Software Project Management
Lab 2

Topic: iPad Restaurant Application

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Project Description/ Introduction

With the widespread use of technology being rapidly applied across various industries, the restaurant industry has been a quick and early adopter to the use of mobile technology to boost efficiency in various businesses. A prime example of this is the touch screen tablet devices, such as the iPad, that can be seen being implemented in many all-you-can-eat restaurants, where orders are frequent, and the number of servers is limited. The automated system ultimately provides comfort to the customers while allowing organization in business. Studies have even shown that 76% of modern consumers prefer to use self-service channels, due to the convenience and efficiency associated (CRM, 2018).

Although an initial investment is required to set up the hardware and develop software, we believe the potential savings achieved by the digital and automated system is significant enough to warrant the change.

Project Objectives

The touch-screen digital menu has objectives concerning both business, software aspects. The prime objective of this kind of system is to record and convey order information quickly and efficiently. The digital system needs to have a faster retrieval rate and higher efficiency rate that the conventional server using a notepad method. Additional opportunities become available also in the ability of further enhancements like saved customer records and long term customer history.

- Appropriate privilege to customers and business respectively

Restaurants should be able to add new menu items/promos
Clients should be able to order with the limited privilege given to them

- Synchronized server and client system

Storefront should be notified in almost real-time once the customer makes an order

- Respective area of operating business should receive customer's orders

Food/drink should be directed to the respective area of where they're ordered (e.g. bar or dining)

- Speed/quality of software

Ordering through software should be more efficient than conventional waitress-notepad methods

Measurement of success

As a software system, measurement of success can be measured in both software project metrics (ie. latency, downtime) and as a business product point of view (ie. customer satisfaction, profit margin).

- Order failure/error rate

The failure/error rate for a customer's order should not exceed the set threshold

- Saved cost analysis

Implementation of software has many benefits, including a reduction in staffing costs, prevention of food waste

- Workplace efficiency

Software implementation improves business metrics such as order turnaround time

- Net profit analysis

Analysis of break-even point, and potential business gains due to software system (ie. overlooked metrics and relations due to software implementation)

Infrastructure

Personalized POS systems are commonly used applications, where they already exist due to companies who provide modular services to fine-tune the software to specific business applications, therefore we must first perform a cost analysis of popular "off-the-shelf" software services.

If the project was to be created using our own software, we noticed that this will be a three-tier system, where data, application, and the client will be used to separate the design. The biggest expense (other than development) will come from the maintenance of a server, where data and application will be stored. The cost analysis for server will be performed to analyze possible cloud services that can be applied to the use case. For example, the choice between AWS or Digital Ocean will be based on the team's proficiency, cost, and usability of the system in the specific application. Secondly, for the application layer, the choice of a technological stack will be made on the maintenance fee of the developers.

The project will be handled in an agile manner with incremental deliveries, to work closely with the customers, and receive feedback. The delivery of each increment will build on the previous deliverable so that the initial delivery will provide the core software functionality to the client.

Conclusion

Technology in the restaurant business is a subtle but fast-growing industry, and with the promise to connect modern consumers, the demand in the industry is growing. The software-based restaurant menu handles customer requests, and by reducing the tedious and error-prone jobs to technology, restaurants are interested in maximizing their gain.
This report looks into potential alternatives to having a restaurant application and discussed potential topics/areas of development and investment required for the project.

Works Cited

A new dawn for dynamic customer care: CRM CRM. (2018, 03). Customer Relationship Management, 22, WP18~WP19. Retrieved from http://search.proquest.com.uproxy.library.dc-uoit.ca/docview/2046112117?accountid=14694