



American International University-Bangladesh (AIUB)

Department of Computer Science

Faculty of Science & Technology (FST)

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<YOUR BUSINESS ASSISTANT>

Software Requirement Engineering

1. PROBLEM DOMAIN

1.1 Background to the Problem

According to the list of yellow pages in Bangladesh there are a total of 1315 businesses and services. Among them the distribution of work from corporations to agencies is the main issue. Initially as they come to market one of the top issue agencies is having adequate leads and proper work. And one of the top challenges their managers face on the corporate side is finding a competitive and good organization that can do its job properly. More often than not if they are to locate some service provider service seekers find it hard to get their bearings on where to start from. It has been found that the listing or consistent structure of service providers is lacking and this makes it more difficult for companies or companies to make informed decisions. And small and new service holders are also affected by the lack of exposure. In the business Client Acquisition is another major issue. A considerable amount of money and time is spent on

attracting customers which can often prove to be futile. This boosts the price of opportunity and businesses run at a 30 percent efficiency rate due to a lack of visibility.

So the key issue that happens if we list down is from all the analysis:

1. No detailed list of companies and departments online open.
2. No way to make businesses aware Decision.
3. There is a lack of exposure for new and small businesses.
4. Payments in late so the central issue of all this is:

Lack of efficiency, connectivity and transparency in the B2B ecosystem among service seekers and service providers.

1.2 Conceptual Foundation of the Project

The solutions include a bridge between companies and organizations after evaluating the issues where they can neutrally interact and share their work. So we are suggesting a site called YBA (Your Business Assistant). Our aim is to bring down the cost of lead generation through a YBA for each company. To deal with the problem our solution is:

- Allow large and small businesses to access and compare rates.
- Provide sellers with a neutral forum to highlight their services.
- Facilitating economic transactions between applicants and suppliers.
- Provide appropriate processes for management.
- Promote visibility to potential buyers for small and new business owners.
- Decrease the cost of opportunity less time, less money make sure that sellers do not have to spend more time getting buyers but can use that time for operations or ideation instead.
- Provide a learning center for the initial starters and startups in the market.

This however is not entirely a new approach for the market. Existing software is available which offers these types of services:

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

Yet they are not our direct rivals since they all enable businesses and associations to get listed online. The key problem of Lead Generation Cost and Financials is not solved by them. The unique advantage of our services is to help reduce the expense of lead generation and also to

quickly and securely collect payments. 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 corporate.

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 platform 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 Learning 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 Learning 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.

3.Social Impact Analysis

In our opinion there will be a huge impact in the society from this project.

As this project basically makes a stage for all the businesses. The provider and the businesses will both be benefited. As there are very few stages like this

The society will take this idea as a positive impact. This project can positively influence how society operates. It can build and maintain social capital through its core operations the goods and services it provides and the activities supported through increasingly global and complex supply chain.

4. Development plan

The Software Development Life Cycle simply outlines each task required to put together a software application. This helps to reduce waste and increase the efficiency of the development process. Monitoring also ensures the project stays on track and continues to be a feasible investment for the company.

Many companies will subdivide these steps into smaller units. Planning might be broken into technology research, marketing research, and a cost-benefit analysis. Other steps can merge with each other. The Testing phase can run concurrently with the Development phase since developers need to fix errors that occur during testing. The Seven Phases of the SDLC diagram of the stages or phases of SDLC

1.Planning

In the Planning phase project leaders evaluate the terms of the project. This includes calculating labor and material costs, creating a timetable with target goals and creating the projects teams and leadership structure. Planning can also include feedback from stakeholders. Stakeholders are anyone who stands to benefit from the application. Try to get feedback from potential customers, developers, subject matter experts and sales reps. Planning should clearly define the scope and purpose of the application. It plots the course and provisions the team to effectively create the software. It also sets boundaries to help keep the project from expanding or shifting from its original purpose.

2. Define Requirements

Defining requirements is considered part of planning to determine what the application is supposed to do and its requirements. For example a social media application would require the ability to connect with a friend. An inventory program might require a search feature. Requirements also include defining the resources needed to build the project. For example a team might develop software to control a custom manufacturing machine. The machine is a requirement in the process.

3. Design and Prototyping

The Design phase models the way a software application will work. Some aspects of the design include: Architecture Specifies programming language, industry practices, overall design and use of any templates or boilerplate User Interface defines the ways customers interact with the software and how the software responds to input Platforms defines the platforms on which the software will run such as Apple, Android, Windows version, Linux or even gaming consoles.

4. Software development

This is the actual writing of the program. A small project might be written by a single developer while a large project might be broken up and worked by several teams. Use an Access Control or Source Code Management application in this phase. These systems help developers track changes to the code. They also help ensure compatibility between different team projects and to make sure target goals are being met. The coding process includes many other tasks. Many developers need to brush up on skills or work as a team.

5. Testing

It's critical to test an application before making it available to users. Much of the testing can be automated like security testing. Other testing can only be done in a specific environment consider creating a simulated production environment for complex deployments. Testing should ensure that each function works correctly. Different parts of the application should also be tested to work seamlessly together performance test to reduce any hangs or lags in processing. The testing phase helps reduce the number of bugs and glitches that users encounter. This leads to a higher user satisfaction and a better usage rate.

