

Project Design Document



The American Video Game Company

Customer Relationship Management System (CRM)

C188 Performance Assessment

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WESTERN GOVERNORS UNIVERSITY®

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A. INTRODUCTION

M2G Consultants is a group of top-notch IT professionals that have the combined goal of improving business relationships and helping businesses stay connected to their customers and becoming more efficient in their ways. We were founded in 2010, based in the small town of Kingsville, Texas. We are privately owned, with over 40 employees and over 100 years of combined Customer Relationship Management (CRM) System experience. We strive to create and find solutions to make the hardest business CRM situations into the simplest turnarounds. All while having fun and creating a lively environment.

A.1. PURPOSE STATEMENT

The purpose of this document is to design and showcase a proposal to help the American Video Game Company become most efficient through a newly improved Customer Relationship Management (CRM) System. This document will provide information on requirements for the Scope, IT and Hardware environment the CRM will be deployed in, Software Methodology Advantages and Disadvantages, Design Storyboards/Flowcharts, GUI interface, and Test cases of this proposal.

A.2. OVERVIEW OF THE PROBLEM

The American Video Game Company's recent sales increase has now surpassed their existing systems for managing all aspects of their current CRM. Our company's proposed Customer Relationship Management (CRM) System will help The American Video Game Company's growing business, by providing them with helpful tools that will efficiently help manage many different crucial areas that currently need updating. This will include areas within their client base, sales tracking, activity management, and reporting systems.

A.3. GOALS AND OBJECTIVES

The goals and objectives for our proposed CRM project and solution are as follows:

- Provide the ability to integrate with other systems to automatically update information that will improve data sharing, reporting, and business process flows.
- Provide a user-friendly environment that is easy to use and graphically intuitive.
- Provide a support and maintenance structure that will help identify future issues within the system for easier troubleshooting.
- Provide an adequate management system for activities and sales tracking.
- Provide internal and remote users control access to certain features based on roles and permissions within the company's active directory.



A.4. PREREQUISITES

Listed below is a table of the prerequisites needed to forgo the design, development, and implementation of our CRM project proposed in this document.

Number	Prerequisite	Description	Completion Date
1	Operating System	All windows systems should be updated to windows 10	6/1/22
2	Internet Browser	Internet browsers should be updated to their latest versions	6/1/22
3	Windows Server	Windows Server 2012 and above is required.	6/2/22
4	Internet Connection	Our proposed CRM system will be managed through the cloud and will require a fast internet connection. Fiber optic internet is strongly recommended. If Fiber optic is not available in your area a broadband internet connection with a minimum of 10 Mbps download speed and 3 Mbps upload speed will be required to reach ultimate performance.	6/3/22

A.5. SCOPE

Our proposed CRM System will include a user-friendly environment for all to use. With just a click of a button, service-side users within the business will be able to create system tickets, making it easier to track and organize customer communications and contact information. With a simple code tracking system, reports can be generated by selecting group codes needed for requested sales information for simplified order management. Our system will also broaden scalability toward the rapid growth of users who access the system.

Our proposed CRM System will not be handling any Forecasting processes in this proposal. Although we strive to keep our clients happy, Forecasting does not seem to be of importance at this moment in time.

A.6. ENVIRONMENT

Our proposed solution will only be compatible with the following systems and browsers:

- Google Chrome version 101.0.4951.64 on Windows, macOS, Linux, Android, and iOS
- Internet Explorer 10 and above
- Safari 8.0
- Android tablets
- iPad 8 and iPad air 4
- Microsoft Edge Chromium
- Windows 10 and above
- Windows server 2012 and above



B. REQUIREMENTS

As The American Video Game company grows, our system of Customer Relations Management will grow with you. Every day new customers and clients walk through your online doors, and our system will help welcome them right in. To assure the power of our proposed design for both, the business and customer sides, we will provide five distinct requirements from your system. Each requirement will separately focus on business requirements, user requirements, functional requirements, and non-functional requirements. They will be listed in order as follows:

1. *Business Requirements* – Opportunity Management
2. *User Requirements* – Order Management
3. *Functional Requirements* – Ticketing System for sales tracking & Reporting
4. *Nonfunctional Requirements* – Backup & Security

B.1. BUSINESS REQUIREMENTS

Opportunity Management:

Nothing is better than a system that gives the ability to help your sales team minimum effort to manage business opportunities. Our sleek design offers an easy tool for getting the most out of your sales and competitors. With our Opportunity Management system expect to perform win/loss analysis, providing you with the information on the products doing well and not so well. Competitive analysis is also offered as an insight for your sales team to see what is selling, and what is of highest interest at that moment. Competitive product analysis and discount approval and analysis are also available at the simplicity of the provided sales dashboard.

