[MJ Logistics Gaming Co.]

D284 Project

[MJ Improvement]

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[Version 1.0]

Western Governors University

CONTENTS

A. INTRODUCTION

A1. INTRODUCTION AND PURPOSE STATEMENT

MJ Logistics Gaming Company has been growing fast, especially with all the new games and merchandise they're releasing. Because of this, they want to build a new web-based CRM system to keep better track of their customer interactions, sales, and internal processes. The goal is to make everything more organized and efficient, especially since they're currently juggling a lot of disconnected tools and manual workflows

A2. OVERVIEW OF THE PROBLEMS

Right now, the company is using a mix of spreadsheets, emails, and old-school databases to manage customer data. These tools are scattered across different offices and departments, which makes it hard for teams to find what they need quickly. People are repeating work, miscommunicating, or missing details altogether. The new CRM system will fix that by bringing everything into one place, automating repetitive tasks, and improving how teams collaborate.

A3. GOALS AND OBJECTIVES

Goals:

- Give everyone at MJ Logistics one place to manage customer info, orders, and contracts
- Save time by automating things like quoting and sales tracking
- Keep everything secure and easy to update as the business continues to grow

Objectives:

- Track contact and business information with fewer mistakes or duplicates
- Turn quotes into actual orders and keep track of all contracts
- Help sales teams manage pipelines, forecasts, and reporting with real-time tools

A4. PREREQUISITES

List the prerequisites, their descriptions, and future completion dates. Be sure to be clear and concise for all listed prerequisites. (You may add lines for additional prerequisites if needed.)

Number	Prerequisite	Description	Completion Date
1	Confirm Project Budget	Make sure funding is in place for CRM development.	August 10, 2025
2	Review Existing Tools	Figure out which current tools will stay or be replaced.	August 25, 2025

3	Finalize Team Roles	Decide who's leading, building, and maintaining the system.	September 5, 2025
4	Pick a CRM Platform	Choose between a pre-built tool or custom solution	September 10, 2025

A5. SCOPE

Covered:

- Managing customer contacts, sales, and contracts in one system
- Tracking meetings, orders, and follow-ups
- Creating reports and dashboards for sales and leadership teams
- Integrating with tools the company already uses, like Outlook

Not Covered:

- Anything related to game development itself
- Public websites or eCommerce platforms
- Major changes to the company's existing hardware setup

A6. ENVIRONMENT

Front-End:

- Responsive, user-friendly web interface compatible with all major browsers (Chrome, Firefox, Safari, Edge) and optimized for both desktop and mobile use.
- Designed using modern web frameworks such as React or Angular to ensure flexibility, maintainability, and fast load times.
- Supports role-based dashboards and dynamic forms tailored to different departments (e.g., Sales, Support, Admin).

Back-End:

- Cloud-native architecture hosted on a reliable U.S.-based cloud provider (e.g., AWS, Azure, or Google Cloud), ensuring high availability, scalability, and disaster recovery.
- Developed using secure server-side technologies (e.g., Node.js, .NET, or Python), with RESTful APIs to facilitate smooth communication between components and external services.
- Integrates with existing company systems including Microsoft Outlook, Active Directory, and legacy databases through secure APIs or middleware tools.

- Implements best-practice security standards, including data encryption (at rest and in transit), multi-factor authentication (MFA), access control policies, and regular vulnerability assessments.
- Designed to support future scalability as MJ Logistics expands its user base, product offerings, and operational needs

B. REQUIREMENTS

In the subsections below, explain your four distinct requirements, one for each subsection.

Note: All requirements must be in your own words and must interpret the requirements found in the "CRM Requirements" supporting document. Please do not copy and paste word for word from the requirements in the "CRM Requirements" supporting document.

BUSINESS REQUIREMENTS

Problem: MJ Logistics needs a better way to track conversations, meetings, and contracts with their customers and partners. Right now, it's all scattered across emails, spreadsheets, and paper notes.
Solution: The new CRM will act as the central hub where employees can log visits, meeting notes, and contracts. Everything will be stored in one place with an easy search function and workflows that help people follow up on tasks without dropping the ball

USER REQUIREMENTS

Problem: Different employees at MJ Logistics need different levels of access depending on their roles, but the current system doesn't handle that well.
Solution: The CRM will let users log in with their existing work accounts (Active Directory) and give them the right access based on their role. This means sales reps, managers, and support staff will only see what they need—and nothing more

FUNCTIONAL REQUIREMENTS

Problem: Creating and sending quotes is slow and manual, which delays orders and frustrates customers.
Solution: The new system will allow users to build quotes based on up-to-date inventory and pricing, apply taxes and discounts, and then convert that quote into an order with just a few clicks. It'll also support different currencies and include electronic signing.

NON-FUNCTIONAL REQUIREMENTS

Problem: The company doesn't want to lose old records or data when things are updated or deleted.
Solution: The CRM will include versioning and audit trails. That means any time someone makes a change, there will be a record of what changed, who did it, and when. Plus, deleted data won't disappear—it'll just be hidden until someone with the right access restores or permanently deletes it.

