

ITERATION 7

TEAM 35



NGO PROJECT PORTFOLIO MANAGEMENT SYSTEM

This document contains the complexity matrix and the complexity achieved for the proposed Integrated NGO Management System for EPI-USE and groupelephant.com.

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1. Document Introduction

This document presents the complexity matrix achieved for the Integrated NGO Management System developed for EPI-USE and groupelephant.com.

2. Complexity Matrix

Topic	Level		Marks	Indicated by group	Marks given	MAX	Total
1. Special GUI	For online applications: Responsive web design(using HTML and CSS to automatically resize, hide, shrink, or enlarge, a website, to make it look good on all devices.)	*	3	3		42	0
	Appropriate use of grids/tables		3	3			
	Appropriate use of tabs/links		3	3			
	Use and update of at least two graphs in an appropriate business context. For example, a dashboard indicating the status of goods sold, services rendered, staff allocation to work etc. These graphs are NOT the graphs for a report and do not have to be printed in a PDF as per section 3.		4	4			
	The storage and display of graphical information, like photos with a good business reason. For example, a profile picture or a product image.		3	3			
	Working e-mail automatically generated from the database in an appropriate business context		2	2			
	SMS messages automatically generated from the system in an appropriate business context		2				
	Extensive user-friendly search facility		3	3			

	At least one use of a tree to display data from the database. This needs to be setup in the database. For example: Province, City, Suburb OR Product category, product type and product.		3	3			
	Able to dynamically modify a data tree structure and in doing so adjusting the data in the database. As per line 19, however, from the front end you need to be able to modify it by adding/updating/deleting the records.		4	4			
	At least one use of a calendar view of data (not a date/time picker; not a plug-in such as Google calendar)		3	3			
	Uploading a file into the system with appropriate business reason. Can be PDF or an additional image.		3	3			
	The use of audio/video in an appropriate business context. This can be a youtube video or a help video.		3				
	At least one use of an administrator configurable timer in an appropriate business context. For example, OTP session timer or logout session timer - these timers need to be adjustable from the front end.		3	3			
2. Database access	At least 30 tables used (4 member groups) or 40 tables used (5 member groups)	*	6	6		15	0

	Full referential integrity on all tables. You need to be able to delete a record that is not associated with any other record.	*	6	6			
	At least one use of master-detail table relationships (Schneiderman's golden rule on system status applies here). A many to many on one screen such as an order with the order items or a basket with the basket items.	*	3	3			
3. Reports(Do not take screen shots and add it to pdf to make a report, for example html2canvas)	At least 3 simple list reports in a reporting tool (no control breaks, no graphs, single table) displayed on screen and generated as PDF with logo, date generated, person generated. Reports should be useful to allow organisation to make decisions.	*	3	3		15	0
	At least 2 transactional report with 2 or more control breaks (with heading and calculated values/totals, multiple tables) displayed on screen and generated as PDF with logo, date generated, person generated. Reports should be useful to allow organisation to make decisions.(have sub totals and full totals)	*	6	6			
	At least 1 report with adjustable criteria displayed on screen and generated as PDF with logo, date generated, person generated. Reports should be useful to		3				

	allow organisation to make decisions.					
	At least 1 management report using a graph displayed on screen and generated as PDF with logo, date generated, person generated. Reports should be useful to allow organisation to make decisions.	3	3			
4. Flexibility	All data that can change in future should not be hard coded but maintained in a sub-module of the system (e.g. Lookup tables)	6	6		12	0
	Some business rules are not hard coded, but maintained in a sub-module of the system and should work when implemented in the system. For example, discount, VAT, response time etc. These need to be in a table that can be updated. It should be applied in the code.	6	6			
5. Error handling	All system-generated errors are trapped and consistent, user-friendly error messages are displayed	6	6		12	0
	Appropriate data validation on all input fields. This includes, dates (example: cannot be born in the future), numbers (no negative quantities or prices).	6	6			
6. Help	At least one menu item or other control that opens up a complete help document (HTML, PDF, Help-file)	3	3		15	0

