Create and update their profile.

- b. They can upload their work and portfolio. (upto a certain number according to different subscription process)
- c. Manage their pitches according to the given templates
- d. Manage all the work from different corporates/ businesses.
- e. Watch the work performance and manage the timeline online.
- f. Manage their finance online

Get payment easily: Rather than waiting for a long time they will be able to get payments easily and quickly from YBA by using online banking.

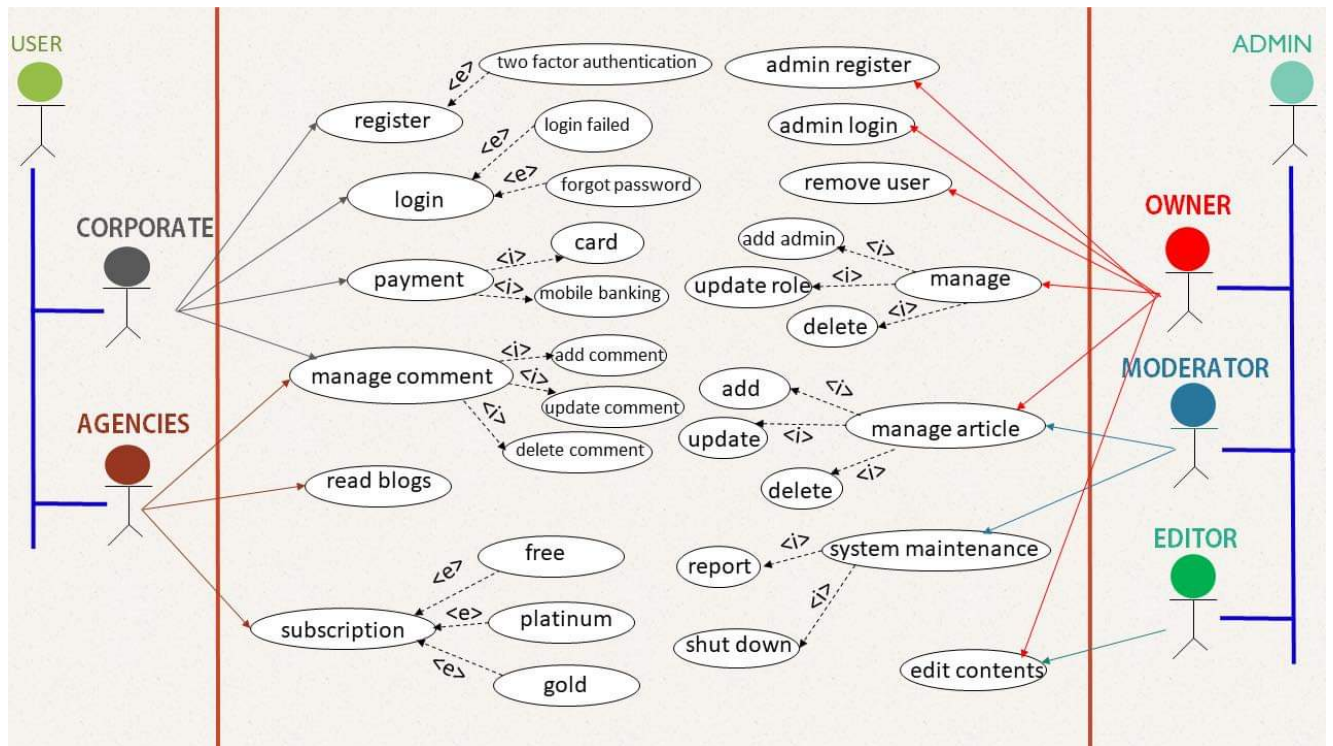
Give Feedback and ratings to the corporates: Agencies will be able to give feedback and ratings to the corporates.

