

Part A Rubric

Note: This group mark does not represent your mark. Your individual mark is derived from the peer reviews

Group Mark: 6.47/10

Item	Unsatisfactory	Pass	Credit	Distinction	High Distinction
Part A: Company and Client project objectives	<div>A basic summary of the case study is given or goals and objectives are irrelevant or incorrect</div> <div>0</div>	<div>A summary of the case study is given without further expansion of possible goals and objectives, or the goals and objectives are vague and not aligned with the case study and the fictional company. A lack of understanding of the fictional company's role is present, or too much focus is on the fictional company instead of the client and the case study demonstrating a lack of understanding of the case study requirements.</div> <div>0.5</div>	<div>A discussion of the goals and objectives of the case study, and an introduction of the fictional company without an understanding of its position towards the case study.</div> <div>0.65</div>	<div>A relevant outline and discussion of the goals and objectives of the case study given, while also outlining briefly the position the fictional company has towards these, demonstrating a very good understanding of the case study and student's role.</div> <div>0.75</div>	<div>A clear, focused and relevant outline and discussion of the goals and objectives of the case study given. Along with a clear position of the fictional company towards the case study, demonstrating an excellent understanding of the case study, the student's role, and objectives of the client.</div> <div>1</div>
Part A: Email Questions	<div>Questions are simple or closed questions, and demonstrate a lack of understanding of the project case study.</div> <div>0</div>	<div>Questions are sensible and have identified basic information not present in the case study to complete a feasible project proposal.</div> <div>1</div>		<div>Questions are professional, demonstrate comprehension of the project case study, and show identification of crucial information not present in the case study to complete a feasible project proposal.</div> <div>2</div>	

Item	Unsatisfactory	Pass	Credit	Distinction	High Distinction
Part A: Email Professionalism	Email does not have a signature, uses jargon, does not introduce themselves or is not an email. 0	Email is informal, does not show empathy toward the client and is essentially just asking questions. 0.25		Email is professional, with email signature, no use of jargon, and demonstrates empathy and professionalism towards the client. 0.5	
Part A: Functional Requirements	Functional requirements given without all of the following for each: a functional statement, a summary of the function, and justification. Many functional requirements are incorrect, incomplete or irrelevant. 0	An outline of functional requirements with each consisting of a functional statement, a summary of the function, and vague or irrelevant justification for the requirement towards the goals and objectives of the project. Some functional requirements identified are not relevant to the project. 1.5	An outline of functional requirements with each consisting of a functional statement, a summary of the function, and okay justification for the requirement towards the goals and objectives of the project. 2	A set of functional requirements with each consisting of a functional statement, a summary of the function, and justification for the requirement towards the goals and objectives of the project. All requirements relevant to project case study. 2.5	A comprehensive set of functional requirements with each consisting of a functional statement, a summary of the function, and excellent justification for the requirement towards the goals and objectives of the project. All requirements relevant to project case study. 3
Part A: Non-Functional Requirements	Only a list of non-functional requirements are present, or list is limited - less than five, or only areas of functional requirements are present, and actual requirements are not defined. 0	A set of non-functional requirements are present. Each requirement discussed and justified in relation to project case study. 1.5	A set of non-functional requirements are present. Each requirement discussed and justified in relation to project case study and given in a quantitative measure. 2.0	A comprehensive set of non-functional requirements are present. Each requirement discussed and justified in relation to project case study. Discussion on how they will be achieved and given in a quantitative measure is present. 2.5	AA comprehensive set of non-functional requirements are present. Each requirement discussed and justified in relation to project case study. Success factors for each requirement is also discussed and given in a quantitative measure in addition to how they will be achieved. 3

Item	Unsatisfactory	Pass	Credit	Distinction	High Distinction
Part A & B: Professionalism in Written Communication	<p>Not all required sections are present or clearly outlined. There are considerable spelling and grammatical mistakes. Overall look of the document is not at a professional standard. The document is missing many relevant sections of a basic professional document (executive summary, introduction, conclusion). The executive summary is more an introduction to the project than a summary of the content within the document.</p> <p>0</p>	<p>All required sections are present and clearly outlined. There are numerous spelling and grammatical mistakes. Overall look of the document is at a professional standard. All relevant sections of a basic professional document are present (executive summary, introduction, conclusion) The executive summary provides a basic summary of the content within the report. The conclusion summarises the proposal and the recommended solution.</p> <p>0.25</p>	<p>All required sections are present and clearly outlined. The writing is in a professional tone and not an academic tone, not written like an assignment. There are minor spelling and grammatical mistakes. Overall look of the document is at a professional standard. Most of the relevant sections of a basic professional document are present (at a minimum includes executive summary, introduction and conclusion). The executive summary provides a basic summary of the content within the report. The conclusion summarises the proposal and the recommended solution.</p> <p>0.32</p>	<p>All required sections are present and clearly outlined. The writing is in a professional tone and not an academic tone, not written like an assignment. Spelling and grammar is good. Overall look of the document is at a professional standard. All relevant sections of a basic professional document are present (executive summary, introduction, conclusion, references as footnotes and/or appendices [if needed]). The executive summary provides a detailed summary of the content within the report. The conclusion summarises the proposal and the recommended solution.</p> <p>0.38</p>	<p>All required sections are present and clearly outlined. The writing is in a professional tone and not an academic tone, not written like an assignment. Spelling and grammar is excellent. Overall look of the document is at a professional standard. All relevant sections of a basic professional document are present (executive summary, introduction, conclusion, references as footnotes and/or appendices [if needed]). The executive summary provides a detailed summary of the content within the report. The conclusion summarises the proposal and the recommended solution while presenting next steps.</p> <p>0.5</p>

