



Business Requirements Document

(Guide S50 Version 1.0)

for

CIT-U Student Organization Management System

<Version 1.0>

Prepared for

CSIT 327 - INFORMATION MANAGEMENT 2

Submitted to

Frederick Revilleza



September 09, 2024

Prepared by

Cataos, Felraine Kyle A.

Sugimoto, Kinka B.

1. DOCUMENT REVISION LOG

Table 1 Document Revision Log

Date	Author	Version	Reason for Change
09/07/2024	Cataos, Felraine Kyle, Sugimoto, Kinka	1.0	<ul style="list-style-type: none">Added Functional RequirementsAdded User Requirements

2. DOCUMENT REVIEWERS

Table 2 Document Reviewers

Name & Title	Role	Approval Date	Version

3. APPROVER & SIGNOFF

Table 3 Client Acceptor (Project Sponsor)

Name & Title	Role	Approval Date	Version
Signature:			

4. INTRODUCTION (Analysis Description)

4.1 DOCUMENT PURPOSE

The purpose of the Business Requirements Document (BRD) is to present the stakeholder requirements needs for **CIT-U Student Organization Management System** completely, accurately and unambiguously in a technology-independent manner. This information is captured and written by the Business Analysis team during the project Analysis phase. Business language is used to describe the requirements authored in this document and is the definitive specification of the user requirements. The BRD is the primary input to the design and development phases, and is the primary specification for User Acceptance. This document is intended to be read by all responsible for the management of the project development initiative including business users, user representatives and sponsors, and other interested parties.

4.2 DOCUMENT SCOPE

As determined during the Analysis phase of the project, the scope of this document is limited to describing the **CIT-U Student Organization Management System** stakeholder business needs including stakeholder categories (*who*, e.g. primary and secondary users), the business data relationship map (*what*, e.g. data model), the event-response table (*when*, e.g. state diagrams), business policies (*why*, e.g. business rules), and the process map (*how*, e.g. use cases). The approved and signed version of this document will serve as the basis for subsequent phases of the project.

This document intends to define and describe the:

- Business requirements,
- User requirements,
- Use cases that support the business processes,
- User profiles and locations,
- Business processes and rules,
- Functional requirements,
- Non-functional requirements,
- Data requirements,
- Requirements baseline and traceability,

XXX Project – Business Requirements Document V0.0
BC Ministry of Forests and Range

- Future considerations,

This document does not include:

- Technical and design specifications – these will be provided in the next phase of the project as part of the system design documentation
- Descriptions of functionality, interfaces or requirements of processes outside of the business area
- Detailed analysis of requirements related to other applications, and
- Out of scope requirements>

4.3 DOCUMENT AUDIENCE

Table 4 Document Audience

Document Audience	Location

4.4 BUSINESS ANALYSIS APPROACH

< The objective of the Analysis phase of the project was to document the list of requirements of interest to the business and to provide supporting documentation for the solution in sufficient detail for next phase work. The Analysis phase included <both a review of existing information and> identification of new or modified requirements.

The approach included:

- Business analysis planning and monitoring
- Elicitation
- Requirements management and communication
- Requirements analysis
- Solution assessment and validation

The inputs to this phase included:

- Business Case
- Master Project Plan

- Project Charter
- Business Analysis Work Plan

4.5 REQUIREMENTS QUALITY ASSURANCE

<Quality assurance for requirements planning and management focuses on ensuring that the processes and activities will deliver outputs that meet an appropriate level of quality. The processes and activities may include techniques such as BRD peer review, contractor status reporting and metrics, requirements change management process, requirements completeness checklist, client participation in requirements acceptance and signoff, and vendor project quality assurance plans. State if structured walkthrough of finalized set of requirements will be conducted for ensuring the quality of the requirements.>

<There are a number of levels at which this document should be reviewed including;

- *Business Case Synchronicity Check (the Sponsor has identified the means for validating the project success)*
- *Requirements Document Check (the document is worth reading at the business context level)*
- *Requirements Statements Content Check (the individual and related requirement statements are unambiguous, clear, valid and traceable)>*

4.6 INFORMATION REFERENCES

Table 5 Information References

Document Name	Author	Date	Version

4.7 DEFINITIONS, ABBREVIATIONS & ACRONYMS

<The following terms, acronyms, and abbreviations are used throughout this document.>

