Advanced Video Game Company

Customer Relationship Management Offer

Software Engineering Performance Assessment

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Version 1.0

• INTRODUCTION

The popular Advanced Video Game Company has inquired for a new design of a CRM system for their business. The company is rapidly outgrowing their current standard and needs an overhaul to keep up with the growing demand for activity management, reporting, and other applications such as client contacts. In the following, this proposal will discuss a potential software solution to meet the company's needs.

A.1. PURPOSE STATEMENT

The purpose of this new system is to improve AVGC's business practices and to make their CRM system more scalable and reliable while meeting the defined objectives and requirements.

A.2. OVERVIEW OF THE PROBLEM

AVGC has seen a 42% growth in the past two years and are unable to keep up with the increased demand. They currently have decentralized processes, outdated systems which can lead to security breaches, and different service tools which they would like to do away with and use one primary tool. With outdated systems and processes, there is a greater risk of data loss and/or compromise which could lead to more potential issues and put the company out of business.

A.3. GOALS AND OBJECTIVES

The primary goals and objectives of this proposed solution include:

- Accurate control of data access, workflow, and editorial control based on user permissions.
- Systems can be enhanced and scaled.
- Processes must be easy to use, intuitive, and user friendly
- Security should be robust.
- consolidates all contact and business information

A.4. PREREQUISITES

Prerequisite start times can be concurrent and maintain the set durations

Number	Prerequisite	Description	Completion Date
1	Operating systems and engines	Must ensure all user desktops and laptops have the latest operating systems and web browser for maximum support	1 week duration
2	Licensing	Acquire licensing for all users in order to install the off the shelf software	2 week duration

3	Process gathering	compile all current processes and systems in order to consolidate and update them through the new software	2 week duration

A.5. SCOPE

These scope of this proposal will cover:

- Setting up user access control, permissions, and settings
- User training will be given when the system is available
- Consolidating all current processes into the new software
- Creation of a separate customer database for users to interact with for business practices
- Sales and customer reporting will be implemented as an updated process
- Desktop and laptop application

Some items that will not be covered in the scope of the proposal:

- Full automation of any single business process
- Mobile application.
- Computer hardware/network upgrades

A.6. ENVIRONMENT

- Most recent versions of Chrome, Firefox, Safari, Edge.
- Apple mac OS 13+ preferred
- Windows 10 or windows 11

This Salesforce software is a cloud based solution that will require a proper network connection and up to date web services to be able to successfully integrate the system. This will be beneficial for AVGC as they can outsource the set up databases and cloud hardware to Salesforce and they will be able to handle the rest. Security and permissions will also be taken care of by Salesforce as they have a security policy for users and user accounts under their licensing.

REQUIREMENTS

Several requirements for the new CRM system are as follows:

- Scalability/Efficiency
- Control of user access to data and permission setup
- Reporting
- Contact management
- Single point of contact for remote and in house users (hosting)

BUSINESS REQUIREMENTS

AVGC needs their new CRM to be able to scale up to the increasing demand of new customers and services. Salesforce is a prime choice for this requirement as it is a cloud based solution which can provide as much resources as needed to keep up with the rate of growth that AVGC gets which has been 42% in the last two years. This is achieved by being able to add more databases and entries into those databases as entities increase all while still maintaining a user friendly interface to interact with.

Along with being scalable, AVGC would like to implement improved contact management. They would like to be able to assign contacts to one or more businesses while also having those contacts maintain one or more roles if needed. The proposed software can solve this problem directly providing a contact dashboard for storing all contact information and linking them to other contacts and businesses. So one contact could be under business A and business B, while predetermined roles can be assigned to each contact allowing them to have multiple roles for multiple businesses simultaneously.

USER REQUIREMENTS

The new CRM system needs to accommodate access to up to 2,000 users with a current maximum peak of 500 users simultaneously active in the system. This includes all of the remote and local users that will need access. Salesforce provides that singular point of contact by establishing a server side database that all users can access from anywhere as long as they have the supported browsers and operating systems.

AVGC also requires that data access and user permissions must be implemented to maintain integrity and security of customer information. Salesforce accomplishes this by allowing users to create user accounts with predefined permissions and access control set by the admins of the program. For example, if a user needed specific customer or client information they would need to log in to the program with a user account that has been given the rights to access that information they need. Otherwise they will not be able to access it.

FUNCTIONAL REQUIREMENTS

The fifth requirement covered is reporting which AVGC would like to have both predefined and custom reports on all data in the system. Salesforce comes with a prebuilt reporting system which allows users to create full reporting dashboards. These dashboards will have the functionality of creating custom reports with advanced queries on any and all data given within

the program. This functionality should meet or exceed the expectations of AVGC and facilitate the ease of use with other processes.

SOFTWARE DEVELOPMENT METHODOLOGY

The company has selected the waterfall software development methodology for this project. Below will discuss a few advantages and disadvantages of both waterfall and the agile method as it is another popular method that could be implemented in this case.