Hi Jerome,

Thanks for your email. I've gone through the specification, it looks promising.

For your first question, the timeframe is 12 months. This coincides with our annual membership. For the budget, this is going to tender, so let's see what you come back with first.

I thought Pinnacle was a tailor made software company? Are you saying they supply hardware now also? Interesting to know.

For your final question. Sorry, but I have no idea. We have gone to tender for this sole reason. We are looking for a company that can provide the best solution possible for us.

Hope these answers are helpful.

Thanks,

Sarah

Group assignment Part A

Group 7K

by Jerome Gardiner

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EMAIL TO CLIENT

Dear Sarah Agne,

My name is Jerome Gardiner, a member of K7 project managing group at Pinnacle Software Inc. We have been tasked to provide a solution for your software problem. Currently, K7 is working on a project specifications document detailing the requirements for the solution based on the business case and structure provided to us.



We are using a guided project management process that requires us to gather information from our clients so we can address any issues proficiently. This information is usually with regards to project constraints and things that may have been missed in the project specification, and it is imperative that we gather answers to the following questions.

Ideal Question

1. What constraints are there in the development of this project in terms of time, cost, and capacity? It is important to know the upper and lower limits expected to be given in time and cost so we can make feasible estimations. We also need to know the amount of people you want the system to handle(capacity). We are also trying to understand how much growth that will be expected in the future and to design the system to become scalable enough to meet your needs.
2. Are you looking for both a hardware and software solution? Most software solutions require some form of hardware to function like servers to keep information stored in a database. When estimating the Scope and cost of this project, we need to know what hardware is in place, what you would expect as extra hardware and whether you wish to outsource to server and storage providers for this project.
3. What is your plan for migration of current data and implementation of the project? For new systems, training and planning must be put in place to transfer smoothly into the new system. For estimating the scope of a project, it must be known what forms of data need to be transferred and how you would plan to move it to create a smooth installation of the system.



Please answer these questions in a reply email with as much detail as possible so we can provide you a better software solution for your problem.

Thank you for providing us with this opportunity to work with your organization. We look forward to hearing from you.

Yours Sincerely,
Jerome Gardiner
Pinnacle Software Inc.

2021

PROJECT REQUIREMENTS SPECIFICATION

IN PREPARATION FOR: THE
HORTICULTURAL ASSOCIATION OF
AUSTRALIA
K7 PROJECT TEAM

PINNACLE SOFTWARE INC.

EXECUTIVE SUMMARY

The Pinnacle Software Inc. (PSI) is investigating the issues that the Horticultural Association of Australia (HAA) is facing. The PSI has analysed the current systems that are used by the HAA to generate and transfer information. The PSI has produced this report to formalize and detail information that it has gathered from this investigation. A new system will be required to replace HAA's current IT facilities on account of reaching operational and membership capacity.

One of the objectives of this report will be to identify both functional and non-functional requirements of the new system. The system that will be recommended must meet these requirements. This will increase efficiency of development and decrease oversight and miscommunication. This will be done for operational, membership and financial requirements.

Operational level: This system must provide interaction between roles in the current system through the generation of reports and forms. The forms include financial reports, membership status reports and formal reports. These reports are used for administration and decision making. The system must also provide necessary security by way of authorization and authentication on several levels of the business.

Membership level: Interaction between staff, administration and members is important. The system will keep necessary data on members including address and contact details. It will provide necessary forms to generate membership reports and general enquiries. It will also provide storage and distribution of promotions such as advertisements, news, magazine information and events.

Financial level: The system will securely interact with the GARD accounting package to generate financial and summary reports for administration. The system will also accept forms provided at the Secretariat and Administration levels. The administration will create these reports and send these to the GARD accounting package.

