



Faculty of Engineering and Technology

Computer Science Department

Software Engineering

COMP433

Course Project – Phase 1

Project Name: Adverttech Software System for Golden Adverts

Prepared By:

Students Name	Student Number
Jehad Hamayel	1200348
Laith Ghnemat	1200610
Arwa Doha	1190324
shahd hassouneh	1190618
Ayah Salamah	1190418

Instructor's Name: Samer Zein.

May 11, 2023

Introduction

Adverttech is a powerful software system for Golden Adverts. It supports many developments needed to expand the company's capabilities and improve its efficiency in the advertising industry in the West Bank region, as we have built a comprehensive software system that can automate all operations of this company. It is managing customer information, billboards, advertisements on social media, and television and radio advertising campaigns, which are the sections that we will work to develop in this project.

The current system in place in Golden Adverts relies heavily on Excel spreadsheets, and the data is entered manually, so it can track information for customers and it also maintains information for a wide range of customers (companies, institutions, and individuals) in the form of spreadsheets. Currently, the software records all customer contact information including phone numbers, cell phone numbers, emails, websites, etc., as well as a description of the customer's business. This way of storing data is less secure, less scalable, confusing and more likely to be lost. It is also difficult to obtain reports on the financial condition of employees, including salaries, costs, and taxes that management requests. This makes supervising the company's financial position in an effective manner difficult.

In addition to the above, the current system lacks the ability to provide clients with a proper online platform to manage their campaigns. So that customers must rely mainly on e-mail as well as phone calls to communicate with the company, and this is considered a waste of time and impractical due to the presence of large numbers of customers and it also causes customer frustration.

In order to solve these challenges that we face, we propose a comprehensive and complete software system that integrates all operations of the Golden Adverts company, including commercial operations, as it provides an exciting, simplified and effective experience for both employees and different customers. As our system will automate many tiring manual operations in the company, and this reduces the errors that we face and it also improves efficiency further and increases security, which makes customers feel comfortable. In addition,

the system will provide an online platform for customers to manage their own campaigns, which will make communication with the company easier and more convenient for them.

Our offered system will be built using the latest and best technologies and best practices, as we ensure that the system is scalable and optimizable, in addition to being highly flexible and reliable. We will work closely with the Golden Adverts team to ensure that the system will meet all their needs and requirements. Moreover, our team has very extensive experience building high quality systems and software of all sizes. Our software system will include a VIP list, where they will receive special attention and will get discounts and discounts on their campaigns, in order to gain their trust and encouragement. We are confident in our ability to provide appropriate solutions that meet the needs of the company and exceed the expectations of Golden Advertising Company.

In conclusion, we believe that our proposed software system will provide many, many features and benefits for Golden Adverts, including improved features, better collaboration, and a unique experience that is highly suitable for customers. and for the project requirements we will use the reuse – oriented method with the incremental software process. We are ready to work with Golden Adverts and reach the goals to be achieved, and we are ready to provide the best solutions that will distinguish them from their competitors.

System Features

As for the functional requirements:

- 1. Ad Campaign Management:** The software should enable the development, administration, and tracking of multiple ad campaigns across billboards, radio, television, social media, and other media. It ought to keep track of the campaign's beginning and ending dates, as well as its description, expenses, and other pertinent information.
- 2. Customer Relationship Management (CRM):** Client information should be managed by the software, including contact information, business domain, campaign history, and assigned employees in the business department. It must also keep track of a list of "golden clients" who receive preferential treatment and discounts on their advertising campaigns.
- 3. Billboards Management:** The software should keep track of the billboards' positions, sizes, names, and intricate scheduling of advertisements. Along with tracking money and calculating expenditures, it should also maintain track of the billboards' upkeep operations.
- 4. Social Media Adverts Management:** Online advertisements should be created and managed by the software on social media sites like Facebook and Instagram. It should keep track of all pertinent data, such as the campaign's dates, materials, costs, technical staff, and revenue..
- 5. TV and Radio Adverts Management:** The software should manage advert campaigns on TV channels and radio stations. It should store contacts of TV and Radio stations, and special agencies that can create the advert TV and Radio material.
- 6. Employee Management:** the software should manage employee financial information, including salaries, cost, and taxes.
- 7. Management Reports:** The software should generate full reports on consumer campaigns and other pertinent financial data, including payments from customers,

costs, and revenue. Additionally, it should generate reports with thorough financial data on billboards, such as revenue and maintenance costs.