ADVANTAGES OF THE WATERFALL METHOD

Several advantages of the waterfall method include:

- It uses a clear structure with a simple, defined set of steps to follow.
- The end goal is agreed upon at the start. Which will prevent getting hung up on a lot of the details as the project proceeds.
- Information is easy to pass along through the different steps as everyone knows where the last step ends and the next begins.

DISADVANTAGES OF THE WATERFALL METHOD

Several disadvantages of the waterfall method include:

- Changes become difficult to implement because the entire project and scope will need to be reworked.
- Delays testing until after completion. leaves marginal room for error as more time will be needed to redesign the project if errors do occur.
- Excludes the client or end user. Best for internal applications as clients like to be involved with the project.

ADVANTAGES OF THE AGILE METHOD

Several advantages of the agile method include:

- Adaptability as the time frame between steps is generally smaller, changes can be made quickly and effectively.
- Improvement is continuous as the agile method promotes swift feedback and iteration to produce a better deliverable.
- Less preparation time to begin the project as details can be worked out as the project progresses.

DISADVANTAGES OF AGILE METHOD

Several disadvantages of the agile method include:

- Goals can vary during the lifetime of the project. This can cause scope creep by not having the goals locked in at the beginning.
- Poorer documented improvement as project improvements are primarily reactionary after the fact.

- The project becomes less predictable when requirements and goals change over time. Clients may want something completely different when the whole project has been finished.

- BEST SUITED

In the case of AVGC when compared to the agile methodology, waterfall would be best suited for this project as the goals are clear and defined which allows the creation of simple linear steps to reach the desired solution. Because this project is internal for the company, there won't need to be as much reporting to end users or clients which is ideal for the waterfall method. The planning phase would be relatively simple as far as choosing databases, deciding specific user permissions, and how they will host the software. When these tasks are decided, the company can then form a detailed strategy on how they would like to execute them since there will not be much that will need to be changed once it is finished. AVGC isn't looking to make any major changes to the overall system, so using a more structured format will keep the project focused and prevent any unnecessary roadblocks down the road. During implementation is where the actual building of databases, networks, and contact lists will take place. once the project has been finished, it can either be improved upon or closed out if it is satisfactory.

• DESIGN

The following images will show different design templates on how salesforce will be created and implemented.

• STORYBOARD OR FLOWCHART (CHANGE TITLE TO FIT NEEDS)

The image below illustrates a rough flowchart example of how a user would login and access the system interface. They would be able to generate reports and add or delete customers/contacts.