In this current system, continued increase in membership will create oversight and redundant information in many parts of the organization. A new software solution is required to congregate information and generate reports in a single unified system.

The software experts have analyzed the case and made an immediate estimate of the possible solution. The experts have stated that the solution that will be recommended will most likely be an intranet that is supported by a Database Management System (DBMS). The DBMS will form the basis of information transfer within the business. This includes operational information, membership information and financial information. The new DBMS will also integrate the information from the membership database.



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INTRODUCTION

TERMS USED IN THIS DOCUMENT:

Term	Description
HAA	Horticultural Association of Australia
PSI	Pinnacle Software Inc.
DBMS	Database Management System
DB	Database
Integrated System	A system which has the capability to work concurrent with many users.
Recovery Point Objective (RPO)	A measurement in time of how far back a system must be reverted to on failure.
System Recovery Time (SRT)	A measurement in time of how long it would take to get a system back online upon failure and reset.

The purpose of this specification document is to conduct a preliminary investigation that will be used to determine the solution to the current business problem. This can be done by understanding the objectives of both the Horticultural Association of Australia (HAA) and Pinnacle Software Inc.. The objectives can then be used to identify the functional requirements of the system. Pinnacle Software Inc. (PSI) will use this analysis to put forward a tailor-made software solution to deal with capacity and integration. This will improve the current system's ability to process applications because of membership growth.

The project management group of PSI follows a strict step-by-step project management protocol. Multiple parts of our organization are involved in this process including the marketing department. This protocol involves a detailed analysis of HAA and PSI objectives. It will also display functional and nonfunctional requirements. The functional requirements are the things the system does. The non-functional requirements are the qualities that the system possesses.

The objectives

This document provides an analysis of the objectives of each of the stakeholders. The HAA have specific objectives that will be aligned within our proposed solution. A clear

understanding about the scope of the objectives allows the project management team to shape the product requirements. This information should provide necessary insight to determine a possible software solution.

An extensive analysis of the HAA's objectives will be used to construct our objectives. The objectives are also needed to verify quality and success. The objectives are divided based upon the two major stakeholders involved, that is, the HAA and PSI. Each objective will possess an objective identification number. This will be used as references throughout this document and other corresponding documents that will be produced in the future. The PSI's objectives should be carefully aligned with the HAA's. The aligned objectives will be stated at the bottom of each of the objectives of the PSI. This is to ensure that we have a clear understanding about how we are to achieve the HAA's objectives.

The Functional and Non-Functional Requirements

Functional and nonfunctional requirements of the recommended solution will also be present in the document.

The project team has investigated the functional requirements of the software products that will be recommended to the HAA. The functions must possess certain characteristics, and these are detailed as non-functional requirements. The non-functional requirements are usually accompanied by a value. This value can be used to test whether or not the system is suitable for this case.

Each functional and non-functional requirement has been given a function number that will be used to identify each specific function. The function identification number will also accompany a detailed summary about each of the requirements. The functional requirements are particularly important in the other aspects of the project plan because it determines which solutions should be recommended. It is also important for us to determine the functions so that we can estimate the cost and effort required to finish the project.

Goals and Actions

The project specification is an essential part of this process that is required to initiate a detailed analysis of the other aspects of the project. Information stated in this document will be used as an analysis tool for the experts at our company to draw conclusions and identify possible software solutions. The major goal is to ensure that the software solutions meet the HAA's and PSI's objectives.

Here we will provide context to the problem as well as gain insight to determine a possible solution. This information will form the basis of a future design.

COMPANY AND CLIENT OBJECTIVES

HAA Objectives

Objective HAA-01: Improve Productivity

Summary: The HAA requires that it must improve its productivity. This can be provided through the application of the solution. The HAA wants guarantees that the system being produced will help speed the work rate.

Reason:

- To reduce costs and improve motivation
- Improve profits by improving work rate and reduce excessive workload.
- Reduce stress by lowering unnecessary commitments.

Objective HAA-02: Reduce Redundancy

Summary: Redundant information is produced as the result of duplicate work. The current system is causing more work than is necessary to complete tasks. Multiple submissions of reports are being generated at different locations in the business. The extra work has placed constraints on the human resources of the company. The system must reduce this type of duplication and therefore improve efficiency and accuracy.

Reason:

- To reduce duplicated information around the workplace
- Reducing redundancy will also reduce the business's cost.
- This will lead to more efficient use of human resources.
- This will improve total output of the work.

Objective HAA-03: Facilitate Growth and Capacity

Summary: The current system is outdated and stretching the company to its limits. The system is not designed to handle greater than the current intake of members. The business was also not designed to handle the growth that they are currently experiencing.

