CSCE 5430 - Software Engineering

3/20/2023

**Project Proposal (#2 Submission)**

GitHub Link:<https://github.com/blackwell7/Software-Engineering-CSC5430-Project.git>

**1.** **Project Title and Team Members**

***Project Title***

Contact Management System

***Team Members***

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**2.** **Goals and Objectives**

***Motivation***

As we are the students of software engineering, the requirements analysis is the very crucial step in developing an efficient software the way the user wants it to be. So, the requirement gathering can be successful only because of communication.

So communication is the most important aspect. And in the present world we have many online applications for communication like teams, but there is no simple GUI which allows us to create contacts and manage the contacts and save them to our database. Mobile applications and softwares do exist with which we can store in our cloud, but to simply store the contacts in our systems we do not have a very good interactive contact management system. And also, a perfect system app exists through which we can find the details of the contacts we create.

***Significance***

The main significance for selecting this project is the fact that businesses rely heavily on (CRM). Good CRM focuses on building a customer profile, saving repeat customer information, and providing techniques and software that can help different departments collaborate to meet customer needs [6]. Contact management systems are one part of CRM that focuses on building a customer profile by taking customer information such a name, email addresses, or phone number and saving that information in an easy to access, secure location. With this information a business can work on building a loyal customer base as well as identifying customer demographics for product offers and promotions. This benefits the business as managing customer information can lead to increased revenue through sales to repeat customers.

The reason that this project was chosen was due to the importance of gathering and storing information for analysis. While gathering and storing customer information may seem menial, it can have a profound effect for a business. Contact management systems are a part of customer relationship management (CRM). One research paper found that, “In summary, the case studies reveal that organizations often do not make good use of their CRM systems’ capabilities to obtain knowledge from their customers. Customers are a very valuable knowledge resource for organizations” [1, p. 39]. Essentially through the use of CRM and by extension contact management systems, businesses could obtain feedback from their customers to improve products, advertisements, or business processes. This project is interesting as it is essentially developing software that is critical for a company to function as well as storing and organizing data that can be used in other fields like data analytics or machine learning.

Other notable CRM projects could include the contact management software that is used by Salesforce which features chatbot integration [4]. Another contact management software that is relevant to the proposed project could be the software offered by Hubspot. This software provides the added benefit of lead generation [3]. The main difference between the software that is presented by these companies and the software that we aim to develop is the fact that this software solution would focus on creating a simple GUI that focuses on saving personal information and to a database.

***Objectives***

The main objective of this project is to implement a solution or software product which makes it very easy for the management and the coordination of different contacts, which is very difficult without software support.

And also, we can very effectively manage the contacts with the contact management solution software. With this application the communication barrier between the customers and the business owners is completely eradicated. Productivity is also another concern. A firm could completely see peaks in their business when the customers are well managed and satisfied. And also there is no fear of data loss, data accuracy. The ultimate objective of the contact management application is to make the updating process simple and accurate. To conclude the ultimate objective of this project is to enhance the customer relationship with proper communication and collaboration.

***Features***

As we know the features of the software product is nothing but the specification or the functionality that is provided to the end users, by our software. So by ensuring all the functionality and specifications are met with the required modules we can ensure all the features are provided in our application.

Our application has features which help to add a new contact. And the details such as the First Name, Last Name, Gender, Age, Address, Contact and further more details could be added. We aim to make individual profiles for each person with which many customized queries and searches based on the need can be done. The dynamic control is the most important feature of the application. We can also delete unwanted numbers or contacts as we wish. The last but the most important feature is the possibility of the exporting of files so that a backup can be easily made [2].

The features that we aim to implement are:

* A GUI where the user can create, save, and delete customer contact information
* A method for creating a customer profile with new contact information [First Name, Last Name, Gender. Age, email address, Address, Contact, location, image ]
* A method for saving customer profiles to a database for later use.
* A method for deleting customer profiles.
* A method for updating a customer Profiles.
* A method for sorting customer information based on desired category (ie. group customers by gender or age)
* A Login Page for employee to login to access software
  + Lockout feature if too many wrong attempts
* A Lookup Feature where the user types a name and application will search through the saved contacts to retrieve information.

**References**

[1] F. Khodakarami and Y. E. Chan, “Exploring the role of Customer Relationship Management (CRM) systems in Customer Knowledge Creation,” *Information & Management*, vol. 51, no. 1, pp. 27–42, 2014.

[2] M. Nath and A. Arora, "Content management system : Comparative case study," 2010 IEEE International Conference on Software Engineering and Service Sciences, Beijing, China, 2010, pp. 624-627, doi: 10.1109/ICSESS.2010.5552271.7

[3] “Software, tools, resources for your business,” *HubSpot*. [Online]. Available: https://www.hubspot.com/. [Accessed: 20-Mar-2023].

[4] “The customer company,” *Salesforce*. [Online]. Available: https://www.salesforce.com/. [Accessed: 20-Mar-2023].

[5] “Unity Customer Data Platform,” *Oracle*. [Online]. Available: https://www.oracle.com/cx/customer-data-platform/. [Accessed: 09-Mar-2023].

[6] “Why you need [the right] CRM,” *Oracle*. [Online]. Available: https://www.oracle.com/cx/what-is-crm/why-crm-is-important/. [Accessed: 09-Mar-2023].