6. The Deployment

The program is made open to users in the implementation process. Many businesses prefer the implementation stage to be automated. This can be as easy as a payment portal on the company's website and a download connection. An application could even be downloaded on a smartphone. It can also be difficult to deploy. One illustration is updating a company wide database to a newly developed program. Since the database uses many other technologies it can take more time and effort to integrate the update.

7. Maintenance and Activities

The development cycle is almost done at this stage. The application is carried out and is used in the field. However the Operation and Maintenance stage is still relevant. Users find vulnerabilities in this process that were not identified during testing. There is a need to fix these bugs which can spawn new development cycles. Models such as Iterative development schedule new functionality in future updates in addition to bug fixes. A new Development Cycle can be started with any new update.

5. Marketing Plan

Having it available for download on as many software downloading sites as possible is one of the best ways to market the software online. Go for software pages that have software that is free as well as paying for. Spend some time monitoring which websites provide you with more traffic and formulating your marketing plan accordingly. Through this marketing technique software developers with a dedicated website for their products and services may also gain more back links.

PAD IT

Literally not the development of a PAD (Portable Application Description) file for desktop applications makes their submission successful on software distribution websites. Today over 50,000 software publishers use PAD files to deliver over 250,000 unique applications. PAD files provide a standard way for software to be distributed online. It is a XML document that is machine readable which relieves writers from writing long and detailed program specifications. In addition webmasters enjoy submitting applications with PAD files as it helps them to automate the listing of the app. The Association of Software Professionals PAD committee manages all PAD submissions, specifications and assistance. Participate in debates online

Find some online forums as part of your research work where individuals chat about software functionality releases and other related topics. But before getting involved in debates know that in search of information people visit these websites. Voice your opinion as an expert on the subject not as a promoter. Most readers would dismiss what you have to say if you sound like you are here just to sell your tech goods. In addition you may even be blocked for overt publicity by certain forums.

Post posts blogs and guest blogs

Your best shot is to publish blog posts and write articles with relevant information to broaden your reader base and thereby build clients and customers. But you need to maintain a balance between knowledge and promotion here as well. As a portion of the solution present your goods and avoid. Pitching specifically for its sale. If you do not already have a reader base by guest blogging you can promote your program.

Build trust through promotional offers for your software

If you are new to business then your first aim is to make your audience believe that real software products are being offered. For desktop applications the most productive way to convince them

that it would work for them is to let people use a free trial edition. In order to convince people what your application is about you can also offer a free version of your software with some simple features. This marketing strategy works beautifully for mobile app promotion. Other ways to build trust in your software products are providing money back guarantee for paid apps and using software security badges. In addition software publishers with a website will invite geeks and tech writers to write reviews about their software products and feature them as public opinion.

Utilize social media

Have we forgotten social media? Its definitely not! Did you not hear “Save the best for last”

Begin by optimizing Facebook, Twitter, Google+, Linkedin and other profiles for you. Start posting details about your latest release that is important and interesting. By holding competitions short surveys and other strategies, engage the audience. To give people an idea about the look and feel of your apps and what to expect from your latest update you can also use visual social media like Pinterest and Flickr. If you are releasing a mobile app social media is your key focus as smartphone users are your target audience. Get expert tips on social media to promote your mobile app.

Paid Marketing

At lightning speed technology is changing. Not many developers can afford to spend too much time promoting their software and waiting for results in the midst of this rush. What everybody is looking for and everyone wants is immediate visibility with long term success. This is where professional marketers positions come into play.

Make an investment in SEO

One thing that you need to actively work hard on to improve your online app sales if you have a company website is to have your website optimized for better search engine ranking. Based on tested keywords you need to constantly add new content to your site track the efficiency of your website, enhance website design and usability focus on improving your link popularity. Pheew!-Pheew! Sounds like a great deal of work. Its necessary but equally necessary. That overhead

might become a merry walk with a professional SEO team at your side. Would you like to add more traffic to your platform and multiply the downloads of your app? Getting Started.

Build a video explainer

In your marketing strategy having produced an explanatory video on the release of the app will make miles of difference. But you need to make sure there is more to your video than just an add. It should give the viewers the data they are searching for. Explore this video of the business explainer produced by FATbit to get some video script ideas. Employ a reliable and innovative firm that understands the needs of your customers and visually transmits your message in a convincing way. And on numerous video-sharing sites and social media do not forget to promote it.

Employ a team for marketing

If you do not think you can spare time and marketing efforts which is normal for developers then hiring a trusted marketing company can provide you with an end to end solution. It will cost you a few extra bucks of course but it will save you a lot of time in exchange and deliver more good results.

There might of course be several incorrect combinations but just a few correct ones. So instead of ineffectively putting lots of time and money on your own it is easier to have professional support in formulating your marketing plan.

6. Cost and profit analysis

Particulars	Total
Profits	
A. Increase in Revenue	2,500,000
B. Increase in Additional Revenue	500,000
Total profits(A+B)	3000,000
Costs	
D. Salary Cost	700,000
E. Utility Cost	100,000
F. Salary of New Employees	400,000

G. Cost of Additional Hardware and Software	200,000
H. Software License	100,000
I. Marketing Cost	100,000
Total Costs (D+E+F+G+H+I)	1,600,000
Benefits Cost Ratio	1.875