2.2 UML Diagrams:

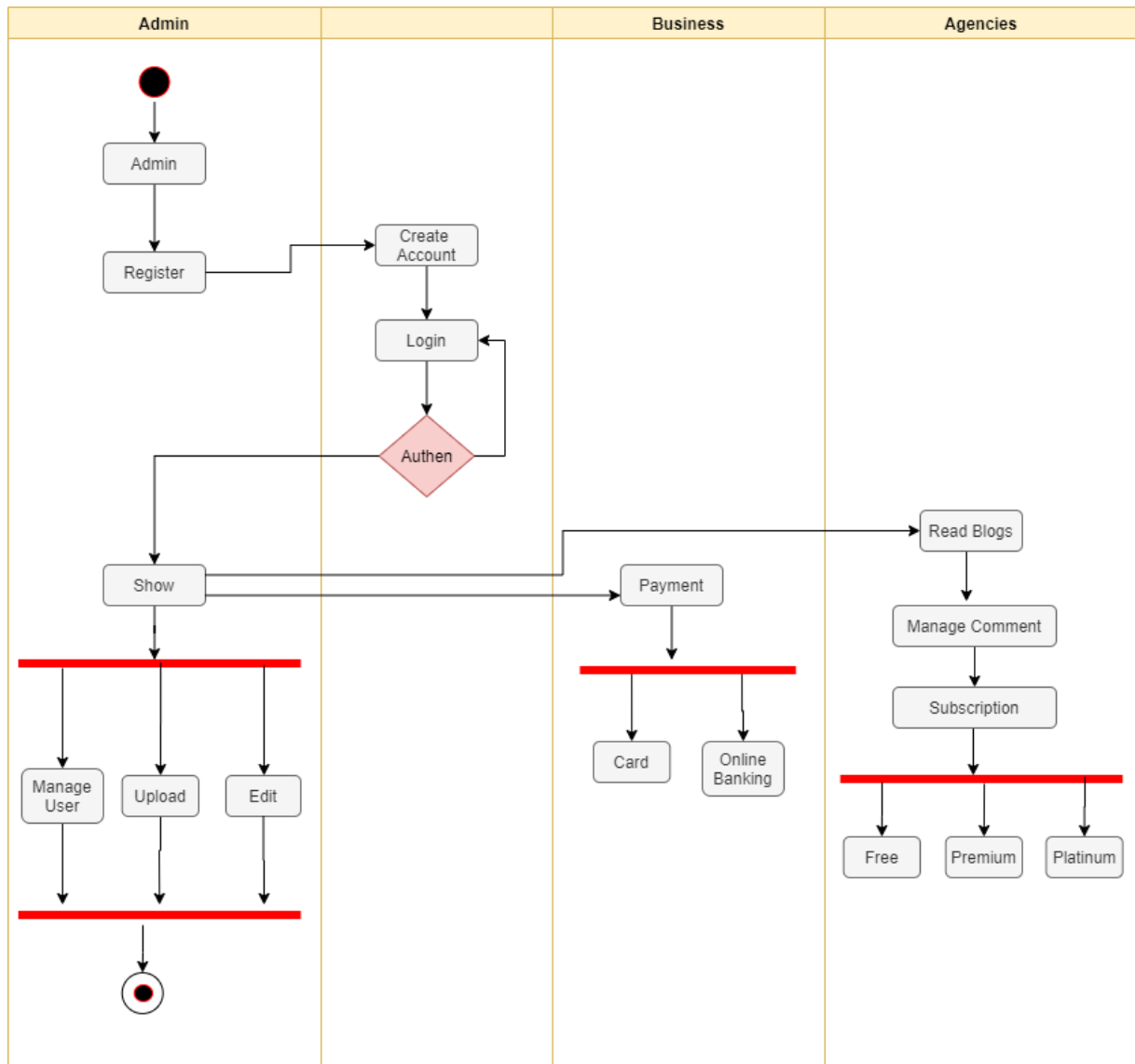
Use-Case Diagram:

The following is the use case diagram of the system. In our use case we have several types of actors:

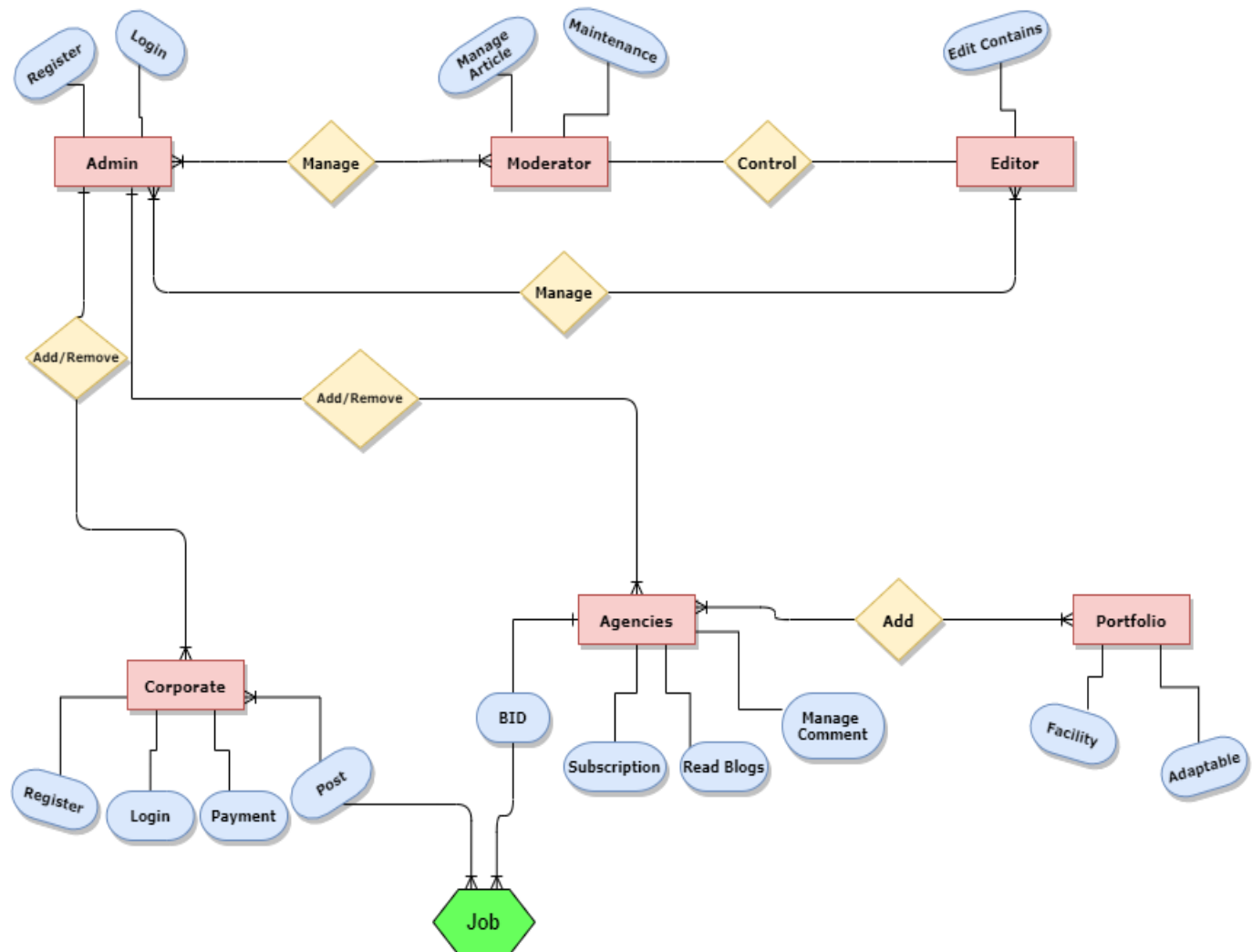
1. User
 - a. Corporate
 - b. Agencies
2. Admin
 - a. Owner
 - b. Moderator
 - c. Editor



Activity Diagram:



ER Diagram:





3.1 Process Model

Based on these characteristics we can say that in nature the software is more likely to be a 'Web Application '.

Web Application is a software application that runs on a remote server. In most cases, Web browsers are used to access web applications, over a network, such as the Internet. It evolves in such a way that besides providing stand features, computing functions, and content to the end user it also integrates corporate database and business applications.

In YBA we have sophisticated dashboards for different kinds of users and CRUD operation inside. Corporates can create, update and delete their own profile and post a job, agencies can create, update and delete their portfolio and are assigned to a job by corporates. Corporates can manage their work inside YBA. So in total it's a totally sophisticated system with multiple stages of application. That's why it's called a Web Application.