B.2. USER REQUIREMENTS

Order Management:

Order management will be a breeze for old and new customers coming to the site. With an updated user interface there is no way one can get lost. Users will be able to create an account to have access to orders placed, communications, quotes, saved items, and user profiles. The account will have the ability to track orders and get notifications of any new items under customer recommendations and receive loyalty discounts after a certain number of purchases. The account will also have access to online customer support chat, leaving the customer satisfied with a convenient shopping experience.

B.3. FUNCTIONAL REQUIREMENTS

Ticketing System:

To help manage entry and the tracking of communications and contacts, a well-defined ticketing system will be in place. This system will include a ticket number to help track the ticket created the name of the client/customer that called, the ticket name, severity, status, the assigned group name (to who the ticket was forwarded), dates created/modified/and closed, and type of ticket (what the ticket is for). This ticketing system will have an easy-to-navigate dashboard for the business-side users to easily work with making the workflow efficient and flawless. Reports can also be made on the ticketing system for future audit trails.



Reporting:

Being a crucial part of the business, reporting has never been easier for a user than now. M2G Consulting experts have put together a system for the most efficient data retrieval. The American Video Game Company will have access to a dashboard that will allow filtering, formatting, querying, and exporting of data. Any report or query will be available to schedule a run at a requested time as needed. You may also write and automatically save audit records for future auditing. Reports may be managed through a toolbar provided with several options on the type of report. They may be easily filtered through group codes entered during a sale, or through historical data for sales analysis. All reports can be saved for future edits and access.

B.4. NONFUNCTIONAL REQUIREMENTS**Backups and Security:**

We understand the pressure of remembering to set the “tapes” for eventful backups. Our system will offer an automated backup that will save you time and stress. All you would have to do is set your backups, let them run, and get the completion status sent to your email or by text.

As for security, set your worries aside with our 24/7 friendly, knowledgeable, and super responsive IT support team. They are always on call and watching for irregularities in the system. For additional support, we do recommend a highly on-duty firewall and antivirus which are separate from this proposal, but always available to add on.



C. SOFTWARE DEVELOPMENT METHODOLOGY

The American Video Game Company have stated their preferable software development methodology as the Waterfall methodology. This method is rare among developers nowadays, but there are a few variations of it that are useful. This especially includes the Incremental Waterfall Method. This method builds an application incrementally, adding pieces as we go until the application is the best it can be. In the following sections, we will go through the advantages and disadvantages of the Waterfall Method, and the Agile Method. We will then discuss which method will be best suited for your company.

C.1. ADVANTAGES OF THE WATERFALL METHOD

The Waterfall Method gives us opportunities to change direction. In a variation of the Waterfall Method, an Incremental Waterfall Methodology, when headed in the wrong direction, you need only to stop the most recent increment in your project and start a new one. This prevents canceling and redoing the project from scratch. Saving you time and frustration with failed work. Another advantage of a Waterfall Method is the amount of work to put in is less overall. Each increment has a small duration until it is filled and flows over to the next. This is because the Waterfall Method is usually used for smaller projects, and the development team knows their goals from beginning to end.

C.2. DISADVANTAGES OF THE WATERFALL METHOD

One disadvantage of the Waterfall Method is it assumes each step is finished completely and to the fullest extent before you move on to the next step. The model does not allow you to head back to any earlier steps. This makes it difficult to edit any part of development that was not thought through thoroughly in the beginning and now needs a change.

C.3. ADVANTAGES OF THE AGILE METHOD

Some advantages of working with the Agile Methods include:

- Accurate requirements that customers can adjust as needed during the project development.
- Frequent user engagement and communication.
- No writing of requirements in detail, which reduces development time.
- Code reuse, to save time writing up new code.
- Constant testing and focus on quality.
- Risk mitigation to search for and handle potential risks.

C.4. DISADVANTAGES OF THE AGILE METHOD

A disadvantage of the Agile Method is the fact that it is more of a set of guidelines than an actual development model. It is more used to enhance methodologies. Another disadvantage of Agile Methodology is the rush to create high-quality code and less documentation. Documenting the project process is very important, the Agile Method focuses more on getting the job done before documenting.



C.5. BEST SUITED

After deep research and consideration, M2G Consultants agree that the Waterfall Method is best suited for the American Video Game Company. Although the Agile method would do well with the American Video Game company, the Waterfall method will be much better considering the CRM requirements of the company. There will not be many changes needed during development. Requirements, design, implementation, verification, deployment, and maintenance should be a breeze with the CRM requirements given to our company before this proposal.