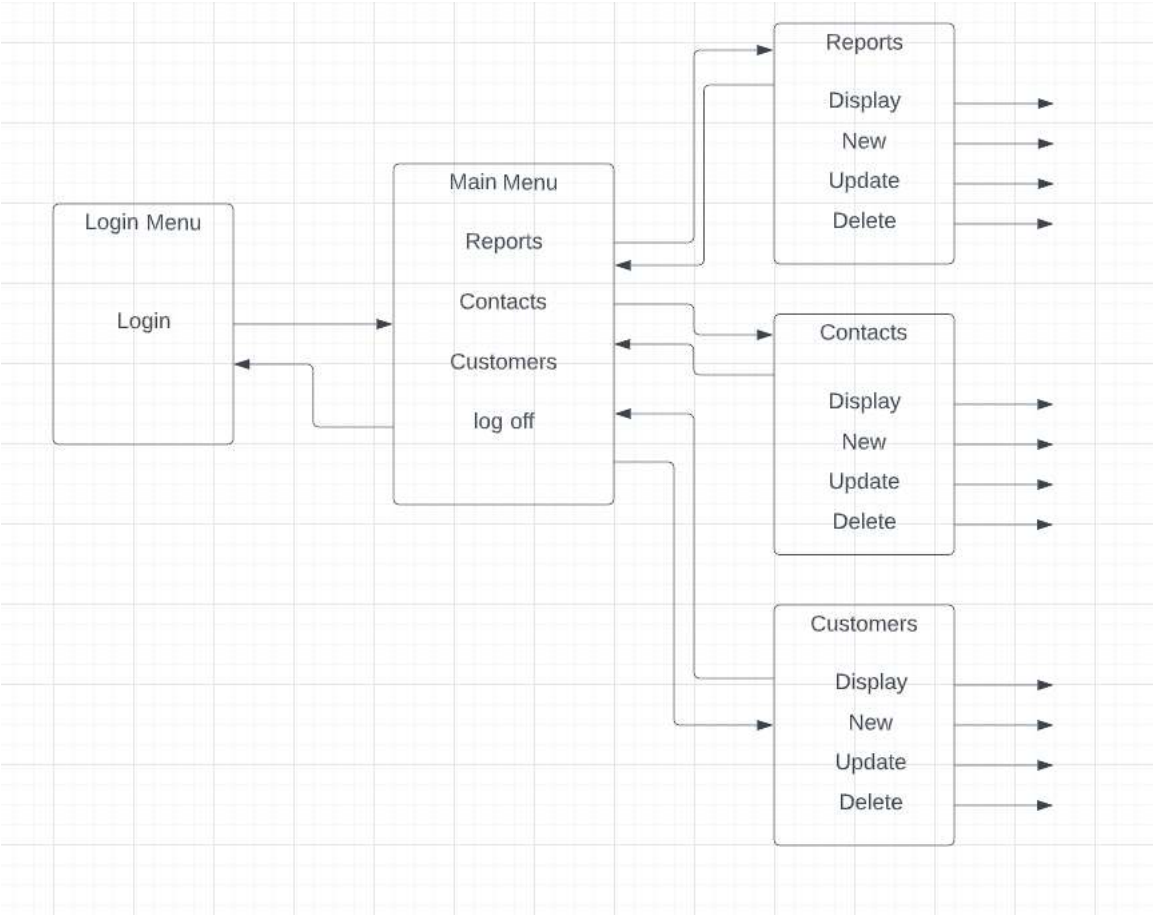

Figure 1: Sample Storyboard

- UML DIAGRAM ASSIGNING ROLES AND CONTACTS TO BUSINESSES

This diagram depicts an earlier stated example that AVGC would like to accomplish in regards to assigning multiple roles to contacts while also being able to assign multiple contacts to businesses. Databases like this are able to be created using Salesforce.

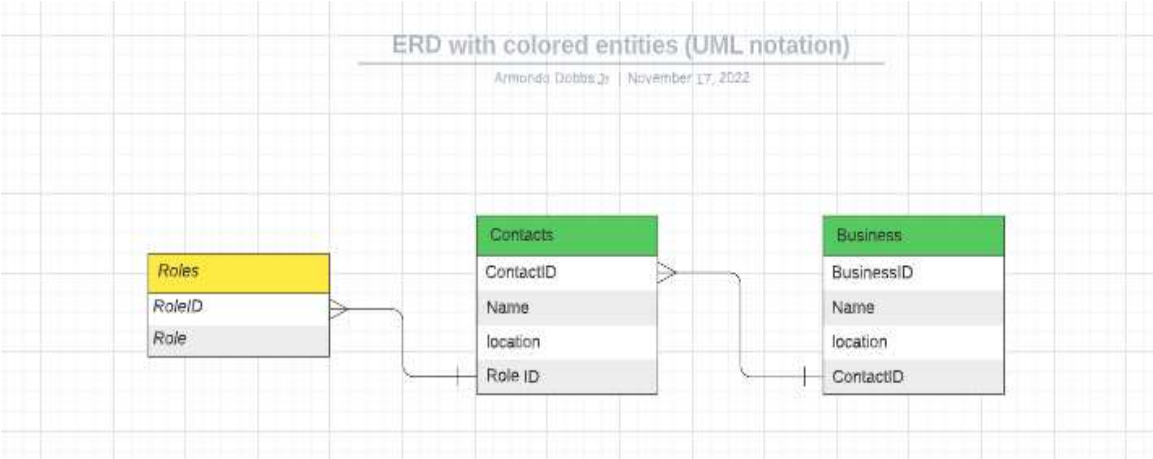

Figure 2: Sample Database

TESTING

USER TESTING

Three tests are going to be performed once the system is up and running to ensure that it meets the baseline requirements listed in the above sections. These tests include:

- Stress tests to check for limits in system performance.
- Functional test to see if the system can generate reports as it was designed to do.
- Usability test to make sure users can navigate the various pages and check for basic bugs.

FUNCTIONALITY TEST

The requirement that will be tested in this case is the system's ability to generate reports from the reports dashboard.
Preconditions: The databases must be built already and report functions interface must be developed.
Steps: The steps the tester must execute to test the feature. • Log in to the program and go to the reports page. • Select the data that the user would like to see on the report. • Generate the report. • Verify that the correct data has been displayed on the report as the user requested.
Expected results: The data that the user requests should be properly displayed in the report when it is generated.

Pass/Fail: PASS

- STRESS TEST

This test will check to see if the user peak time requirement will be satisfied with the new system. It should be able to handle 500 simultaneous users logged in during a given period.
Preconditions: Will need a minimum of 500 users able to login with valid user accounts created.
Steps: The steps the tester must execute to test the feature. • log 100 users in to the system • Verify that the system is performing as expected • While the first 100 are logged in, log 200 more users in and check the performance levels • If still performing as expected, log the final 200 users in and determine if the system is behaving as it should
Expected results: All 500 users will be able to log in without the system crashing or losing performance.

Pass/Fail: PASS

- USABILITY TEST

The requirement that will be tested in this case is the general usability of the program. It should be easy to use, robust, and not have any bugs.
Preconditions: The system must be in the completed phase and integrated so users can explore the entire program and make sure it is navigable.
Steps: The steps the tester must execute to test the feature. • Log in to the system. • Navigate through the various tabs and pages of the system. • Check to see if any pages do not work or have any errors. • Successfully log off. • Check logs and make sure no data was lost.
Expected results: Users should be able to log on and off and use the program as expected without losing any important data.

Pass/Fail: PASS

- SOURCES

No sources were paraphrased, quoted, or summarized in this assessment.