Student’s Name

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Course

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Web Application Development Basics

Web applications entail the various applications that are hosted on native servers and are available over internet browsers by users over different geographical locations. These have become increasingly important in the business world in recent times and grown to be necessary to the success of business organizations rather than just luxurious additions. The development of web applications is a process that requires careful handling in order to achieve effective and efficient results. Different business organizations have varied needs and thus the process is specific to a particular business organization (Suzanne, and Robertson 17). Consequently, there are various implementation options that an organization could choose from in order to meet its needs. Most of the design decisions are justified by meeting customer needs as well as making business processes more effective and efficient.

This paper is geared towards the analysis of the web application development process with regards to the Book and Board (B&B) Company based in the UK. The company is in the hospitality industry and has plans to develop a website and web based applications. This report documents the market research and domain analysis of existing web based applications in order to build a foundation for the implementation options for Book and Board (Hariri, et al 1738). Requirements specifications for the web applications are also included in order to determine the most effective design options for the company.

Market Research and Domain Analysis

The Book and Board travel agency would face stiff competition from various hospitality companies operating in the UK as well as others from abroad. This is mostly due to the large number of players in the industry offering similar services to customers. Clients can easily choose between which companies to approach for the services. This gives the buyers more power in the market and also ensures that the prices offered must be very competitive. Some of the competitors include companies such as Topdeck, Sherpa Expeditions, Tucan Travel, Contiki and Utracks among others. These businesses offer varied packages to customers and also target different market segments. Nevertheless, there are common technicalities among all the competitors within the industry and thus Book and Board travel agency would need to have an edge in the competitive market.

The competitors’ web applications are specially geared towards attracting the target marketing and ensuring convenient online experience. The web pages use deliberate keywords in order to direct traffic towards the sites. These keywords are evenly distributed and lead users to relevant information. Most of the websites also have impressive interface designs that encourage users to explore some of the packages on offer from the companies. The layout of information is also strategic with more important and sought after information appearing at appropriate locations within the sites. Finer details are accessible once a user is impressed by the general information within the website. User interaction is also enhanced by incorporating databases that store user information including contact information and preferred packages. This is necessary in order to keep the customers engaged. Customers also have the ability to search through the sites for their preferred packages. Various filters are used in order to guide users on searching their relevant information. All the available destinations, hotels and travel options are stored in databases and therefore easily available to customers on the interactive web based applications. Some of the companies have also incorporated the possibility of customers booking and paying online.

The general business objectives of travel agencies and other companies within the hospitality industry entail providing memorable services to customers and also building customer loyalty. Considering that the industry is very competitive, there are not many things that companies can employ to differentiate them from competitors. However, given that this is a service industry, the provision of high quality and reliable service could be very appealing to customers. Most people who go for these services are interested in recreational and leisure activities and thus more attractive packages would be more competitive. Furthermore, less people would like to handle less bureaucracy and hustle when it comes to traveling and finding the perfect hotels. It thus becomes necessary for the web application process to take into consideration these business objectives. The web applications should be suitable to the customers and also add value to the customers’ experience rather than just provide information about the company.

Ethical considerations concerning the web application process aim at meeting the required ethical standards both in the development process and the general business operations. The company needs to ensure that the content displayed for the purposes of information and advertising is not misleading. It is unethical to provide wrong information that could impair the judgment of unsuspecting customers. The company should also uphold human rights in its provision of various services online. Discrimination and disrespect for people through the use of inappropriate language and media should be avoided in order to be ethical. The company could also engage in environmental awareness and promoting responsible human activities which are helpful to the society. Finally, honesty and integrity when it comes to finances and business process should be upheld.

Requirements Specifications

The requirements specification for any software is determined by the user and the need for better functionality (Manman, et al). Requirements for a web application are aimed at ensuring smooth interactions with the users and also providing optimum information to the users (Achimugu, et al 569). The functional requirements need to cover all the services provided by the company and most of the realistic actions that would be suitable for customers. On the other hand, the nonfunctional requirements ensure that the web applications are reliable and well organized.

Functional Requirements

* Displaying relevant information to customers including current offers and best selling offers
* Availing contact information for the various company branches including physical address
* Create user accounts for new customers and store their information within the database
* Retrieve customer information including contact details and preferred packages
* Enable filters for customers to peruse through available packages i.e filters such as pricing, location, time of year etc
* Enable online transactions where customers pay money for specific packages
* Manage and compile financial transactions and other activities on the website
* Access relevant external information from other sites
* Provide links towards social media platforms and other related sites
* Provide guidance to new users on how to navigate the website

Non functional requirements

* Smooth performance in terms of response time and appropriate interface
* Ability to handle many users at the same time without malfunctioning
* Reliability and minimum downtime thus good availability
* Good security of the web applications to prevent cyber attacks
* Proper handling of customers’ information to avoid it getting to unauthorized persons
* Ease of use to customers considering different levels of technical knowledge

Use Cases and Scenarios

In order to validate the functional and nonfunctional requirements identified, use cases and scenarios can be employed. These are more practical in the process of requirements identification and analysis as compared to activities such as brainstorming and gathering the requirements from interviewing and questionnaires (Mirakhorli and Cleland-Huang 312). For the Book and Board, a relevant use case must involve the actor, the system and goals. The actor would be a person, whether an admin or a user, who would want to interact with the web applications in order to obtain information, retrieve information or manipulate some information in order to achieve particular results. The system would be the various web applications which are supposed to carry out the particular functions. Finally, goals would be the specific functions that need to be accomplished by the system upon prompting by the actor. An example scenario would be a customer who wants to browse the various offers available and finally purchase a package for two people ten days to the particular day of travel. The user should be able to navigate the web applications smoothly and achieve the desired goal without much work. User stories could also be used to validate the identified functional and nonfunctional requirements of the web applications.

MoSCoW Prioritization

The identified requirements for the web applications development process could be arranged in terms of priority. This is necessary in order to determine the requirements that must be addressed first and those that may have to be left out for the time being until a future time (Achimugu, et al 573). The MoSCoW analysis method offers four levels of priority for new projects including the Must have, Should have, Could have and Won’t have at this time. Based on the business objectives and model of Book and Board Company, the various identified requirements could be easily prioritized considering timelines for delivery. The table below shows the priority of the functional requirements of the web applications.

|  |  |
| --- | --- |
| **Priority** | **Requirements** |
| Must have | Displaying and availing relevant information  Creating user accounts and retrieval of user information  Enabling filters for searching the database |
| Should have | Online transactions  Managing and compiling financial transactions |
| Could have | Access relevant information from other sites  Provide links towards social media platforms |
| Won’t have | Guidance to users on how to navigate the website |

Product Backlog

The product backlog would be used to show the roadmap towards implementation of the digital transition for the Book and Board. It entails the various stages broken down for easier implementation of the whole process. The identified requirements play a major role in determining the structure of the product backlog. Based on a timeline, priority is given to requirements that need to be addressed first. User stories will also be used to guide on how the requirements are addressed in the web applications development process.

Works Cited

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