The system should be able to handle the current capacity, while also having the ability to scale. This scale will be used to design a system which will take into consideration future growth. This will ensure that the business will avoid the same

problem from generating in the future. The capacity of the system must be known before we undertake the project.

Reason:

- The capacity should be enough to facilitate growth in the short term.
- This capacity should be modifiable in the future to accommodate for growth.
- To reduce and alleviate operational burdens of future growth.
- Improve the business's mobility to grow and increase the business's transitional speed.

Objective HAA-04: Integrated System

Summary: The system is currently working in disunion, and the system must be designed so that all changes are visible in all parts of the business. The HAA needs an integrated system to ensure staff members have a single access system, and a single system to produce and store records.

Reason:

- To reduce redundancy and improve productivity.
- Reduce extra work done by employees.
- To free-up human and other physical resources
- The information must be always accessible in all places, and times.
- Increase speed of access to information.

Objective HAA-05: Improve Security

Summary: Information within the business can be accessed by unauthorized members. The system is also susceptible to loss of information. The current system does not possess the necessary security controls. Therefore, the objective is to protect the information from unauthorized access and also that this information is available, continuous, and recoverable.

Reason:

- To ensure authorization; the system must be accessed by those who are authenticated.
- To ensure confidentiality.
- To ensure recoverability of the database to improve reliability.
- To ensure that the data is resistant to unauthorized change.

Objective HAA-06: Standardized Approach

Summary: There is a non-standard approach to achieve the objectives of the business's operations. This lack of standardization has placed constraints on employee trainability. Standardization is required so that everyone is familiar with the operations in an organized fashion.

Reason:

- To improve human resource allocation
- To increase the speed of training new staff
- To develop an easy method of developing a common understanding of the business.
- Improve productivity and efficiency.

Objective HAA-07: Migration

Summary: The current system needs the information to be migrated into the new system. This ensures that there is a smooth transition from one system to the other.

The HAA requires that the current methods that have been used to handle information must be incorporated into the new system. The company is in a period of growth and the loss of information in the current system could be detrimental to its interests.

Reason:

- To ensure quick transition from one system to the other.
- To ensure business is uninterrupted during transition.
- To prevent the loss of information from the previous system.
- To maintain relationships with previous customers.
- To maintain relationships with business relations.

Objective HAA-08: Affordability

Summary: Although the business is experiencing growth, the solution must be suitable for the budget requirements of the HAA. A cost effective solution is necessary to ensure that the transition does not affect the current growth of the business.

Reason:

- The system must be affordable so that it does not affect future growth.
- To reduce the impact the new transition has on the system.
- To be able to allocate needed resources during a period of stress.

Objective HAA-09: Project Completed on Schedule

Summary: The business must have its solution completed in a timely fashion. The current situation has placed great constraints on the functionality of the business. The business cannot continue working in this way and therefore needs the solution to be provided as immediately as possible.

Reason:

- The HAA needs the product to be completed immediately to reduce the risk the current system has on the growth of the business.
- The customers must not be affected by the timing of the completion of the project.
- To improve the smoothness of the transitional phase.
- To reduce the continuous force that the current workload is placing on the business.
- To ensure customers are unaffected by the internal changes of the business.

Pinnacle Software's Objectives

This whole project is intended to tackle the issues that the HAA is facing. Therefore, PSI's objectives have been carefully designed to align with our clients' objectives. This is vehemently important to ensure that the products we are recommending are suitable solutions.

Objective PSI-01: Identify Suitable Solutions

Summary: The solution will be identified after determining the functional requirements. These solutions must be also designed to ensure that the objectives of the HAA are met.

Reason:

- To ensure that we meet the HAA's objectives.
- To reduce conflict.
- To improve the business operations.
- To reduce redundancy and improve productivity.
- To improve the HAA's human resource management.

Aligned Objectives: ² HAA-01, HAA-02, HAA-03, HAA-04, HAA-05

Objective PSI-02: Finish Project Quickly, Affordably and Efficiently

Summary: This solution must also be affordable and implemented quickly. The current business is at an important stage in its growth. This growth cannot be sustained with the current system.

This has placed an excessive amount of pressure on the business to operate proficiently. It is extremely imperative that the business acquires this solution both affordably and quickly. The project must also be designed to take into consideration the budget limitations.

Reason:

- The project must be analyzed extensively to ensure if we can meet the time constraints that the HAA has placed on the projects.
- To reduce the burden on the HAA.
- To improve the quality of service of the HAA to the customers.
- To reduce the negative effect time has on the business outcomes.

Aligned Objectives: HAA-08, HAA-09

Objective PSI-03: Implement Standardized Controls

Summary: Standardization ensures that the system is produced according to specific requirements. A standardized system improves the quality of the work and improves the speed at which the system can be learned. This eases the amount of time required to train new staff members.