D. DESIGN

The following sections provides insight into M2G Consultants proposed CRM system design. Provided below is a Storyboard image of our sleek ordering process, and a Graphical User Interface (GUI) design for our straightforward ticketing system.

D.1. ORDER MANAGEMENT STORYBOARD

This Storyboard provides the process of users placing new orders through our user-friendly customer portal.



Figure 1: Order Management Storyboard



D.2.TICKETING SUPPORT SYSTEM GUI MOCKUP

Presented below is a GUI form mockup of our Ticketing System. You will also find it's GUI Control Mapping table below it that indicates where the GUI components point inside the application.

Figure 2: Sample Ticketing Support System GUI Mock-up

Ticketing Support System GUI Control Mapping			
ID	Control	Property	Data Source
1	Textbox	Upon clicking inside box, user enters title of ticket	Internal Variable
2	Drop-Down List	User selects ticket type from drop-down list	NA
3	Drop-Down List	User selects severity of ticket from drop-down list	NA
4	Drop-Down List	User selects request type from drop-down list	NA
5	Textbox	User provides description of issue needing support	Internal Variable
6	Drag-and-drop box	User drags supporting documents into drag-and-drop box for uploading	Database
6	Upload box	User clicks box to upload supporting documents	Database
7	Button	User submits filled out form into ticketing system for further support.	Database



E. TESTING

Testing scenarios will be provided within this section. Three separate functionality types will be tested from our proposed Customer Relationship Management proposal.

E.1. FUNCTIONAL BLACK BOX TESTING

Below we will be using the functional black box testing method. This means we will have a software tester outside of our company, with no knowledge our system, evaluate the functionalities from an end-user point of view. Focusing on functional requirements of the proposed CRM system.

E.1.1. ORDER MANAGEMENT

Requirement to be tested

To successfully have a user transaction, we will need to ensure that the order is successfully placed. Once an order is successful, the user can then receive confirmation and tracking support.

Preconditions:

A created user account that will provide the following information:

- User full name
- User mailing address
- User phone number
- User email address
- User payment method

Steps: The steps the tester must execute to test the feature.

1. Create a user account.
2. Log in to customer portal.
3. Browse store catalog.
4. View item.
5. If item is of interest, select "add to cart".
6. Proceed to checkout.
7. Verify Billing information.
8. Verify Shipping information.
9. Verify email address.
10. Confirm order.
11. Verify confirmation of order through email.
12. Verify tracking information.

Expected results:



The expected result is to receive an email verification of the order. Within the email will be information provided by user including shipping details, instructions for order updates, plus a tracking number.

Pass/Fail:

Pass

E.1.2. RUNNING REPORTS

Requirement to be tested

To successfully produce, print, archive, and export a report through the report dashboard within the toolbar of the CRM database created.

Preconditions:

User must know areas needed to auto-query a report from the system. User must have a predefined query before producing a manual queried report.

Steps: The steps the tester must execute to test the feature.

1. User must be logged in to CRM system.
2. User must have authorities to produce reports.
3. User will navigate to the toolbar at the top of the database.
4. User will locate and click on the Reports section of the toolbar.
5. User will have the choice to generate a custom report or a predefined report.
6. If predefined report is chosen, user then needs to select the areas where information is needed to be grabbed from.
7. If custom report, user then needs to provide a written query to grab the information needed.
8. Once reports are generated, user has choice to print, save, or export report.
9. If export is chosen, user selects format to export report out of system.
10. User will now be able to view produced report to help in business matters.



Expected results:

The expected result of running a report is to be able to view, print, save, and export the information needed to aid in business.

Pass/Fail:

Pass

E.1.3. CREATING SUPPORT TICKETS

Requirement to be tested

To successfully create and submit a support ticket.

Preconditions: Conditions that must be present before test case can successfully run

User must have an existing user account and know the nature of support needed.

Steps: The steps the tester must execute to test the feature.

1. User logs into customer portal with existing account.
2. User navigates account hamburger menu to find the Support section.
3. User clicks support link.
4. User chooses to create a support ticket.
5. User fills out title of ticket, chooses ticket type, selects severity, chooses request type, writes the nature of support into the description box and provides supporting documents for further analysis.
6. User then clicks on the submit button to submit ticket into the system.
7. User will then be notified by email on updates of support ticket.

Expected results:

The expected results are to provide the user easy navigation towards the support portal, easy submission of support ticket, and proper notifications of support process through email.

Pass/Fail:

Pass

