EVA DE EVA

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REFERENCE STATISTICS FOR EVA DE EVA

Feasibility Report

I.EXECUTIVE SUMMARY:

The online shopping market is growing strongly due to the development needs of society, especially after the covid 19 epidemic. Ms. Bui Thi Mai Anh proposed to create a website to promote products and attract users, as well as participate in the online market. Ms. Mai Anh developed the original client proposal and is very knowledgeable about the shop's needs. So, we decided to make Ms. Mai Anh a website for her to sell on, helping to solve the current problem. Ms. Mai Anh will be our primary client. People who buy goods on the website will be users because they use our products through the client, Ms. Mai Anh.

The basic goal of the development team is to create a website with all necessary function of an online store. This website will have basic function as allow users to choose size and color, disable products if they are not available, etc…. In addition, when buying clothes here, users will receive vouchers from store manager and they can use them at the store or on the website. Successful implementation of the system will have Eva De Eva improve sale performance, attract new users and increase revenue.

II. PRELIMINARY REQUIREMENTS ANALYSIS

Part I – Application Overview

Objectives

The basic functionality of the system will be a website with all necessary function as Ms. Mai Anh's requirement.

Business Objectives

The creation of this website will help the store expand its operating method, improve sales and promote their stores more widely on social media platforms. Not only that, the website also makes it easy for users to make purchases without having to go directly to the store.

Current Business Process and Rules

Previously, if a store didn't have its own website, users would only be able to purchase goods and services at the store, during opening hours. On weekends or public holidays, the number of users coming to the store will be larger, leading to overcrowding and inadequate service. Users who come to the store are often people in the vicinity because of the problem of distance and time, especially for women, choosing clothes takes a lot of time. Moreover, stores often use traditional marketing methods such as handing out leaflets, placing advertising signs, etc. These forms are also limited in terms of their ability to reach users and the amount of information conveyed.

That is why, online shopping is gradually taking the throne. Building a sales website is an economical and effective way for stores to introduce products and sell goods. When there is a website, users from anywhere can access the website to find out information about goods and place orders, at any time of the day, as long as users give their address and personal information, the goods will be delivered safely and securely. Moreover, the website will help you implement effective marketing programs to users. With the website, the shop can do online marketing activities such as: SEO, google ads, Facebook ads. Online marketing will help market your products to users quickly. Especially, online marketing costs are often low, and effective. This is the best way to increase sales.

User Roles and Responsibilities

Administrator Role: The ability to enter, record, upload, and delete data; create promotional events, promotional codes or vouchers and can change order status on the system.

Staff Role: create promotional events, promotional codes or vouchers and can change order status on the system.

User Role (who buy products online or from store): The ability to buy in store or order online (need to enter full address information for accurate delivery), can register an account and become a loyal user to receive vouchers, can see order status on system.

Interactions with Other Systems

The website is built to expand the sales form from the current direct selling system. In addition, this website also links with Google to log in to the system when users want to have an account to receive special promotions.

Production Rollout Considerations

The design and development of the system's interface and functions will be carried out in phases for three months before being tested and used. Users will be guided in detail before use.

Part II – Functional Requirements

Statement of Functionality

The website system will be flexible, sustainable and user-friendly. Users can see all the clothes that the shop has, can quickly search by keywords or search by product filters (titles, categories, cost, etc..). In addition, users can also click on the link to Facebook or Instagram to view the product's feedback. Users can add to cart to store the products they like. Users can buy in-store, or can order online. The system allows to manage the purchase history of each user and manage orders on the system.

Users can see order status on their system. The store will change the order status and the user will receive a notification every time the order changes.

Users can register for an account and become a loyal user to receive vouchers (birthday) or enjoy exclusive promotions for loyal users (some discount items are only for loyal users).

Users also receive discount codes, vouchers from the store and see them in their account space. These codes can be used to make online orders, can also be used at the store at checkout to enjoy the discount. Some promo codes are only applicable for online purchases, some are only applicable in stores.

Users when making a purchase will accumulate points on their loyalty card to rank up. When you level up, you will enjoy more incentives from the store.

Users can also receive notifications from the store in their personal accounts about promotional events, about coupon codes, or reminding them to use their own offer codes before the offer code expires.

Moreover, the system allows store owners to easily create promotional events, promotional codes or vouchers to give to users or general events that apply to all users in the system.

Security and User Capabilities

The system will support two types of users. To access the system, users do not need to log in, but if users want to buy goods, the system will ask to log in with Gmail. At the admin login level, users will be granted additional rights such as adding, deleting, editing and updating product types and can optionally add promotions easily. At the user access level (for purchasers), only purchase-related functionality will be provided.