Reason:

- To improve a common understanding of the employees of the HAA.

- To reduce redundancy.
- To ease the speed of training new staff.
- To improve the maintainability of the system.
- To enhance the report generating system.

Aligned Objectives: HAA-01, HAA-02, HAA-06

Objective PSI-04: Implement an Integrated System

Summary: The current system produces excessive redundancy and extra work load. The current workload is significantly impacted by the way the system is designed. This has placed unnecessary constraints on the business's ability to grow. The solution that will be recommended will be designed such that it unifies all business operations. An integrated system will be needed to reduce workload and minimize redundancy.

Reason:

- The integrated system will ensure that it reduces redundancy and duplication to improve productivity.
- To remove unnecessary workload
- To improve profitability and resource management.
- To improve accessibility of information.
- To improve the business security.

Aligned Objectives: HAA-01, HAA-02, HAA-04

Objective PSI-05: Produce a Scalable System

Summary: The current system is reaching its capacity. Currently, there is no easy way the business can modify itself to handle this capacity. This is straining the business's ability to facilitate growth. Such issues must not be generated in the future. The system should be easily upgradable so that the business does not suffer the same issues that it is currently facing.

Reason:

- To facilitate growth.
- To reduce the burden growth has on the transition of the business.
- To increase the speed of new transitions.
- A system must be easily migrated after it is modified, for example, data should be easily transferable into the new system.

Aligned Objectives: HAA-03

Objective PSI-06: Improve Security

Summary: Information within the system may be handled by unauthorized individuals. There is no clear mechanism to ensure that users are authenticated. The recommended system must improve the security of the HAA.

Reason:

- To reduce loss of information.
- To improve accessibility.
- To improve confidentiality of information.
- To ensure a continuous and available system.
- To ensure that there are contingency back-ups.

Aligned Objectives: HAA-05



FUNCTIONAL REQUIREMENTS

Functional ID: FUNC01 - Store, Retrieve and Organize Data

Summary: The system is required to store generated reports and to be capable of retrieving those reports. Information about staff members, sites, members, customers, and clients can also be stored. It is also important that this information be entered without the need for duplication.

Reason:

- This will ensure that there is no duplication or redundancy in the data.
- To ensure data is accessible to facilitate business operations.
- To have a storage for all records so that this information can be accessed to handle business operations.
- Make sure staff and members have access to stored reports for both operational and record keeping reasons.

Functional ID: FUNC02 - Production of Reports

Summary: Each type of standardized reports is dictated by the functional needs of the business as financial, formal, statistical and status reports. The system generates these reports via inputs from the user. Information will need to be gathered to determine how these reports should be designed on the computer.

The standardized generation of reports within the system will create redundant-free storage. It is also important that each of the reports will reach their respective audiences. These reports will be stored for record-keeping purposes as well as data transfer and decision making.

Report Types:

1. Financial Reports

This is accessed and generated by the treasurer who will place in the necessary information including: membership revenue, other revenue, expenditure, and accounts.

2. Formal Reports

Formal report generation to be on a single system that will be accessed and generated by the staff for general enquiries, requests, and updates.

3. Statistical Reports

The system shall generate statistical reports on information in the system including membership, financial status, location, and promotional information.

4. Status Reports

The status reports to be generated by the system via input by the secretariat which store information about minutes of meetings and other membership status reports.

Reason:

- To help manage the business operations.
- To reduce redundancy and extra work in data storage.
- To improve business operations.
- To ensure the business has the necessary facilities to continue providing their services.

Functional ID: FUNC03 - Reports to PDF and Other Formats

Summary: All reports must be stored in one standard format. The system will convert inputs into a common format file for the use and distribution to other organizations, members, and associates. The business sends this information both internally and externally. This is done through meetings, mail, email, fax, and web pages. Therefore, a set of different report formats will be necessary to make sure a given document is valid on several platforms.

Reason:

- To ensure suitable representation of the data for clients and customers.
- To ensure that there are different mechanisms to handle data.
- Reports will become accessible to print or generate a common format for the organization's operational purposes.

Functional ID: FUNC04 - Login System

Summary: The system must be able to be accessed by various types of members with different membership privileges. This would also give other functions which can be accessed according to the membership number.

Reason:

- To create accounts and store information about different types of people that are in or are associated with the organization.
- To provide authentication services.
- To improve accessibility
- To improve confidentiality of information

Functional ID: FUNC05 - Account Types, Creation and Registration

Summary: Account types will be generated to store information about the person

who is logging in and the privileges they possess. Different account types will have different authorization levels. Some accounts may have limited access to system information and report generation.