Table 6 Terms, Acronyms & Abbreviations

Name	Definition

5. USER REQUIREMENTS (Needs)

5.1 USE CASE OVERVIEW

Appendix B Use Case

Use Case Number	UC-01
Name	<i>Manage Student Organization Tasks and Events</i>
Description	<i>This use case allows student leaders to organize events, assign tasks for event preparation, and track attendance during meetings or events..</i>
Actor(s)	<ul style="list-style-type: none"> • <i>Student Organization Leaders</i> • <i>Student Organization Members</i>
Pre-conditions	<ul style="list-style-type: none"> • <i>The student leader is logged into the system.</i> • <i>An event or meeting is scheduled within the system.</i> • <i>Attendance is to be tracked during the meeting or event.</i>
Flow of Events	<p>Standard Path:</p> <ol style="list-style-type: none"> <i>1. The student leader logs into the system.</i> <i>2. The system displays upcoming meetings or events.</i> <i>3. The student leader sets tasks to be completed for event preparation.</i> <i>4. Organization members receive task assignments and notifications.</i> <i>5. Members update task progress as they complete their assigned tasks.</i> <i>6. During the meeting/event, the student leader initiates attendance tracking.</i> <i>7. Organization members check in using the system.</i> <i>8. The system records attendance data and updates the event progress.</i> <p>Alternate Path:</p> <ul style="list-style-type: none"> • <i>Tasks reassigned if members cannot complete their assignments.</i> • <i>Meeting/event rescheduled if necessary.</i>

	Exception Path: <ul style="list-style-type: none"> • <i>Network failure or system outage during attendance tracking or task assignment.</i>
Post-conditions	<ul style="list-style-type: none"> • <i>The event is prepared, with tasks completed and tracked.</i> • <i>Attendance data is recorded for meetings/events.</i>
Exit Criteria	<i>All assigned tasks and events are completed and marked as done in the system.</i>
User Requirement #	REQ-01
Notes & Issues	<ul style="list-style-type: none"> • <i>System should send reminders for meetings and incomplete tasks.</i> • <i>Consider adding functionality to auto-generate attendance reports.</i>

5.2 BUSINESS PROCESS MODEL

<A business process model diagram should be created in each of the following cases: for each function one level above the elementary function level; and where more than one system process is used to implement the elementary function level, one process model diagram should be created for each elementary business function.

In the former case, the diagram will include a number of elementary business functions, and the business event(s) and outcome(s) associated with each. The diagram should be given the same name as the higher level function on which it is based. In the latter case, each diagram will show all of the system processes used to implement the elementary business function being depicted, the system trigger(s) used to implement the business event(s), the outcome(s) of the elementary business function, and the flow lines that indicate the processing order.>

5.2.1 “As Is” – CURRENT STATE

- *<‘As Is’ State: Provide a high level description of the business area in terms of the business functions being accomplished. Also identify the systems being used to address the business functions.>*

5.2.2 “To Be” – FUTURE STATE

- *<‘To Be’ State: Summarize the findings from the review of the systems. Identify any redundancies on process or data, data sinks (data coming in not being used by any other processes) and data gaps (data being used but not coming in from another source). If this review covers multiple business areas or sub-systems, you may want to create a general findings section and a Program Area specific section to ensure all topics are covered.>*

Appendix C Business Process Model Diagram

INSERT DIAGRAM HERE

5.3 ACTOR PROFILES & LOCATIONS

Table 11 Actor Profiles & Locations

Organizational Job Function	Nature of the Interaction	Organizational Relationship	Job Title

5.4 INPUTS

< Describe the input media at a conceptual context that can be used by the operator for providing information to the system. Where appropriate provide the layout of all input data screens or graphical user interfaces (GUIs) (for example updates to existing screens, prototype etc.). Provide a graphic representation of each interface.

This section should contain a list of the data entities. Specific values, range of values, mandatory/optional, alphanumeric values, and length are defined and identified in the Data Requirements Section 6.

Where applicable discuss the miscellaneous messages associated with operator inputs, including the following:

- *Copies of form(s) if the input data are keyed or scanned for data entry from printed forms*
- *Description of any access restrictions or security considerations*
- *Each transaction name, code, and definition, if the system is a transaction-based processing system.>*

5.5 OUTPUTS

<This section describes of the system output requirement relative to the user/operator; show a mapping to the high-level data flows. System outputs include reports, data display screens and GUIs, query results, etc. The output files are described in Section 3 and may be referenced in this section. The following should be provided, if appropriate:

- *Description of the purpose of the output, including identification of the primary users*
- *Description of the output which may be represented by report and screen contents (provide a graphic representation of each layout and define all data elements associated with the layout or reference the data dictionary)*
- *Report distribution requirements, if any (include frequency for periodic reports)*