Reporting

The reports generated will help in statistical analysis of the reference data that is collected and stored in the central data repository. Daily, weekly, monthly, quarterly, and yearly reports will be created using the functionalities of the system and sorted data.

Non-functional requirements

The software system will be installed and run on existing Windows systems and the system will be tested out on the store servers. The system needs to be functional whenever reference staff needs to access it.

The criteria for success of the system would be measured by the flexibility and sustainability of the system. The functionality and ability of the system to meet all requirements (i.e. simultaneous access from different workstations, effectiveness of the design of the central data repository, automatic backups, retroactive editing of data, various levels of user access, etc.) would be critical for success as well.

Usability

Usability issues such as speed of operation for the user interface, collection and storage of important quantitative data, speed and efficiency of the work flow processes through automation, and concurrency of collected data will be important considerations

Scope

The scope of our website will be within the capacity of Vietnam in terms of language interface as well as the scope of delivery, if well developed, we will expand to foreign countries.

Users need to enter personal information such as name, age, address, phone number, citizen's identity so that the system can accurately confirm the buyer, avoiding the situation that users don't receive goods.

III. PROCESS TO BE FOLLOWED

For this project, the team has decided to follow an iterative refinement approach that involves beginning with designing the user's website interface and gradually adding functionality until all of the client's requirements are met. The team chose this particular method due to the client's concern over having a user interface that is easy to use and less cumbersome than the current paper method. The interface is required to be intuitive and simplistic in order to easily collect the reference statistics from the librarians and other assistants. Another version is also required to act as an administrative interface to manipulate the data and perform any necessary administrative functions including report preparation and the modification of data categories. By using an iterative method, the team can quickly complete the product for the client to evaluate. If necessary and time permitting, redesign of the interface will occur based on client feedback. While the interface is being revised at 4 each step of the iterative process detailed below, the team will be adding the necessary software modules that will handle the central data repository, report generation, and other functionalities. Below is the proposed

outline of the iteration stages and milestones including what the team expects to have completed at each stage.

Process Outline

User testing throughout: At each milestone, the team will present the most current version of the software to the clients for their testing and evaluation. Although the software will not initially be fully complete during the early presentations, it will give the clients an approximation of the functionality of the final product.

1st iteration (April 19, 2022 – May 26, 2022)

Feasibility study

The group considers technology issues decides what programming languages and frameworks to use for the project, considers whether the database system is feasible in storing, automating systems that client equirements, or not, thereby concluding the feasibility of the project. At the same time, conduct pre-analysis of requirements, choose a model to follow to implement the project, and then build a tentative plan of work as well as milestones for system development. Evaluate that plan is feasible? Are you okay? Anticipate possible risks and have plans to deal with possible risks.

- Time: 1-2 weeks

- Work results: Report 1: Feasibility Study and Plan

(Submitted on April 28, 2021)

Requirements

The team conducts analysis, understands clearly and explicitly the requirements set forth by the client. When everything is clear, translate the defined requirements into corresponding functional specifications (requirements => functions) and the project team creates designs for the product to meet some those requirements, including hardware design, software design, programming language, data saving.

- Estimated time: 4 weeks

- Work results:

+Build basic database**.**

+The team will design the initial user interface for the client's evaluation:

- Product management page interface design
- Complete CRUD products

+Order management page interface design with basic functions.

- Fill information, view the products in cart, purchase

+Complete the function of viewing and searching for product.

The team will finalize the initial user interface and some basic functions for client to see and rate, if the client is not satisfied or has comments, it will be corrected in time so as not to affect the progress of the project. The team will also work with the client to exchange and receive if the client has a change in request or feedback.

2nd iteration (May 27, 2022- June 5, 2022)

Design Document

A formal document will be prepared that details both the design of the system and the code behind it. In describing the design of the system, the hardware and software needed from the client will be specified. Details about the program design will cover internal functionality so that the client can maintain and modify the end product in the future.

- Estimated time: 1 week

-Work results: Report 2 and Presentation slides.

Implementation

Based on feedback from the client concerning the first iteration deliverables, the team will modify the design of the user and administrator interfaces as needed.

In during iteration, the team will complete some functions:

+Sign in, sign up

+Purchase (payment, sales, apply voucher, accumulate points …)

Once completed, we will release the product to the client and receive feedback from the client.

- Estimated time: 3 weeks

3rd iteration (June 6, 2022)

-Completely design voucher, event, feedback.

Final Testing Period

The team plans to reserve two weeks before the final presentation so that the client can test the product in its intended environment with real users and data. All functional requirements will have been met before this point; any changes hereafter will only cover small details, such as aspects of the user interface.