	Extensive context-sensitive help. E.g. calling Help on a specific screen/function will automatically open the specific help for that screen/function.		6	6			
	Search Facility on Help		3	3			
	Extensive use of hints for example place holders or tool tips.		3	3			
7. Security	Logon screen with user ID and password and fixed user profiles		3	3		13	0
	Applying two factor authentication with applicable business reason via a OTP not via a link.		3				
	Encrypted passwords in database	*	1	1			
	Flexible user profiles (i.e. you can dynamically add user profiles that will enable/disable access to certain parts of the system). For example, you can add a new role with new permissions for the role, or you can adjust permissions for an existing role. It does not refer to profiles for example a client vs and employee role.		6	6			
8. Audit Trail	An audit trail of all transactions in the system showing at least date, time, user, transaction type, critical data (such as amount and quantity of transaction). Who did what when on the system. Link the table to the user		6	0		9	0

	table to capture ALL transactions.					
	Able to search the audit trail on any of the following: date, user, transaction type	3				
9. Deployment	For an online application: Deployment of application to a publicly accessible web server such as Azure.	3			12	0
	For a mobile application: Deployment to an App Market place (such as the PlayStore or the AppStore)	6				
	Deployment of the database to a remote database server	3	0			
10. Backup and Restore	A backup and restore subsystem exists that backup/restore all data (system may exit during restore). From the front end, not in the database management system.	3	3		3	
11. Import/Export Data	Able to open Word or Excel and automatically place data in it based on the parameters provided (with a good business reason). For example importing products and prices into the system.	6	0		9	0
	XML or JSON: At least 1 XML or JSON file for Importing or Exporting of data (with good business reason). For example JSON can be used to interact with another system.	3	3			
12. External INPUT device	Simple Link to an external INPUT device using plug-and-play technology, such as a swipe card reader, bar code	3	3		18	0

	reader, etc. or a native component such as a QR reader, a GPS component, etc					
	Loose Link to an external INPUT device using device specific software. Data or images must seamlessly be stored in the database but device specific software is visible to the user. (This could include a digital camera, scanner, voice recording device, thumb print reader, etc.)	6	6			
	Tight Link to an external INPUT device using device specific software. Data or images must seamlessly be stored in the database but device specific software is not visible to the user. (This could include a digital camera, scanner, voice recording device, thumb print reader, etc.)	9				
13. External APPLICATION / Services	Integrate an existing web service into your application (with good business reason). For example google API or weather forecast (with a good business reason)	3	3		9	0
	A fully functional link to an installed external application system exists and the interface must be shown to work on the external system. Note that this excludes Microsoft Office Applications. For example Paypal/payfast or another system.	6				

14. Multiplatform processing for an appropriate business reason (such as mobile application). Needs to be developed using a different tech stack than your main system. For example IONIC.	Appropriate business use of static views on an alternative platform such as mobile application with a good business reason. For example, an about us page on your mobile app.		3	3			18	0
	Appropriate use of dynamic views on an alternative platform (i.e. data is displayed from the system's database) on alternative platform with a good business reason		3	3				
	Appropriate use of substantial dynamic views on an alternative platform (i.e. both reading and writing data from the system's database)		9	9				
	Uploading a file through an alternative platform onto the system's database.		3	3				
15. Programming Principles	The use of a data layer to facilitate interaction between your database and your business layer		3	3			17	0
	The use of an API to facilitate interaction between your business layer and your presentation layer. Owned developed API.		6	6				
	Comprehensive use of stored procedures and/or triggers and/or jobs.		3					
	Complete automated unit testing for five use cases.	*	5					
16. Innovative addition to the system	Any very advanced innovative addition to the system (e.g. machine learning, AI, block chain, text mining, IOT, etc.) If #		1-9				9	

	you implement a chatbot, it needs to have advance functionalities that you have developed and trained yourself.						
	Complexity Marks Obtained			0	0	228	0
	Maximum Complexity Marks		228	158			
	Complexity Marks Required for 5 members in team		150				

Table 1: Complexity Matrix Table For Iteration 7

3. Document Conclusion

This document outlined Team 35's complexity matrix for the Integrated NGO Management System.

4. Sign-off by Client

Sign-Off Confirmation:

I, the undersigned, have reviewed the contents of this document and approved it as complete and accurate. I acknowledge that the information provided meets the requirements agreed upon with team 35, Canvas.

Client Name: Dané Coetzee

Signature: *Dané Coetzee*

Date: 11/08/2026

5. Sign-off by Team

Team member:

Name: Alexander Steven

Date: 16 August 2026

Signature:



Team member:

Name: Amahle Khoza

Date: 16 August 2026

Signature:



Team member:

Name: Christopher Bailey

Date: 16 August 2026

Signature:



Team member:

Name: Nicholas Bailey

Date: 16 August 2026

Signature:



Team member:

Name: Stephan Bredenhann

Date: 16 August 2026

Signature:

