Customer Relationship Management System Proposal

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| [American Video Gaming Company] |
| Software Project |
| [C188 Task Assement ] |

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# Introduction

Customer Relationship Management, CRM, is a process in which a business or other organization administers its interactions with customers, typically using data analysis to study large amounts of information. The benefits for a business to use a CRM are:

* + Connect with your ideal customers
  + Proactively manage the customer relationship.
  + Reduce the cost of sales.
  + Increase employee productivity.
  + Deliver better customer service.
  + Improved customer retention.

Finally, four different CRM systems are used; Analytical, Operational, Collaborative, and Strategic.

# A.1. Purpose Statement

The purpose of this document is to define the requirements for a new CRM solution for AVGC.

# A.2. Overview of THE PROBLEM

AVGC ’s sales have increased by over 42% in the last two years. AVGC has outgrown its current CRM system and is struggling to meet customer demands. AVGC’s IT infrastructure has become obsolete and fragmented causing potential security risks. Its employees use different business processes across different workplaces and different custom-built tools that have become disjointed. If AVGC does not resolve these issues with a new CRM system, as the business continues to grow, AVGC will eventually suffer growth, customer retention, and top industry ranking. Then finally AVGC will go out of business.

# A.3. Goals and Objectives

The goals and objectives for the project and solution are the following:

Scaleability

To be robust.

To have enhanced security

To allow interaction and integration between vendors, customers, and employees.

Controls access to features based on roles and permissions for the company’s users, both internal and external.

Have an identified support and maintenance structure.

Have an identified licensing model and defined ownership rights regarding any custom development.

# A.4. Prerequisites

Outline any aspects that need to be in place before the design, development, and implementation of the project proposed in this document. Be sure to be clear and concise for all listed prerequisites. Also, clearly outline why each prerequisite is needed.

*Note: If no prerequisites are needed, include a paragraph justifying why there are no prerequisites.*

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Prerequisite | Description | Completion Date |
| 1 | Workstation | All workstations must be running Windows, version 21H2 or Mac OS 12.0+ | 30 Jan 2023 |
| 2 | SQL | MS SQL Server 2022 | 28 Feb 2023 |
| 3 | Cloud Soultion | MS Azure | 30 Mar 2023 |
| 4 |  |  |  |

# A.5. Scope

Provide a brief overview of what the proposed solution will cover and what the proposed solution will not cover. It is important to set clear boundaries for the project.

The proposed CRM solution will cover the following items:

* + 2,000 users will be accessing the system, but 500 users accessing the system at peak time.
  + Contracting System
  + OS and Browser Support
  + Ticketing System
  + Hosting

The proposed CRM solution will not cover the following items:

* + Archive feature
  + Contact Management
  + Will not be using an active directory server.
  + Order Management
  + Forecasting

# A.6. Environment

The IT and hardware environments that the solution will be deployed are the following:

* Latest Chrome and Chromium
* Latest Firefox
* Microsoft Edge
* Safari 15
* Mobile & Tablet
* iOS16 Safari
* iOS16 Third-Party Browsers (Chrome and Firefox)
* Android 13 Chrome
* SQL Server 2019
* Microsoft Azure (subscription based - expandable, reliable, and safeguarded).

# Requirements

These are the five requirements I will be discussing below:

* + Hosting
  + OS and Browsers Support
  + Ticketing System
  + Contracting
  + Users

# Business Requirements

Provide a brief introduction to the business requirements for the proposed system.

1 sentence what is the requirement is

3 sentences per requirement

Contracting Requirement

# User Requirements

Provide a brief introduction to the user requirements for the proposed system.

The new system must accommodate 2,000 users as well as 500 users logged in at one time.

# Functional Requirements

Provide a brief introduction to the functional requirements for the proposed system.

Ticketing System Requirement

Hosting Requirement

# NonFunctional Requirements

Provide a brief introduction to the nonfunctional requirements for the proposed system.

OS and Browser Support Requirement

# SOFTWARE DEVELOPMENT METHODOLOGY

I will discuss below the advantages and disadvantages of the Waterfall and Scrum methods. Then I will be discussing which methodology is best suited for AVGC.