Account Types:

1. Members
2. SIGS
3. Committee members
4. Council
5. Executive
6. Secretariat
7. General Staff

Reason:

- This will help create a form of authentication and authorization at different levels of HAA.
- This will ensure each member will be given only their respective privileges.
- The privileges will determine what page of the system they will be able to access.
- This will also determine which functions they possess for example the report type generation, for the purpose of accessibility, security, and integration.

Functional ID: FUNC06 - GARD Integration Package

Summary: The financial system will communicate with the GARD accountancy package to generate financial reports. This will include transferring revenue, membership, and expenditure information into the package.

Constraints on report generation may include time, revenue type and expenses. A report shall be generated from the information and provided to the petitioner.

Assumptions: GARD accountancy shall keep financial information of the company. When petitioned with the correct authorization, it will provide access to the information.

Reason:

- To integrate other software for optimized security
- Ease of access for form generation and record-keeping.
- The report generated from the GARD accountancy package will be validated and written in a report standard of the financial system, making it easier to create the report or input it back into the system.
- To reduce the effect the transition has on the business affairs.
- To reduce the burden of extra training on the business.

- To maintain useability of the current system.
- To reduce extra costs and time for training

Functional ID: FUNC07 - User Interface



Summary: The system will require a user interface that can be accessed from the web page. This user interface shall communicate user enquiries, input, and tasks. This will be used to generate reports and access information. This interface must be ergonomic and intuitive for ease of use.

Reason:

- To make this system easy to use and create security by compartmentalizing functionality only to authorized users.
- It will also be the main way the user may interact with the system.
- To provide an interface so that the business can conduct operations.
- To improve information accessibility.

Functional ID: FUNC08 – Authorization and Authentication

Summary: Assumptions have been made to the security measures of the company. Access to the system is barred without authentication and authorization. Such authorization would require a minimum of a password and username. This may include two step authorization and key encryption for access to places which contain sensitive information.

Reason:

- To ensure the privacy and security of stakeholders involved in the organization.
- To ensure that information is accessed by authorized individuals.
- To ensure that the business works in accordance with the law and is legally protected.
- To reduce information loss.

Functional ID: FUNC09 – Form Design

Summary: Forms will be given appropriate input functions such as buttons, text boxes, drop down menus and check boxes, marked with appropriate names. This will be present in form designs of financial, membership, general enquiry forms and reports.

Reason:

- Form and interface design will make the system easier to use and navigate.
- This will also remove redundancy from freeform report structures and formats.
- Easy design of validation on the client and server side.

Functional ID: FUNC10 – Form Validation

Summary: The system will take in inputs from forms and surveys by staff and members and will generate reports. These reports will undergo validation on input to test if there is information inputted. This will also ensure that input is appropriate for the question or report. This validation will vary from form to form.

Reason:

- Validation will protect the system from redundant or corrupt information as well as from possible attacks on the system
- To reduce errors in the database and system.
- To ensure that the necessary information is being inputted.
- It will also make generated reports accurate and easy to read as no false or inappropriate information will be present.

Functional ID: FUNC11 – Member Database

Summary: The current user database will be updated to collect information from registration by members. This registration will undergo processing and validation before being inputted into the system. Access will be given to authorized personnel petitioning for a change or view information on members. The members will be given restricted access to petition a view or change their own information.

Reason:

- By creating an integrated member database with several access ports, redundancy and incorrect information is reduced with little to no oversight in the closed system.
- To be capable of using this information for statistical purposes.
- Flexibility is assured from the ability to access and change information if necessary.

Functional ID: FUNC12 – Member Report Generation

Summary: Authorized staff may petition a member report from the system. The database will construct a report based on constraints of location, activity and or payment status. This report will be processed and returned to the petitioning staff member with required information stipulated in the petition.

Reason:

- Report generation on the system's part will shorten the time it takes for staff to generate reports as well as remove oversight and human error.
- The report design will also be valid input for other functions.
- Keeps certain information on members secret based on authorization and objective of the report
- Allowing constraints also creates more efficient report designs for different objectives.

Functional ID: FUNC13 – Database Access

Summary: Staff shall complete authentication and authorization before petitioning the system. Upon petitioning, the system shall validate and process the necessary report.

Reason:

- Database access is limited to the system as to remove oversight and create security of the information in the database.
- To ensure that the system is operating in unison with the database.

Functional ID: FUNC14 – Promotion Design and Creation

Summary: Staff shall have the ability to design and input promotional material in standard formats. The material shall be validated and processed, then given to authorized staff members to review. If validated, the system shall send promotions to the emails of users. This will be done according to their respective location or promotional status. An option can be made to send the promotional material to other entities with access to the system, like the magazines or external press.