Final Documentation and Presentation

Documentation for the final version of the product will be presented to the client so that the end product can be maintained and extended. This will include information on all required features, which will be fully implemented. The documentation will also cover any desired and optional features that have also been implemented. The team will also provide a demonstration of the system and training so that the client can understand how the user interface is intended to be used.

Final System

The final system will include all features that the team and the client have agreed are required, such as allowing data input and storage, sorting data. Based on development progress heretofore, the final system may also include any functionality that the client has also determined as desired and/or optional.

- Estimated time: 4 weeks

-Work results:

- The finished product of the system
- Documentation for clients (documentation)

IV. SUGGESTED DELIVERABLES

1)Periodic Status Reports:

Throughout the software development process, periodic reports will be written and presented to the client to maintain process visibility and enhance the team's responsiveness to the client's needs. The team understands that the client will wish to comment and respond to the development progress. In turn, the team will strive to continually adjust and target processes and progress to the client's needs. Periodic status reports will detail the feasibility of the project, its exact requirements, its design, and ultimately, its final form and implementation. These will be written documents that are presented to the client and any other individuals the client identifies.

2) *Periodic Presentations:*

Restate the customer's requirements in the group's understanding. Introduction to the system, functions and user interface will be implemented in the future.

Presenting features that have worked, failed to work and guide users to try them out. Customer feedback will help the team improve the system, add or remove features, and edit the interface and perfect the product to match the customer's wishes.

3) *Good Faith Requirements Agreement:*

After the project requirements have been discussed and reviewed with the client, a requirements agreement will be presented to the client to clarify exactly what the project intends to accomplish. The agreement will explicitly spell out which features and objectives the team intends to deliver.

4) *Documentation for Use and Mechanics:*

The client will be provided documentation both explaining how to use our system and describing its underlying mechanics. The client has expressed interest in gaining familiarity with the system, and the documentation will be useful for reference needs.

5) *Demonstration and Client Training:*

In addition to documentation, the client has requested training for their staff to use the system. The team will satisfy this need by providing demonstrations of the system (in various stages of completion) throughout the semester (in coordination with our periodic presentations) and by allocating time after the final system is finished to train the clients in the use of our system. The demonstration will consist of performing routine tasks that have been identified by the client, and the training will either consist of group instruction led by team members or one-on-one training with the client.

V. TECHNICAL FEASIBILITY

The feasibility of the technical requirements can be judged by identifying and outlining at least one technical method that will satisfy the client's needs. Since any technical solution must embody the client's requirements, it is useful to identify them:

Requirements:

1)Data sorting by different fields (time, date, etc..):

- Product type: Skirt, top, shirt, JumpSuit, pants, etc..

-Size: S, M, L, XL

-Promotions: the clothes will be discounted

-Sales: best seller items

….

2) *Centralized data repository:*

Since many locations will be operating at once and more locations may be added, a centralized data repository is needed to coordinate all of the information. Since different locations may be active at different times, stations should be completely independent of the functioning of the total system.

3) Multiple levels of access to the system:

- System users include loyal users (when purchasing, will accumulate loyalty points to rank up)

- Regular users

- Admin team

4) *Administrative interface:*

- The system uses a Web interface for administrators to easily create promotional events or vouchers to give away to users or general events applicable to all users in the system.

- The system also allows to manage the purchase history of each user and manage orders on the system.

5) User interface:

- Users can see order status on their web interface system.

- When logging in using a registered account, users can receive notifications about their order status every time there is a change and an account created on the system will save loyalty points, vouchers, and personal information.

6)*Security:*

- All data in the system, especially user data, which is the purchase history of each user, should be kept confidential to avoid illegal access, but still ensure convenient access for both users' accounts. users and administrators.

- The user's account and password will be guaranteed for confidentiality, integrity and availability in the storage system.

7) User support:

- Users will receive notifications when order changes, promotional events, about promotional codes or remind users to use promotional codes before expiration by login accounts registered on the web system of the user.

- Users when making a purchase will accumulate points in their loyalty card and will be regularly updated to their paid account on the system to be promoted and receive more incentives from the store.

Concluding and providing solutions

About Back-end: use MySQL database with Prisma to manipulate and store user's data, combine with Graphql to load data from server to client, use Apollo Server to deploy GraphQL server.

Front-end: using React and ApolloClient to build the UI components that communicate with GraphQL data.

All are written in Javascript on the development environment is Visual Studio Code

We get the links of feedback from the user's personal Instagram and Facebook manually and display them on the website for other user can access and see it.

VI. VISIBILITY

The team will take efforts to maximize the visibility of the system and the development process. This will ensure that the project is being developed in line with client specifications. Any deviations from those specifications can also be caught early and corrected through client feedback. Various visibility methods the team intends to use are described below.