# Advantages of the waterfall method

The advantages of the waterfall methodology:

* Simple and easy to understand
* Predictability
* Clear defined steps
* Each step has specific deliverables and a review process.
* Stability
* Works well in a smaller project where requirements are known in advance.

# Disadvantages of the waterfall method

The disadvantages of the waterfall methodology:

* Lack of flexibility when requirements change.
* Big Design Up Front
* Do not handle unclear or incomplete requirements very well.
* No working program is produced until later during the lifecycle.
* High risks and uncertainty.

# Advantages of the SCRUM Method

The advantages of Scrum methodology:

* Reduced Development Time.
* Encourages Code Use
* Risk Mitigation
* Flexibility to requirement change
* Frequent customer feedback and involvement
* Constant testing
* Promotes high-quality code and eases integration issues

# Disadvantages of the Scrum method

The disadvantages of Scrum methodology:

* Scope Creep
* Requires more skilled workers
* Large teams may resist changing
* Unpredictability
* Cannot handle larger systems

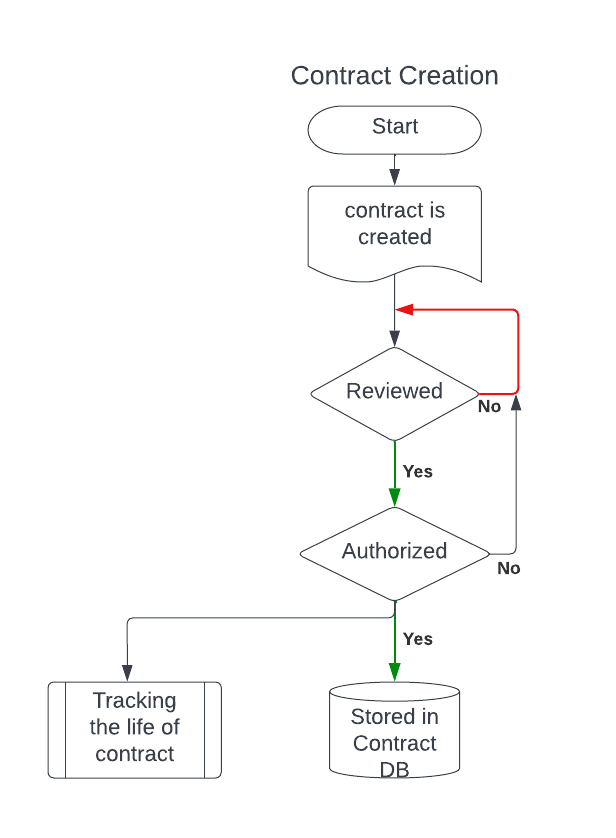
# best SUITED

The best-suited methodology for AVGC to use is the Scrum method. Currently, AVGC uses the Waterfall method, but the main disadvantage of the Waterfall is resistance to any required change. If a requirement change occurs during any of the phases in Waterfall, AVGC needs to wait until to phase is complete and go back to the beginning. This will cause a loss of time to develop and money. Whereas the Scrum method on the other hand embraces change. Scrum runs on two-week sprints, so if AVGC needs a change in the requirements it can be done on the next sprint. This will save time and money for AVGC. Also with Scrum methodology, as the application is being built it can be tested simultaneously, reducing bugs and costly delays. Finally, with Scrum methodology, AVGC can have a working application early to integrate with their current system.