Reason:

- The system can make sure promotional material is in a valid format before giving it to supervisors who can then validate that the material is appropriate.
- Constraints can also be made in validation so that promotions shall be sent to those in the location.
- Optionally, the promotion can be sent to the press for hardcopy handouts or advertisements in the magazine.

Functional ID: FUNC15 - Database Backup-Services

Summary: The data must be backed up by a system that can ensure that the data is not lost. The system must be able to recover to a certain point if an error occurs.


Reason:

- To reduce data loss.
- To improve data security.
- To ensure the business can transition effectively from one system to the next.
- To improve system reliability.



NON-FUNCTIONAL REQUIREMENTS


Non-Functional ID: NFUNC01 – Integration

Summary: This integrated system must have the capability to work 90% in batch with operational work done online. 


Reason:

- This system reduces redundancy and keeps all documentation within one framework.
- This reduces the work required to organize the system.
- This also allows the system to be easily accessible, reducing the amount of work to access information.

Non-Functional ID: NFUNC02 – Accessibility

Summary: This system will be accessible to 4 generalized denominations of users (Based on majority languages known in Australia) and any device with internet connection. 

Reason:

- To aid in the customer accessibility of the system, certain additions must be made to allow the user to choose written viewing language (Mandarin, Arabic, Vietnamese, Greek).
-  addition, this system should function consistently across multiple internet browsers, including Google Chrome, Safari, Firefox, and Internet Explorer, as well as various mobile devices.

Non-Functional ID: NFUNC03 – Performance

Summary: The system will allow a capacity of at least 3,000 assumed users concurrently.

Reason:

- Many users will need to use this system at the same time, so it is important to make sure the system will have the capability to host a high capacity of individual users without breaking down, especially with large events.
- The higher number will deal with massive influx due to events when capacity is at its highest.

Non-Functional ID: NFUNC04 – Capacity



Summary: The database must keep information on 5,000 users as well as 10,000 reports.

Reason:

- Servers of the database will be required to store up to 5,000 user entities and respective information including location, contact details, name, email, password and authorization, financial status, and promotional status.
- The server will also have to keep an assumed 100,000 reports and documents including financial and membership reports and promotional material.

Non-Functional ID: NFUNC05 – Scalability

Summary: This system shall be built with the capability to host up to 5,000 users to account for an influx in users after the new system is in place.

Reason:

- The system that will be recommended will require physical modifications in the future and must be considered.
- A system will be updated with larger storage and processing for concurrent users over time, 1,000 to 5,000 users in a modification. These updates should not interfere with business as usual.

Non-Functional ID: NFUNC06 – Security

Summary: The system will allow those who are authorized access of 128 bits encryption security certification to view and change certain data based on user privileges. For administration and high-level access, it is advised to use 256 encryption level certifications.

Reason:

- Certain security measures would be actioned to include two step authentication and passwords to decrease information disclosure and threats to software and hardware.
- Reduce risk of information loss to unauthorized individuals outside of the company
- To ease anxiety of customers

Non-Functional ID: NFUNC07 – Maintainability

Summary: Systems, especially business systems must have a lifespan of 3-5 years and be easily replaced and maintained.

Reason:

- The lifespan should be expected to last the same amount of time as the given hardware, approximately 3 - 5 years for servers.
- Updates and modifications can make servers obsolete or inefficient before then so it is important to update.
- Modulate servers for ease of maintenance which would increase longevity of the system.

Non-Functional ID: NFUNC08 – Fault Tolerance

Summary: Database backups can be produced once every day. Backups will be necessary to achieve fault tolerance in the system. There should be at least 1 backup system. The system can also be designed to produce replicates immediately for each DBMS transaction. This can be done by producing redundant databases.

Reason:

- To improve system reliability
- By leaving redundancy for an influx of information as well as usage on the webpage will ensure that the system will operate at efficiency, even during faults.
- If servers fail or disconnect, having another server site and redundant servers will allow the system to still function and connect with users.
- Backups of files should also be kept in case of failure.
- Keep the information inside the database consistent
- Backups of earlier versions of the system must be kept as well in case of fault or problem in updating it for maintenance.

Non-Functional ID: NFUNC09– Quality of Service

Summary: The system should function with less than a 3 second wait time for customers and staff on user interfaces, and longer with large processing functions like user registry or report generation. There will be a maximum of 10 minutes for report generation.

Reason:

- As mentioned in performance, the system should function with at most 3,000 users concurrently in case of influx of users.
- Such large numbers can slow the system, so processing for user interfaces and form filling should be less than 3 seconds for customers and at most 5 - 10 seconds.

- However, when it comes to processing the system may spend longer. 10 minutes should be a loose guideline as some files are not under time constraint.