C. SOFTWARE DEVELOPMENT METHODOLOGY

Examine the Agile methodology and compare it to other software development methodologies.

Note: All subsections are required. Refer to the requirements section and rubric section of the assessment for additional information.

C1. ADVANTAGES AND DISADVANTAGES

ADVANTAGES OF THE AGILE METHOD

Describe at least three advantages of the Agile methodology and how they will benefit this project.

- **Flexible and Adaptable:** Agile lets the team make changes during development, which is great since MJ Logistics might adjust features based on what works in early testing.
- **Faster Feedback:** Agile is all about short iterations, which means users can test parts of the CRM early on and give feedback before everything is finalized.
- **Focus on Collaboration:** Agile encourages constant communication between developers, users, and business teams — helpful when working across different departments and offices

DISADVANTAGES OF THE AGILE METHOD

Describe at least three disadvantages of the Agile methodology and how they may hinder this project.

- **Requires Frequent Input:** Agile needs regular feedback from stakeholders. If the MJ Logistics team is busy or unavailable, progress might slow down.
- **Can Be Hard to Predict:** Since features evolve over time, it's harder to predict exact budgets or timelines from the start.
- **Learning Curve:** Not everyone on the team may be familiar with Agile, so there might be some bumps at first while people learn the process

ADVANTAGES OF {A DIFFERENT METHOD}

Describe at least three advantages of a different methodology and how they will benefit this project.

- **Clear Plan from the Beginning:** Waterfall sets a strict structure up front — perfect for teams who want a detailed roadmap before starting.
- **Easy to Track Progress:** Each phase is completed before moving to the next, making it easier to check off milestones and measure how far along the project is.
- **Less Stakeholder Involvement Needed Daily:** Since Waterfall is more rigid, MJ Logistics wouldn't need to be as involved during development.

DISADVANTAGES OF {A DIFFERENT METHOD}

Describe three disadvantages of a different methodology and how they may hinder this project.

- **Lacks Flexibility:** Once a step is finished, it's hard to go back. That's a problem if business needs change mid-project — which can definitely happen in fast-growing companies.
- **Delayed Feedback:** Users don't get to see or use the product until the very end. If the final result doesn't work as expected, it's too late to fix easily.
- **High Risk at the End:** All the testing and changes happen late in the timeline, so mistakes or issues might not show up until it's costly to fix them

C2. BEST SUITED

Describe why the Agile methodology is the best software development methodology for this project, including specific examples to justify your claims.

Or

Provide the details of a different development process and outline why you have selected it and how it is better suited for this project, including specific examples to justify your claims.

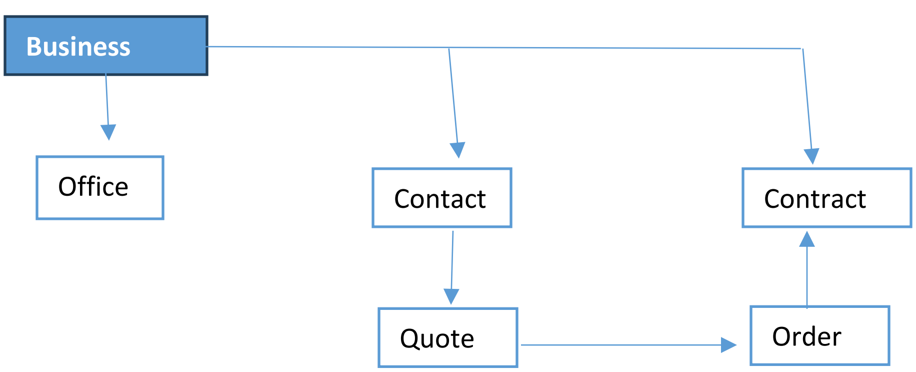
- Agile is the better fit for MJ Logistics' CRM project because the company is growing fast and might need to adjust its priorities as it goes. With Agile, they can test small pieces of the CRM with real users, gather feedback, and make improvements early. For example, if the sales team realizes they need a better way to track follow-ups, that can be added without starting over. Agile also works well with remote teams and encourages continuous improvement — which lines up perfectly with how MJ Logistics is structured.

D. CREATE TWO REPRESENTATIONS OF THE SOFTWARE SOLUTION

Note: You may add subsections here to fit the needs of the solution. At least two different representations of your design need to be present.

REPRESENTATION 1

Provide the first representation of the application (e.g., storyboard, flowchart, UML diagram, ERD, GUI, etc.) and a brief description of the representation.



Entity Relationship Diagram (ERD)
To keep track of all the data and how it's connected, I made an ERD. This shows how businesses, contacts, orders, and contracts are all tied together in the system. It helped me picture how information flows between parts of the CRM.

