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**COT 6931 Project Definition**



**Student Name: Kendrick Hagerman**

**Project Name:** Food Giant Sales Flyer Creator

**Client Name:** John Webb – Bay Minette Division Manager

**Client Phone Number:** 251-288-2964 (Company work cell)

**Client email:** johnwebb@foodgiant.com

**Professor:** Dr. Donna M. Lohr

**Date: 2/19/17**



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| --- | --- | --- |
| **Project Definition Background** | | |
| Background of the project: | Six division managers at Food Giant (a grocery chain) want a program for their store managers that will help them quickly create sale flyers based on items these store managers select. Food Giant already has global sale flyers but these are made and shipped from corporate. The division managers want the store managers to be able to quickly print custom flyers for perishable items they have excess stock in to help sell these items before they expire. This will help them to sell excess stock at a store and increase revenue. This program will be hosted on a server containing data on all items Food Giant sells. | |
| **Objectives** | | |
|  | **Complete** | **Comments** |
| Define project objectives clearly.  List minimum of three (3). |  | Implement a GUI-driven program that allows a store manager to select from one or more template types and categorized items created from a database.  The database will contain categorized items with image name(s) associated with them. The manager can find and then select and copy to these images the selected template.  Implement a simple print program that can print this complete flyer out to a printer or pdf file for future use.  Deploy this program onto a server that the store managers, division managers and division manager’s assistants can log in to in order to print a flyer, add a new product and associated images, or add a new flyer template. **Update 1/24:** Division managers would like ability to review created flyers.  Create a search program that could allow store managers to search the database for certain items instead of scrolling through the entire large list of items. This means the database would need categories, names and unique ids associated with each item.  Implement the functionality for a division manager or division manager’s assistance to add more items to the database. This will mean I will needparameterized queries.  Make the GUI non-technical and easy to use by managers who have little to no computer experience. |
| **Client Organization** | | |
|  | **Complete** | **Comments** |
| Identify a Project client. (i.e. company or organization) |  | Food Giant. 36 stores (from Louisiana to Florida) will use the program. |
| Identify a project client (individual) who will sign-off the requirement and accept the delivery. |  | John Webb, Bay Minette Division Manager  There will be other managers reviewing the software, but John Webb is my primary contact. I can add their information here if needed. |
| **Project Definition Section 1** | | |
|  | **Complete** | **Comments** |
| Project topic must be approved by instructor and accepted by sponsor. |  |  |
| Write a project statement. |  | (Updated 2/1) This project’s objective is to host a GUI program that allows non-technical users the ability to connect to generate a store flyer for their store so they can print distribute this flyer to nearby locations. This flyer contains discounts on excess items the store has in stock to attempt to help sell these items for a profit instead of being disposed of for a loss of revenue. This software will use a database, modern web application and GUI design techniques and must be accessible from the internet. |
| State the research problem/project. |  | Currently, store managers have no way to advertise to customers in regards to excess items besides changing the price for these items on the product at the store. This leads to many unsold items being thrown away and revenue being lost of the company. |
| State the justification for the project or problem. |  | This project has the benefit of increasing revenue for a company, preventing food waste, and saving consumers money.  "In 2008, roughly 43 billion pounds of food was thrown out of grocery stores—that's about 10 percent of all food purchased in stores." (Reference Wystrach).  Obviously, the main benefit for the project is helping to get these items sold to consumers instead of being thrown away. This reference (Reference Johnson) shows the impact of excessive inventory on costs. Where this project will help is in the “High Advertising and Selling Expenses” section. Being able to generate ads targeting the surplus items cheaply and effectively will not only increase sales, it will prevent these items from spoiling and becoming a loss for the store.  The reason grocery stores like Food Giant are working on different ways to increase revenue is (Reference Food Institute) “Grocery stores’ sales climbed just 0.9% to $53.6 billion during the month. Year-to-date sales were up 2.2%. Unfortunately, supermarket sales, which are only available through the first half (of 2016) from the CENSUS BUREAU, were up only 2.1% indicating increased competition from alternative retailers as well as eating and drinking places.” Grocery store sales are starting to go from being a growth industry to potentially becoming stagnant. This decrease in revenue may be exacerbated by online sellers like Amazon Pantry.  Another important reason sale flyers are important is that “In a study by Stanford business, they found that at least 10 percent of shoppers chose their store based on the week's ads.” (Reference Srinivasan) Targeted advertisements on unexpectedly popular items can help increase revenue by shoppers from competitor’s stores.  I worked as a butcher for a few years at a few smaller grocery stores in Pensacola while working on my bachelor’s degree and personally had to throw away a lot of food, usually around 25-40 pounds of meat a day on average.  Besides what I’ve said in the above statements, I know the impact flyers have on sales. Either online ads or store flyers bring a non-trivial amount of additional income by bringing customers in the store. |
| Document any deficiencies in the project. |  | It is possible that these custom flyers may not impact sales or remove enough excess inventory for the program to be worth developing or using.  If we do not spend enough time prototyping the GUI with the stakeholders, it may not be user-friendly enough for the store managers, which may lead to the program being underutilized.  Food Giant may not have a long-term plan for keeping the program maintained on a server.  There will need to be some form of regular training with program documentation for the new store managers, since turnover or promotions with this position exists. |
| Identify and state the audience for the project. (not the instructor) |  | The district and store managers are the primary audience for the project, since they are the ones requesting it. Store managers will be a smaller, but still important audience for this program, since they are the primary users of this project. There will also be a person that the district managers charge with adding new items to the database.  The store managers and program/database admin will require demonstrations of the program and possible some training, though all of this is undecided that this point. |
| **Project Definition Section 2** | | |
| Provide a written review summarizing your research of project literature. |  | Please see the attached Hagerman\_Kendrick\_Research\_Summary.docx file |
| Write a purpose statement for the project. |  | The purpose of the project is to provide an easy to use program to the district and store managers of Food Giant that will allow them to create and design custom flyers using their inventory of store items that they can sent out to potential customers. This program will be hosted on a server and be distributed via the internet. |
| State the research questions for the project allowing you to narrow your purpose. List a minimum of three (3). |  | What software should I use to design this application?  Where and how should I host this server/client application?  How should the GUI for this application be designed?  How should users connect to the application?  How should my application (database, server, etc.) be protected?  What kind of budgetary restrictions do I have for this project? |
| Identify and document a Project Management Methodology that you will use in completing the development of a solution. |  | I’m going to use a combination of the Agile and Adaptive Project Methodologies. I need Adaptive because my time for this project is fixed (until my capstone ends) and my costs (to host the website) will be fixed once I get that information from the stakeholder. I’m using Agile because I plan to separate each module’s (e.g.. database, ASP.NET and C# GUI) development into separate sprints with a prototype to the stakeholder of this module’s functionality at the end of each sprint. |
| **Project Definition Section 3** | | |
| **Risks** | | |
|  | **Complete** | **Comments** |
| Identify the risks and assess them. |  | I do not know the hardware or software of the computers the store managers use. These computers most likely are older computers, which means I need to design this software to be as least complex as possible for these computers or it may fail.  These computers will connect to the application via the internet. This means that anyone may be able to connect to the application, which could easily become a security problem if someone does not know what they are doing or I do not protect critical sections of the code or data.  There are six division managers that will be looking at this program. There is a high risk that the requirements of the program will change as these managers look over the program.  I do not know if they have a maintenance budget planned for deploying the software or teaching new people. |
| Provide Risk Mitigation Strategies for each risk in a Risk Mitigation Document. |  | Please see the attached Hagerman\_Kendrick\_Risk\_Mitigation and Hagerman\_Kendrick\_Risk\_Matrices files |
| **Business Functions** | | |
|  | **Complete** | **Comments** |
| Identify and document any and all business functions that will be modified/deleted/originated as part of the project. |  | These business functions will be covered in the training material provides with the program. The store manager will need to be able to generate a flyer if they have enough excess inventory, which is a decision currently up to the store manager’s discretion. |
| Document the Project interface that you intend to use in your management of the work. (i.e. face to face meetings, etc.) |  | Weekly phone calls and texts as needed, face to face prototype demonstrations to the district and store managers.  Additional training for division managers and assistants responsible with maintaining the database. |
| State the business processes that are impacted by the project. |  | Management, sales. |
| State all project hardware, software, etc. (if applicable)? |  | Client Side:  Windows computer with internet access.  Printer to print flyers.  Prerequisites for client-side connection program (.NET Framework and web browser are only requirements currently)  Server Side Programs:  Database program – SQL Lite  Web design program – ASP.Net  Web logic program –C#  Client-side GUI program – C#  Web hosting program – Azure or AWS (Pending stakeholder review) |
| **Project Definition WBS** | | |
|  | **Complete** | **Comments** |
| Start Date |  | 02/19/2017 |
| End Date (end of second semester) |  | 8/11/2017 |
| Total Effort in hours (for 2 semesters) |  | ~250 for Software Engineer only (me) |
| Budget (Breakdown should be by deliverable. Remember to include setup) Add as an appendix. |  | Please see the attached Hagerman\_Kendrick\_Budget |
| List of Functions |  | **Unsure on this item. What exactly is needed?**  Basic description of program’s functions will be: Connect to Server, Query Database, Create Flyer, Save Flyer, Print Flyer, Open Flyer, and Update Flyer |
| List of Deliverables (not course related documents-only project related) |  | Design Documents for GUI, Client, and Server Side Logic  Source Code for GUI, Client, and Server Side Logic  User Manual  Program Maintenance Manual |
| Milestones/Timeline (Use a Work Breakdown Schedule (WBS) using Microsoft Excel only. Add as an appendix. |  | Please see the attached Hagerman\_Kendrick\_Schedule |