Non-Functional ID: NFUNC10 - Availability

Summary: The system will be designed with an uptime availability of 99.9%.

Reason:

- The designed structure will provide a high level of system availability.
- A web-based system must be online a large portion of the time for customer and staff convenience and should only be taken offline during updates and maintenance.
- This makes availability generally limited by the network structure. Maintenance should be applied to the server in a package with more time for testing and diagnostics.
- To improve customer satisfaction

Non-Functional ID: NFUNC11 - Continuity

Summary: Backups and redundancy of system data should be made to ensure the system remains functional even after a catastrophic failure. We should have a Recovery Point Objective (RPO) of at most 1 day. System Recovery Time (SRT) should be at most 2 - 5 days based on assumptions of where the backup is stored.

These backups must be kept offsite from the database and in redundant servers. The latest system update shall be available to fix the system if a failure was to occur. The system can also be designed to produce replicates immediately for each DBMS transaction. This can be done by producing redundant databases. The redundant system should act as a replacement to normal server function until the main servers come back online. This ensures that the HAA's services are provided in a continuous fashion.

Reason:

- To improve availability and maintainability.
- To ensure and improve accessibility.
- To improve system quality of service.
- To ensure that the work is unimpeded and continuous.



CONCLUSION

The PSI analyzed issues that were identified in the business case of the HAA. The major issues that were identified were with regards to redundancy, security, efficiency, and disunity. The business problem was used as a means to identify the objectives of the HAA and PSI. The PSI's objectives have been designed to align with our client. Functional and non-functional requirements were then identified from the business's objectives.

The information contained in this document will be used to identify possible solutions. The functional requirements are the things that the system must be able to do. The non-functional requirements have numeric values which are used to quantify characteristics of the system. These numbers act as verification tools to determine if the solution that will be recommended possess these characteristics. The functional and non-functional requirements will be used to determine if a solution is suitable.

The primary objective is to ensure that the problems that the HAA is facing can be alleviated by the solutions that we provide. From the preliminary examination of the problem our experts have stated that the recommended solution must contain a DBMS.

Another objective in this regard, is the way in which the interface will be designed. There are numerous solutions to this problem that could include a web-based intranet, a general application or onsite intranet with network connections.

The PSI has the expertise and ability to provide a software solution based on the given business case. To determine project feasibility more information will be needed from the HAA to continue our assessment. This information includes constraints on time, budget, capacity, migration, and implementation.

The information contained in this document along with the information we will receive from the email should give the PSI a clearer understanding of the problem. This information will be used to start the next stage of the project management process. The functional and non-functional requirements will form the basis of the solution. Multiple solutions will be assessed based upon their ability to meet the functional and non-functional requirements. One of the solutions will be chosen after careful assessment. The chosen solution will be made after carefully analyzing its ability to meet the HAA's objectives.

Group assignment Part A Group 7K

ORIGINALITY REPORT

1 %

SIMILARITY INDEX

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Exclude quotes Off

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Group assignment Part A Group 7K

GRADEMARK REPORT

FINAL GRADE

/10

GENERAL COMMENTS

Instructor

PAGE 1



Comment 1

Working on? The idea was that you sent them the specification document.



Ideal Question

This is the ideal question. it is one of the triple constraints on the project that was not known.



Comment 2

This question shows a complete lack of understanding of your company. You are a tailor made software company. You do not provide hardware and you do not maintain hardware.

Also you are asking the client what is expected with hardware. How would they know this?



Comment 3

Wouldn't this be your job to know this? A better question would be what is the current quality of the data that you have and how much.

PAGE 2

PAGE 3



Comment 4

This executive summary covers detail that is not within this document. How many functional and non-functional requirements were there for instance. Also this summary introduces possible solution. Yet, the proposal (Part B) hasn't been put together yet.

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Comment 5

Although quite detailed, this was not what this section was suppose to contain. What is presented is essentially a make up of functional and non-functional requirements.

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Comment 6

This is not a valid functional requirement. A GUI is expected and it is measured in non-functional requirements - usability.



Comment 7

Not a functional requirement.

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Comment 8

Form validation would be a given. It would not a functional requirement. It would be part of quality assurance actually.

PAGE 19

PAGE 20



Comment 9

Some of the functional requirements are not functional requirements. This shows a lack of consideration on what the client actually needs to be meet their business objectives.

PAGE 21



Comment 10

What does this even mean?



Comment 11

Again, what does this mean?

PAGE 22



Comment 12

Only 5,000? Why would it be able to create twice the amount of reports to users. That doesn't seem feasible.

PAGE 23

PAGE 24



Comment 13

Some of the functional requirements given are not valid and do not make sense. Where was the quality assurance to make sure such content did not end up in the report. Remember you get a group mark, then an individual mark.

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