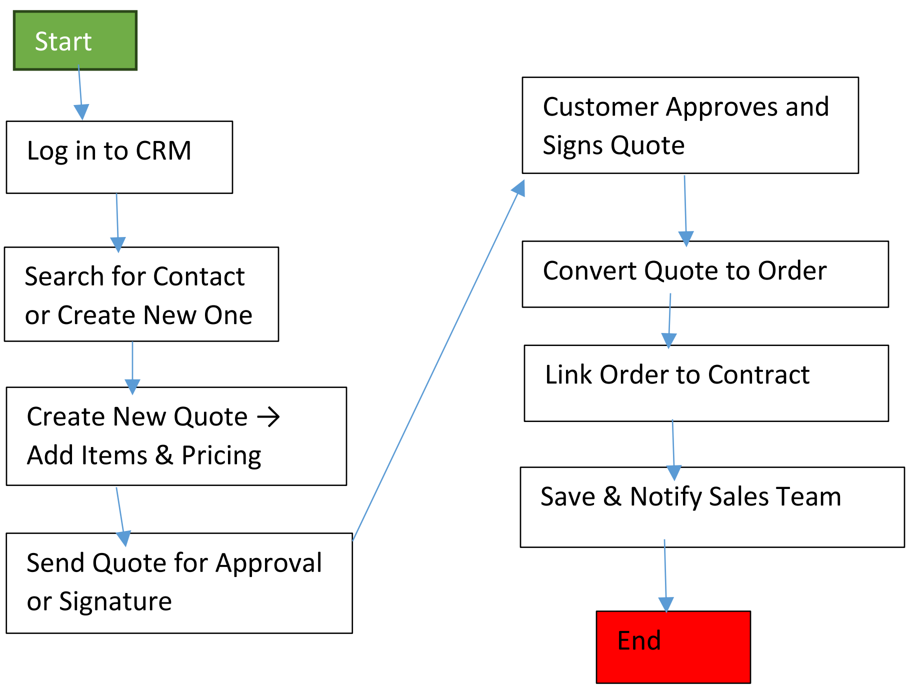
Main relationships I focused on:

- A business can have multiple contacts and offices
- A contact can be connected to more than one business (if they switch jobs or represent more than one group)
- A quote becomes an order, and that order is linked to a contract
- Users have specific roles that control what they can see or do

This diagram helps the team understand the structure before building anything.

REPRESENTATION 2

Provide the second representation of the application (e.g., storyboard, flowchart, UML diagram, ERD, etc.) and a brief description of the representation.



Flowchart

I made a flowchart that walks through how a typical user might use the CRM. I wanted to show how the system helps them move through a task — like turning a quote into an order — step by step.

What the flowchart includes:

- User logs into the CRM
- Searches for or adds a new contact
- Creates a quote using current inventory and pricing
- Sends the quote for approval and customer signature
- Once signed, converts the quote into an order
- CRM links the order to a contract and updates the contact's history

This helped me understand how all the features work together and what the user experience would be like from start to finish.

E. TESTING

TEST NAME 1

Repeat Contact Prevention

Requirement to be tested: Contacts should not be repeated when entered into the system
Preconditions: Conditions that must be present before the test case can successfully run. • User is logged in with permissions to add contacts

• A contact named "Polly Phillips" already exists
Steps: The steps the tester must execute to test the feature. 1. Go to Contacts page. 2. Click "Add New Contact" 3. Enter name: "Polly Phillips" 4. Enter the same email address as the contact that already exists in the system.
Expected results: Expected results and any side effects such as updating a database, writing to a file, etc. A warning should appear stating that the contact already exists and prevent the new contact from being saved and overwriting the existing contact.
Pass/Fail: Explain why the test case passed or failed. The results can be compiled and used to determine if the application is ready for delivery or release. Pass! The system was able to identify the duplicate contact and prevent entry/ overwrite.

TEST NAME 2

Forecast Report Creation

Requirement to be tested: • Users should be able to create, save, and reuse custom sales forecast reports
Preconditions: Conditions that must be present before the test case can successfully run. • User has access to the Reporting module • Sales data is available in the system for the past quarter or selected allotted time period.
Steps: The steps the tester must execute to test the feature. 1. Go to the Reporting section. 2. Select “Forecasting”. 3. Set filters for region and product category. 4. Generate the report 5. Click “Save” and give it a name like “Forecast 234- West” 6. Log out of system then relog in and click “Saved Reports”.
Expected results: Expected results and any side effects such as updating a database, writing to a file, etc. • The saved report appears in the user’s account and loads the correct filters and data when reopened
Pass/Fail: Explain why the test case passed or failed. The results can be compiled and used to determine if the application is ready for delivery or release. Pass! The user was able to create, save, and reuse a forecast report for the selected region without an issue.

TEST NAME 3

Update Contact Preference

Requirement to be tested: • Users should be able to update their own marketing and contact preferences.
Preconditions: Conditions that must be present before the test case can successfully run. • End user has a login and access to their profile settings • Contact preferences are enabled in the user interface
Steps: The steps the tester must execute to test the feature. 1. Log in as the user "Johnny Cash". 2. Go to Account Settings > Contact Preferences. 3. Deselect "Marketing Emails" and instead check "SMS updates" 4. Click "Save" 5. Refresh page.
Expected results: Expected results and any side effects such as updating a database, writing to a file, etc. • Changes are saved and show in the user profile. CRM updates backend settings.
Pass/Fail: Explain why the test case passed or failed. The results can be compiled and used to determine if the application is ready for delivery or release. Pass! Preferences were saved by the system and displayed "Success" message.