- 8. Customer Portal:** Customers should be able to use the software to register online, make preliminary campaign plans, pay online, check their financial state, and track the specifics of and progress on their campaigns using smartphones. Additionally, the customer can extend the advertising period or renew their subscription..
- 9. Integration:** The software should provide integration with other business systems, including inventory control, accounting, and other relevant systems.
- 10. Choosing advertising supplements:** Customers who use this service are given the opportunity to determine the characteristics of their campaign, including the target audience and their interests, as well as suggested positions, sites, and times that fit the nature and purpose of the campaign and are crucial to its success.
- 11. Monitoring ad performance:** Providing details about campaign results and rates of arrival, participation rate and evaluation by categories, as well as the possibility of evaluation by the campaign owner.
- 12. Ad model:** The possibility of presenting several incomplete and initial small models based on the given campaign details to allow the customer to choose the appropriate type of campaign and evaluate each model, so that employees work on the highest rated model.
- 13. Ad creation tools:** Allow the customer to create the ad for their campaign by providing them with template options, stock photos and videos, editing tools, and attaching their ad after it is ready to be published.
- 14. Steps to approve the advertisement:** To ensure that the process proceeds properly and according to the company's policy without harm to both parties, this service will provide several tasks and steps to obtain approval before publishing the campaign.
- 15. Communication feature:** It allows communication between employees about divisions of work and with different powers according to the work rank, also between employees and customers as two types of communication, the first is

cognitive communication to answer their general inquiries, and the other is to follow up on the progress of the campaign.

16. Payment Processes: Availability of payment methods in general to customers within clear and detailed reports and invoices.

17. Promotions: The possibility of identifying the golden customer based on the data to give him unique services and discounts, each according to his rank.

As for the non- functional requirements:

1. Maintainability: Maintainability is crucial for Golden Adverts to ensure that the system can adapt to the changing needs of the business and the advertising industry. This involves designing the system with a modular architecture, well-documented code, and automated testing and debugging tools to identify and fix issues quickly. Additionally, having a support team to assist users and address technical issues is important.

2. Efficiency and Scalability: As for non-functional requirements, efficiency is one the most important attribute that must be present in our system, since avoiding wasting time, money and resources is a priority. Moreover, our software system will have the attribute of scalability, they both will have an excellent performance of serving more than 1000 user at the same time and both systems will have a response time of 99%.

3. Usability and acceptance: The application must be usable and acceptable to users and employees, because employees in the company are increasing rapidly, so it is difficult to waste time training them on the system, also the general customers will use it, and if it is difficult to use, this does not encourage them to use it or agree with the company.

Software Development Process

Incremental software development process will be used in this project due to the possibility to change the project's requirements or gaining a clearer vision with time. In addition, feedback is needed in this type of project during the whole development process to add more enhancements to the project. Having a special employee for each client to follow up with them will help in the continuity of the process incrementally and follow up the progress of the project along the development process to gain feedback, make enhancements and add new features.

This development process will lead to incremental planning for this project and deliver it incrementally. The project will be divided into sprints (2 weeks for each). Each sprint consists of several levels including understanding the business domain and collecting requirements, design, implementation, test, integration and the final system test and integration to gain a real software part at the end of each iteration. At the end of each iteration, a meeting will be held to take feedback from the client. The sprints with the highest priority and highest business value will be worked on first.

The project will be delivered incrementally as releases (3 releases). The first two releases will contain the main features of the project and the last release will contain additional features and improvements on the main features.

The first release will contain the main features such as registering for the advertising campaign using the portal to allow the customer to register their advertising campaign, and the management system for each department (business, billboard, social media, and TV and radio department) to record needed information and show reports for each department. The second release will contain detailed financial information reports (accessed data by the management department) for customer's campaign and employees that need integration with an accounting system, and features for tracking the progress of the campaign by the client through the portal using a personal computer or by smartphone. The third release will contain enhancements to the previous features, and some unique features for golden customers that are additional such as special discounts and other special services.

For projects with similar requirements, the reuse-oriented method can be combined with the incremental software process. Ready-made blocks can be used in agreement with the client, with modifications and additions to them.