As our web application has several interactions with users and data passing. So it is totally a dynamic software. And the requirements of this software will be changed according to our end users behavior. The experience will have to go through change with the users feedback.

That's why the best suitable method to develop this software is Agile. We use the Agile development methodology to minimize risk (such as bugs, cost overruns, and changing requirements) when adding new functionality. In all agile methods, teams develop the software in iterations that contain mini-increments of the new functionality. There are many different forms of the agile development method, including scrum, crystal, extreme programming (XP), and feature-driven development (FDD).

From these models we will use scrum development methods. The reasons to follow scrum:

1. Competitiveness

The requirements of the market change invariably faster and only the ones who are flexible and contemporary can react to Time to Market and stay competitive and create themselves a competitive advantage. In YBA we have good competitors like clutch co. In the market they are international brands so we need to keep up our competitive advantage.

2. Develop what is needed

Scrum allows the incremental development of features. In time the customer receives the first working versions, sees the progress and if necessary can add some new ideas.

3. Confidence through transparency

Transparency plays a great deal on various levels of Scrum. Because of transparency all the stakeholders are informed where the project is at, it helps discovering weaknesses and it makes the effective teamwork possible, which makes Scum so efficient.

4. Build Quality in

Testing is an integrative component of Scrum at every sprint. Only if the software is tested and documented it is “ready”. Methods as Continuous Integration are very well applicable for securing the quality of every object from the beginning on.

5. Recognize risks in time – systematic risk management

Regular releases establish the condition to recognize problems on time and react promptly. There are long-term statements about time factor and product completion possible because of factors as team velocity.

6. To have the costs under control

The period of a project is usually fixed. The effort and the complexity though are just rough. Scrum allows changes on the specification, includes the customer in the project, creates transparency and therefore it allows a definite cost accounting.

7. Changes are welcome – calculable change management

Scrum is not afraid of changes. On the contrary, changes can be shown to the Product Owner at any time and can be realized in the following sprint. That way the customer gets the product he or she desires.

8. Keep it agile – efficient collaboration and customer satisfaction

Scrum involves all the participants of the project. Communication, collaboration, respect and the understanding, what the customer requires or what the team develops, is the basis for successful projects.

3.2 Project Roll Identification and Responsibilities

As we are using the scrum development process, we need to identify all the roles in this process. There are six roles to be exact. The roles are-

1. Scrum master.
2. Project owner.
3. Scrum team.
4. Stakeholder.
5. Customer.
6. Management.

There are some responsibilities of these roles of course. The responsibilities are given below-
Scrum Master:

The Scrum Master is considered to be the top-dog in every organization because companies usually hire them and they are not permanent employees rather they are more of a consultant for individual project. Every Scrum Process has a defined goal and it's their duty to remove all hindrance or

obstruction in the way of achieving that goal. Scrum master commit to goals and deadline on behalf of the team.

Product Owner:

The product owner the owner of YBA. He is responsible for conveying the vision of the stakeholders to the team and they have the authority to alter the scope. They are responsible for the ROI (Return on Investment) that is why they occupy an authoritative position in the firm. And they are responsible to communicate with the stakeholders and inform about the progress and problems.

Scrum Team:

The Scrum Team is responsible for all the activities that lead them towards their sprint goals. They have to work with the Scrum Master to prioritize the items from the product backlog in the sprint planning. They are responsible to fulfill the sprint with maintaining quality. And Scrum Master is not responsible to organize the team. The Team Must be self-organized. According to the scrum rules they have to attend all the standup and weekly meetings to provide the feedback.

Stakeholders:

Stakeholders are the one who will be affected with the service. Product keeps a healthy relationship with them and shares their concerns and changing feedback to the product owner so that they get their exact product they dreamt of. If there are any changes of plans stakeholders must input to the product owner to fix in the next sprint.

Customer:

Customers participate in the tasks related to product Backlog items for the system being developed or enhanced.

Management:

Management is in charge of final decision making, along with the agreements, standards, and conventions to be followed in the project. Management also participates in the setting of goals and requirements.