Communication

MS Team, email and face-to-face meetings will be the primary form of open communication to keep clients updated on project progress. The group will meet as a plenary once a week to ensure all members understand and understand their roles and responsibilities. Any deviations from those specifications can also be detected early and corrected through customer feedback.

Intermediate Deliverables and Presentations

Live demonstrations: The client will be given demonstrations of the progress through presentations at the client site and at the monthly presentations corresponding to each major phase in the project.

Presentations: Slideshows of design layouts of screens, reports and demos of working functions, and the system will be shown to the client to keep them updated with the team’s progress.

Reports: The clients will also be presented with copies of the documentation, which record details at each phase in the software development process. These progress

reports will also enable them to be well aware of the details of the project from their perspectives.

VII. RISK ANALYSIS

As with any project, this undertaking is not entirely risk-free. Three major risk categories have been identified: time, resource, and functionality.

Time Risks

As course requirements specify that the project must be completed within one academic semester, any extensions are not possible. This introduces the risk that the system may not be completed with the full functionality the client wants within the given timeframe of a semester. In this case, there is also a second risk of delayed implementation of the system if the client chooses to wait until the system is fully functional.

Resource Risks

Technological risk: When team members are not fully proficient in the design technology of the system. Most have to study quickly to embark on software projects. Therefore, it is inevitable that error problems arise.

Poor quality code: The lack of mastery of programming skills can lead to code that is difficult to read and understand by other programmers. Code is hard to change, or has bugs that are hard to detect and fix. Especially when the project has been released and used, new errors arise. If detected, it is not sure that there is enough time to process the Library, the framework used may have to pay a fee or stop supporting suddenly, it is possible that the team cannot find a replacement.

Insufficient human resources: For an unexpected reason a team member can't get the job done (i.e. sick...) the team can't find a replacement. Especially when that friend takes on an important function that other members cannot immediately replace.

Other inherent cases such as equipment for programming suddenly broken... while not saving data**.**

Functionality Risks

Functionality risks have to do with how the system works. Issues that fall under this category include developing a user interface that is not user-friendly or not well-liked by the client, or producing functions that have limited sustainability. The biggest risk comes from developing a system that does not do what the client wants it to do.

Out of the three risk categories, functionality risks are the easiest to reduce since functionality constraints are more flexible than time or resource constraints. However, minimizing functionality risk is usually accomplished by omitting specific parts and/or functions of the system, as decreasing functionality naturally decreases its associated risks. The team would like to avoid doing this as much as possible. The clients must be aware that it is possible that this must be done in order to deliver the system by the due date at the end of the semester.

Risk Management/Minimization

Having outlined the basic risks associated with this project above, the team is prepared to take precautionary actions to minimize these risks. The principle plan is to develop and practice good management strategies. The team intends to divide the project into a series of iterative phases that have concrete milestones as discussed in previous sections. These milestones will provide project visibility and allow the client to see the team's progress at each stage.

Frequent communication and feedback from the client are also essential for client satisfaction with the user interface and functionality. The team will also constantly review their progress and modify goals if necessary to deliver a satisfactory system on time to the client.

VIII. BUSINESS CONSIDERATIONS

Trade Secrets and Sensitive Information

In order to access and use our website, you may be asked to provide personal information such as your name, phone number, email... , no trade secrets or sensitive information will be handled during the implementation of our system. We will absolutely keep the information that users provide to us, do not arbitrarily

distribute information to any third party unless you have your permission or request from the competent authority. We will store the information provided until there is a request to cancel from the user.

Copyrights and Trademark

Since this project is being completed for the Eva De Eva store, the team intends to give store a limited license to use and modify the system.

The team will give a limited license to Eva De Eva store, and related staff, hereafter referred to as “the client”. This limited license will allow the client to use and modify the software system for an unlimited period of time. The team will not be responsible for any modifications after the software system is delivered, but will help with any questions or concerns of the client as time and circumstances permit. The team reserves the right to be able to demo the software system to prospective employers and showcase the software system as a work created by each team member.

Since the team does not plan to trademark any names in relation to the software system, trademark are not foreseen as being an issue.

IX. CONCLUSION

From the results of the feasibility study, the team finds that the Reference Statistics for Eva De Eva project is feasible in terms of technicality, skill of team members, and time. Given the time constraint of one semester, the team believes the scope of the project is manageable and that the client’s requirements can be satisfactorily fulfilled upon system completion. The team members also possess the adequate skills to implement the system and are familiar with hardware and software that may be used in this project. The conclusion of the feasibility report is to go ahead with this software development project.