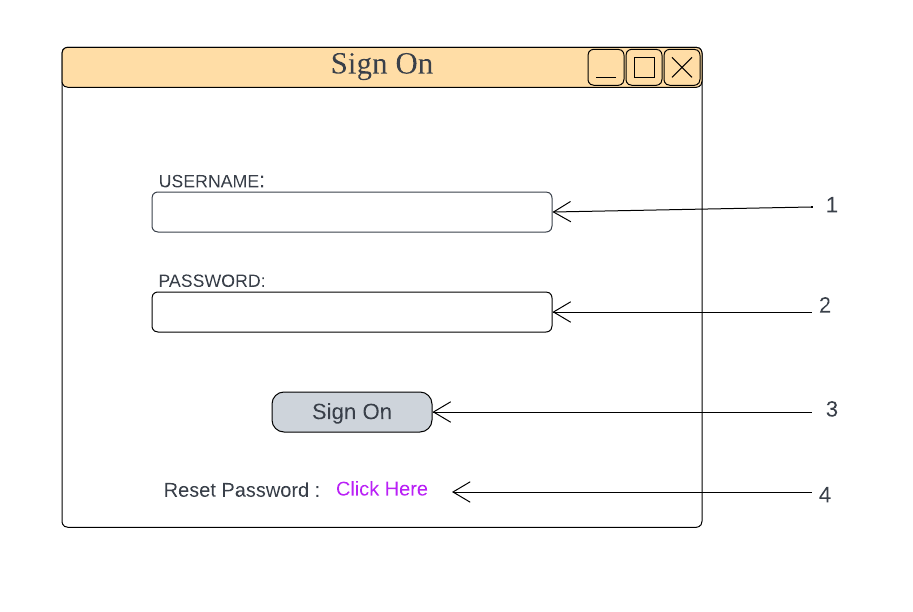
# Design

In this section, I provided 2 diagrams that outline the function of 2 components of the AVGC system. First, a flowchart is provided which describes the process of adding a contract to the database. Second, mock up GUI describing the AVGC login screen that employees will see.

# Flowchart of Contract Creation



# AVGC EmployeE Login GUI



|  |  |  |  |
| --- | --- | --- | --- |
| GUI Control Mapping | | | |
| ID | Control | Property | Data Source |
| 1 | Textbox | On click, user = input( ) | User input |
| 2 | Textbox | On click, user = input( ) | User Input |
| 3 | Button | On click, send username and password to active directory module. | Active Directory Module |
| 4 | Link | On click the user goes to another page to recover user’s password. | Link to another secure page |

# Testing

The proposed system performs the following tests to ensure proper performance, compatibility, and functionality. E1 Performance test focuses on the performance of AVGC’s system to ensure it can handle the required amount of simultaneous users listed in the required documents. E2

The E3 Compatibility test focuses on system compatibility with MS Edge on Windows 10 or Safari on macOS 12+.

# Testing Type

Provide a brief introduction paragraph.

# Performance Test

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| Requirement to be tested  The system must be able to handle 2,000 users, but scalable up to 500 users concurrently at peak time. |
| Preconditions:  Have a program ready to stimulate users logged onto the system, and especially during peak times |
| Steps: The steps the tester must execute to test the feature.   1. Run the program to stimulate 100 users on the system. |
| Expected results: Expected results and any side effects such as updating a database, writing to a file, etc. |
| Pass/Fail: Mark whether the test case passed or failed. The results can be compiled and used to determine if the application is ready for delivery/release. |

# System Testing

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| Requirement to be tested  Hosting |
| Preconditions: Conditions that must be present before test case can successfully run |
| Steps: The steps the tester must execute to test the feature. |
| Expected results: Expected results and any side effects such as updating a database, writing to a file, etc. |
| Pass/Fail: Mark whether the test case passed or failed. The results can be compiled and used to determine if the application is ready for delivery/release. |

# Compatibility Testing

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| Requirement to be tested:  System compatibility testing with latest Safari or Edge browser. |
| Preconditions:  Workstations must be running Windows 10, Version 21H2 with Edge or MacOS, version 12+ with Safari. |
| Steps:   1. Navigate to https://ew3.avagc.com 2. Enter the following credentials: Username: Tester Password: Pa55W0rd23 3. Verify the AVGC’s internal homepage loads correctly. 4. Navigate to create contract 5. Enter the sample contract information. |
| Expected results:  The employee of AVGC should be able to login in successful onto the system, navigate to create contract page, and then finally enter the sample contract information data. Once the contract is submitted, it should populate the Contracting database. |
| Pass/Fail:  The compatibility test should pass where the browser should load the AVGC portal with no errors or security certificates issues. |

# Sources

“Customer Relationship Management.” *Wikipedia*, Wikimedia Foundation, 14 Oct. 2022, https://en.wikipedia.org/wiki/Customer\_relationship\_management.

Stephens, Rod. *Beginning Software Engineering*. Wrox, a Wiley Brand, 2015.

“The 6 Ways CRM Helps Improves Business Performance for Organizations.” *Salesforce.com*, https://www.salesforce.com/crm/what-is-crm/how-crm-improves-business/.