**References**

Wystrach, Michael. *Grocery to landfill: Confronting what we waste.* CNBC.<http://www.cnbc.com/2016/05/11/grocery-to-landfill-confronting-what-we-waste-commentary.html>

<https://www.gsb.stanford.edu/insights/surprising-impact-grocery-circulars>

Patricia M. Johnson. <http://retailowner.com/Need-to-Learn/Inventory-Profits-Cash/Excess-Inventory-Costs>

"Grocery store sales growth still sluggish." *The Food Institute Report*, 22 Aug. 2016, p. 3. *General OneFile*, go.galegroup.com/ps/i.do?p=ITOF&sw=w&u=pens49866&v=2.1&id=GALE%7CA463399619&it=r&asid=be1a6797ff7ca9518e8662ac3516bc04. Accessed 26 Jan. 2017.

**Appendix:**

Hagerman\_Kendrick\_Research\_Summary.docx

Hagerman\_Kendrick\_Risk\_Mitigation.docx

Hagerman\_Kendrick\_Risk\_Matricies.xlsx

Hagerman\_Kendrick\_Schedule.xlsx

**Comments**

[Replace this text with comments.]

**Approvals**

**Project Client:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date: \_\_\_/\_\_\_/\_\_\_\_**

**Client Signature:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date: \_\_\_/\_\_\_/\_\_\_\_**

**Project Professor:** \_Dr. Donna M. Lohr\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date: \_\_\_/\_\_\_/\_\_\_\_**

**Professor Signature:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date: \_\_\_/\_\_\_/\_\_\_\_**

**Student Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date: \_\_\_/\_\_\_/\_\_\_\_**

**Student: Signature** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date: \_\_\_/\_\_\_/\_\_\_\_**