

FEASIBILITY STUDY

The Group

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The Client

Mr, Usman Hussain CEO, ToyShoy, rk14@cornell.edu

The Task to be Undertaken

The project is to develop an E-commerce website for kids and entertainment market where products like toys and other stationary/gadgets will be displayed and can ordered online. The best feature of the website is the customization of stationary items while being Online. The customer can add their name or images of their choice while being on website the client will be offer multiple payment methods and delivery options on the location.

The project consists of three main parts: determining a database solution to hold the metadata for the library's map resources, developing an administrative interface that would allow for adding and changing metadata for map holdings, and developing a UI to expose this metadata to the end user (library patrons).

Benefits:

By the help of this project ToyShoy will be able to run its online store 24/7, customers will get benefit that they can view the toys and stationary items available on the website anytime they want and can easily purchase it by sitting in their comfort. Another amazing feature of this website is that customer can easily customize the product while being online from there cell phone or from laptop.

KEY BENEFITS:

- Growth in sales.
- Nationwide sales Opportunity
- Marketing opportunity.

A Preliminary Requirements Analysis:

The system needs to meet the following functional requirements:

1. Business Requirement.

Four basic requirements of business on E-commerce Store.

- a) **The Niche:** This is the starting point for most of the sites. When it comes to an e-commerce website, you first need to think what you plan to sell. You need to look for a niche which is not too heavily saturated. It will require you to research e-commerce niche. Have a close look at sites to determine whether they are stagnant or are they updated regularly and work towards improving their ranking? This is the standard procedure and you are likely to go through this with any type of site you plan to launch.
- b) **Your Site:** The next thing to focus on is your site. However, the question arises which e-commerce platform to choose for your site? There are plenty of them available. Many have a number of plug-ins and extensions to extend the functionality. In order to decide which e-commerce platform to choose, you should go by your business' requirements. .You need to contemplate which will suit your business requirements in the best way. Generally, one should opt for an e-commerce solution based on its SEO capabilities as most of the traffic is generated by that only. Most of the shopping carts available these days have a lot of really good features. Look for a shopping cart which makes it easy to run split tests.
- c) **Registration of the company:** This is the most important and unavoidable part. It is imperative to get the company registered. This is something which need not be emphasized as it itself tells about how important it is to register the company.
- d) **Your Products and Suppliers:** After focusing on niche and product selection, the nest step is to focus on how to find a supplier. Basically, you can concentrate on three different parts- distribution, wholesale and drop ship. You will find the best deals available in distribution. However, you should remember that with it comes the burden of having higher orders. To start with, distribution may not be the best option available. This is because it involves a lot of operating funds that will be tied up in stock. Generally, distribution companies are less willing to negotiate on the price they offer. In such a case, your next option could be whole sale. This is usually more expensive. However, they are more open to negotiations and may not require any minimum orders. And your last option is the dropshippers. Although, this option holds the least overall margin but the positive part is that you do not have to worry about ordering, holding stock or dispatching the goods, which will free up to focus on making more sales.

2. User requirement.

- a) Users should be able to use the E-commerce application from any Web browser supporting HTML 3.2 (or later) and cookies.

- b) Visitors new to the site should be able to register by themselves. Users will be differentiated by unique user identifiers.
- c) Transactions should be secure. That is, a basic authentication mechanism must be built into the application to prevent unauthorized persons from making transactions on a user's behalf. Secure socket layers (SSL) or other encryption mechanisms are typically used to thwart the access of sensitive information (such as credit card numbers) sent to the server by Web browsers.
- d) Site visitors should be able to purchase goods or services via the electronic store.
- e) Users should be able to view a complete list of specified items available through the site.
- f) Users should be able to search for items by related attributes.
- g) Users should be able to select items of interest and add them to their shopping carts for future purchase.
- h) Visitors should be able to modify the quantities of items in and/or delete items from their shopping carts before checkout.
- i) All selected items should be shipped to the user following purchase.
- j) Users should be able to view the status of items they have ordered.
- k) Large numbers of users should be able to use the application simultaneously.
- l) The performance of the application should not degrade with an increase in the number of goods or services offered.

3. System requirement.

Server & hardware for E-Commerce:

- CPU: for web 1,6 GHz, for web and database 4 x 1,6 GHz CPU.
- RAM: 4GB.
- Minimum database space: 10GB.
- CPU: Quad 2GHz+ CPU.
- RAM: 6GB.
- 1 Website Hosting
- Unmetered Bandwidth
- 30 Email Spaces
- Storage: 20Gb
- Minimum database space: 5 GB
- Linux Based Server
- MySQL Database

Technical Requirements – Feasibility:

- **Website Security.**

How to make e-commerce website to be safe from hackers. The best websites offer 256-bit Transport Sockets Layer (TLS) encryption, allowing for an end-to-end secure connection across

all of the data and transactions on your website. Websites should meet the TLS 1.2 standard and will need to upgrade a browser or operating system (OS) if they currently support TLS 1.0 or TLS 1.1. TLS has replaced Secure Sockets Layer (SSL) as the standard for communications security over a network. From the moment a person accesses your website to the moment that person leaves the website, all of the data is encrypted. The group is currently working on it to find out more ways to secure website and payment integration.