- *Description of any access restrictions or security considerations>*

5.6 USER INTERFACE

<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., help) that will appear on every screen, keyboard shortcuts, error message display standards, and so on. Define the software components for which a user interface is needed. Details of the user interface design should be documented in a separate user interface specification.>

5.7 TRIGGERS

<Define the relationships between the functions and the business processes that drive or initiate the function(s) e.g. dates, event, state change.>

5.8 BUSINESS RULES

<A business rule describes a standard business practice that constrains the design of the solution. Business rules define acceptable corporate behaviour in response to business events. They grant authority to act while imposing limits and conditions on how users interact within their business environment. From an information system perspective, the rules define which processes, data, constraints and performance criteria are acceptable. Properly expressed, they are a set of formal business requirements. OPERATIVE RULES= policy/legislation (e.g. an authorized permit must be in place); STRUCTURAL RULES=true or not true (e.g. every employee must have a 3 digit employee number. An example is:)>

Table 12 Business Rules

Rule ID #	Rule Type	Statement	Source/Date	Priority	Linked Requirement #	Use Case Source	Test Case Source

5.9 FUNCTION HIERARCHY DIAGRAM & REPORT

<If Use Cases are not supplied then include the Function Hierarchy Diagram & Report. The business should be represented on as few diagrams as possible that will meet the objective of clear communication. If the entire function model can be shown on a single page without becoming either illegible or too complex, then only one page should be used.

A function definition report should be generated to correspond to each function hierarchy diagram. If no properties have been captured for higher level functions, then the report should include only elementary business functions presented in alphabetic order by function label>.

Appendix D Function Hierarchy Diagram

INSERT DIAGRAM HERE

5.10 DATA FLOW DIAGRAM

<As distinct from the business process model, defines the understanding of the range of data for the information input, processed, stored, and output between functions. Define the method of ensuring that the function process is adhered to within the system.>

Appendix E Data Flow Diagram

INSERT DIAGRAM HERE

6. FUNCTIONAL REQUIREMENTS (Product Capabilities & Behaviour)

6.1 OPERATIONAL ENVIRONMENT

The student organization management system will be developed using Python with Django as the web framework and MySQL for the database. The system will adhere to Ministry standards for data modeling and administration, ensuring proper database normalization and data integrity. Python and Django will provide a secure and scalable environment, while MySQL will handle data storage and management efficiently.

6.2 SYSTEM INTERFACE

The system will interact with MySQL to manage data for students, organizations, events, and tasks. Django's ORM will serve as the interface between Python code and the MySQL database, allowing efficient data manipulation without the need for raw SQL queries. Future integrations can be supported using Django's REST framework, enabling external systems to interact with the application via APIs.

6.3 COMMUNICATIONS INTERFACE

The system will communicate over HTTP/HTTPS protocols, ensuring secure data transmission between users and the server. Django's built-in email system will be used for sending notifications, such as event reminders and task updates, via SMTP. SSL/TLS encryption will be employed to protect sensitive data during communication between the client and server.

6.4 SOFTWARE INTERFACE

Python and Django will manage the backend functionality, with MySQL serving as the data storage solution. Django's ORM will handle all interactions with the MySQL database, streamlining data exchange. The system will ensure efficient data flow between Python, Django, and MySQL, with Django's features supporting the overall structure and security of the system.

6.5 HARDWARE INTERFACE

The system will be deployed on a physical or cloud-based server capable of running Python, Django, and MySQL. Communication between the software and hardware will occur using TCP/IP protocols, with user interactions managed through a web browser. The server will process HTTP/HTTPS requests, ensuring smooth and secure communication between the client and the system.

6.6 FUNCTION/USER SECURITY MATRIX

<The following symbols represent the level of access by each of the user groups:>

C	Create
R	Read
U	Update
D	Delete

Table 13 Function/User Security Matrix

Actor:	Student Organization Leader	Student Organization Member
Function (or Use Case):		
Manage Student Organization Tasks and Events	<i>C, R, U, D</i>	<i>R, U</i>
Create and Manage Events	<i>C, R, U, D</i>	<i>R</i>
Assign Tasks for Event Preparation	<i>C, R, U</i>	<i>R</i>
Update Task Progress	<i>R</i>	<i>U</i>
Track Attendance for Meetings or Events	<i>C, R, U, D</i>	<i>R</i>
Record Attendance	<i>R</i>	<i>R, U</i>

6.7 USER GROUP & SYSTEM ACCESS SUMMARY

Table 14 User Group & System Access Summary

User Group	System Access
Student Organization Leader	Can create, read, update, and delete tasks and events. Can also assign tasks, track attendance, and reschedule events.
Student Organization Member	Can read tasks and events, update task progress, and check in for attendance.