- **Website Performance.**

Your webpages should load in less than 100 milliseconds (ms). If the website doesn't load in that time, then your e-commerce vendor should already be on the back end working to find a solution before you even notice. We will always be there for after supports according to terms and conditions. Scale According to Your Needs.

E-commerce services have varying needs for resources depending on the size and load of a store. You'll want to quickly and easily scale your website depending on what happens to your load times as traffic to your page increases.

your inventory grows quickly or you need to support heavy load activities, such as Flash sales and seasonal deals, we will provide you interface to scale your platform accordingly to handle these needs or risk customers becoming frustrated with your site's performance and clicking over to another store. Monitor traffic and peak user load times to avoid crashes and scale server resources accordingly.

- **Think Mobile First.**

These days, most e-commerce services help you build out your website on the mobile web before they ever think about a desktop. That's because most content that works on mobile will also render just fine on desktop but not vice versa.

- **Website Updates.**

You'll want an after support agreement that we can consistently deliver new code to your website for performance improvements or new features.

Suggested Deliverables:

Management Deliverables:

1. *Requirements Analysis* – a document and a presentation to go over the formal requirements of the project, both functional and non-functional. This deliverable ensures that the Group is working on a system that closely matches to the wishes of the Client. This deliverable gives the Client a chance to modify and correct items that were mis-communicated or missed out before allowing the Group to proceed further in the design.
2. *Design Document* – a document and a presentation to go over the design of the system. This is the Group's opportunity to go over how the project is to be implemented to the Client. This

deliverable is done by the more technical and experienced in the Group, based on the understanding of the requirements established in the previous deliverable.

3. *Source Code* – a document, presentation along with the source code of the final completed project. This final deliverable wraps up and concludes the project. In this deliverable, the Group delivers the final implementation based on the requirements specified and the design developed in previous stages. The system would have been tested thoroughly with unit tests and with a final acceptance test and would be ready for deployment to the production system.

Technical Deliverables:

1. A database with the required tables to support the inventory system a database needs to be set up on the Store's servers with the tables needed in the system to store the inventory information, and other data.
2. An administrative interface to add, modify, delete and search for inventory a webpage designed to allow the administrator (ie., the Client) of the system to add information to the inventory system for every product that is found in the Store and to build up an electronic record of the resources that are found in the store.
2. A side menu that is populated with all information based on the inventory a portion of the web page that shows available product resources for the selected areas, based on information in the inventory database.

Walk-Through:

In order to ensure that the Client and the Group are on the same page, the following walk-through has been prepared to illustrate the Group's understanding of the product desired by the Client. The walk-through is not necessarily a reflection of the exact interactions for the final product; rather it should serve as a rough overview of the functionality required by the final product as the Group currently understands it.

ToyShoy Patron walk through:

An E-commerce website is the core requirement of the project as the client wants to sell his products online and is targeting a different part of the country. This can easily increase his sell which means more profit. Multiple payment methods and delivery options may attract more consumers. Overall, this website will be beneficial and help the client to target more areas easily and efficiently. In this project, the client needs an E-commerce website for Kids and

Entertainment market where products like toys and other stationery/gadgets will be displayed and ordered online. The best feature of the website is the customization of stationary items while being online. The customer can add there name or images of there choice while being on website. The client will be offered multiple payment methods and delivery options depend on the location.

Administrative walk-through

The administrator needs a way to add, modify and delete entries in the database. To add entries the administrator will enter data on a simple text-box, pull-down menu populated page with all the necessary fields. To modify or delete entries the

Administrator could either use the 'client' interface to reach a particular entry and then modify it, or search on any of the fields in order to find an entry.

Software Development Process:

The project will undertake the *modified waterfall model* because there is a well-defined set of requirements. As the Client has very specific needs for the system which will not likely change in a short timeframe, and given that this is a production system (not a research project), the modified waterfall model should be better suited and gives the Group the following benefits:

1. *Process visibility* – both the Client and the Group are certain which stage of the development process the project is in.
2. *Separation of tasks* – the Group may concentrate on one area at a time, especially since some members of the Group have less experience in coding and in large scale software projects.
3. *Quality control* – a modified waterfall model allows the Group to spend more time on the requirements, understanding the design, and on developing better code (a programmer with less experience may have a difficult time delivering in short iterations in an iterative refinement model).

Outline Plan (Principal activities and Milestones)

I. Milestone 1 (Week 1) Research & Prototype. An initial draft of the requirements analysis should be done as Milestone 1. This should come after a formal requirements gathering meeting with the Client.

II. Milestone 2 (week 2) – Designing. The final front end design should be done for Milestone

- III. Milestone 3 (week 3) – Development.
- IV. Milestone 4 (week 5) – QA/Testing
- V. Milestone 5 (week 6) – deployment.
- VI. Milestone 6 (week 07) – Support/Maintenance

Visibility Plan

External – The Group will conduct regular biweekly meetings with the Client. If situations arise or if a problem needs to be addressed between the meetings, the Group will conduct any further necessary communication via email. Because a modified waterfall model will be used, a report will be issued to the Client at the end of every step to ensure that both parties are in-sync and to minimize any miscommunication in the requirements.

Internal – The Group will meet weekly on Wednesday evenings from 7:30 pm to 9:00 pm to discuss progress and problems. Meeting minutes will be kept track of and sent to all members of the Group for reference. Any additional communication will be done via email or through other collaboration tools such as document sharing or Zoom. In addition, the source code will be stored. All source code will be documented carefully before being submitted to the repository. The progress of the principal activities and major milestones will be closely monitored and compared with the schedule. During the regular meetings, progress will be compared to a Gantt chart, which will be drafted after the completion of the requirements study when the tasks are identified and assigned.

Business Considerations

As Iqranians students, the Group owns the copyright in the software that we create in this project. The Group agrees to transfer the copyright to the Client and to provide the Client with unrestricted license to use the system.

It is just possible that a project may develop concepts that could be patented. If such a situation arises, the Group collectively owns the rights to all patents associated with the System.

We understand that the use of *open-source solutions IS a viable option* and that there are not any serious licensing issues to this extent.

Risk Analysis

1. Changing Requirements:

Risk: The Client may have different ideas about the system during the course of the project. Depending on the situation, the changes that the Client wishes to have implemented may require little or major changes to the architecture. *Solution:* To reduce the possibility of this occurring, the Group needs to establish a clear visibility plan with the Client.

2. Incomplete Requirements:

Risk: It is possible that requirements may be implied but not discussed or misunderstood. This frequently occurs after meetings.

Solution: The Group's interpretation of the Client's requirements will be presented back to the Client to get a confirmation on whether the Group has understood the Client. Frequent client updates and a high level of visibility will also help call attention to any misunderstandings.

3. System Integration:

Risk: Depending on the level of access to the servers that the Group receives, the Group may need to work on the system offline and eventually integrate with the production system when it is ready and thoroughly tested. Due to different software configuration, there may be unpredictable obstacles.

Solution: To ensure a smooth system integration, the Group needs to be aware of as much about the configuration as early as possible.

4. Technical Requirements:

Risk: The software and hardware server environment are not perfectly certain at this point. The client is not aware of the technical aspects of the project. The technical server configuration may have an affect on system architecture and design.

Solution: To resolve this problem, the Group has requested the client to refer the Group to the technical staff working at the library for further inquiries.

5. Human resources:

Risk: The Group is relatively small consisting of only 5 members, some members are not technically oriented and almost all members have limited knowledge of relevant web-technologies.

Solution: For these reason the Group acknowledges that a slow design and implementation phase may be inevitable, and are planning accordingly.

Conclusion:

Based on the analysis of this feasibility study, the Group has collectively agreed that this project IS FEASIBLE and the group IS WILLING to take on the afore mentioned project. The benefits are significant enough to justify the development effort required. Currently, the costs

of the project are believed to only involve the labor costs of the group. The preliminary deadline for the project will be set for AUGUST 26th. On this date a functional system should be live on website's server. The next stage of development will be the completion of a requirements study, which will be conducted and written up by august 25th.

Survey Questionnaire:

1) Will you provide the hosting and domain?

Ans. Yes, the domain will be provided by client and hosting will be purchased by us.

2) What will be the theme color for your website?

Ans. The logo is in Yellow color, so the color scheme will reflect yellow color.

3) Will you provide content?

Ans. We have some of our content on Facebook, you can get it from there. Rest I will send you on email.

4) Do you need a landing page?

Ans. Yes, we need a page where visitrs can come up and go through our items.

5) Which market and age limit you want to target?

Ans. Mostly our target is from 14 years to 50+.

6) How many products will be there?

Ans. There will be around 100+ products, but initially we will start with 20.

7) How many categories will be there?

Ans. There will be 7-8 main categories and then sub categories.

8) How many pages you want? Only basic pages or you want something extra to share?

Ans. Basic 5 pages as per standard.

9) Will there be descriptive videos that describe your product?

Ans. No at the moment no videos.

10) Will there be a review option from a client?

Ans. Yes that will be great.

11) Will website have any coupons or offers?

Ans. Yes, we will run promotional ads so need coupon option.

12) What will be the payment method?

Ans. At the moment COD.

13) Will client get shipping options?

Ans. That is an internal matter we have our own riders and we use M&P as our delivery partners.

14) Want to use track shipping?

Ans. No, we don't want that.

15) Will you charge shipping fee? If yes then what will be the structure?

Ans. We have free delivery policy, so the price is already included in toys price. However the delivery charges is 150 Rs other than Karachi.

16) Will be there be any taxation on website?

Ans. No nothing like that.

17) Do you need email subscription?

Ans. What is that? If that's good for us please do that add it.

18) Will you run AdSense?

Ans. No google ads.

19) Do you need a form to get details from clients?

Ans. Yes for sure.

20) Do want to record all the information regarding the product?

Ans. Yes I want website to provide me the report for each month.