REQUIREMENTS DOCUMENT FOR AN INFORMATION SYSTEM DEVELOPMENT PROJECT

CMPG213 PROJECT PHASE 2

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1. PROJECT PLAN

- Compile a project plan In MS Projects for your project.
- Define the tasks for all the FAST phases for your project.
- Allocate the resources (the members of your project team) for each task.
- Indicate the task inter-dependencies.
- Use the screen shots in SU4 - Project Management Powerpoint slides to give more detail, e.g.
  - 4-33 Entering Intertask Dependencies
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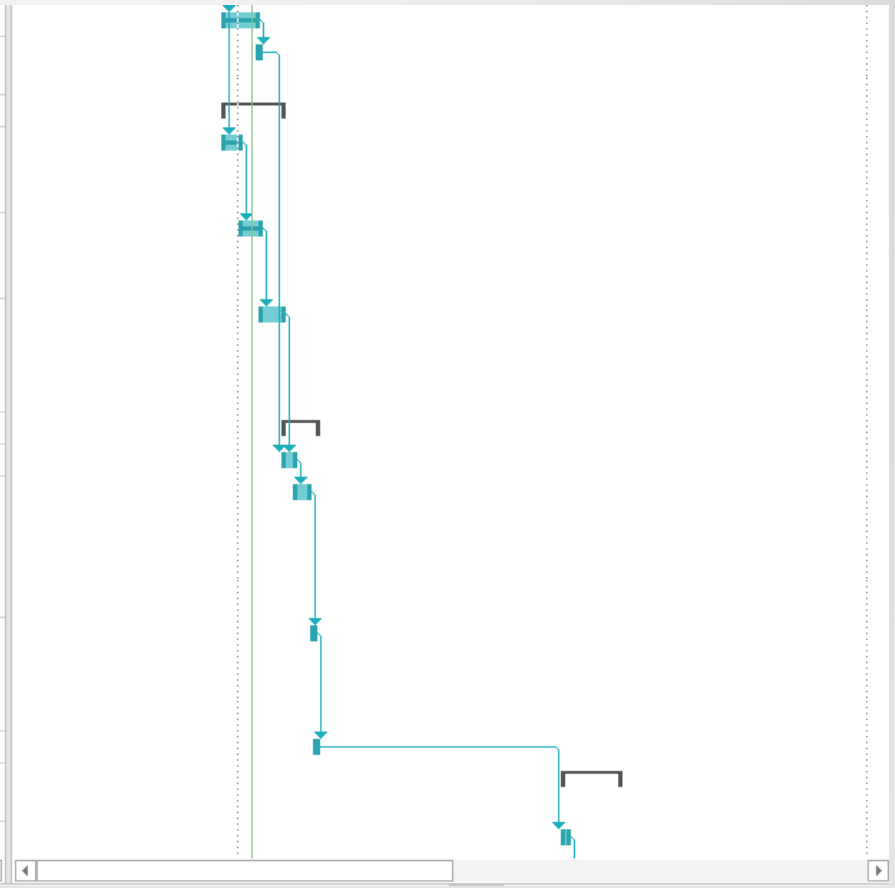
	Task Mode	Task Name	Duration	Start	Finish	Predece
1	✓	**Scope Definition**	**11 days**	**Mon 18/02/05**	**Mon 18/02/19**	
2	✓	Conduct a feasibility assessment where problems, opportunities and directives are categorized	4 days	Mon 18/02/05	Thu 18/02/08	
3	✓	Negotiate the scope with stakeholders	1 day	Fri 18/02/09	Fri 18/02/09	2
4	✓	Determine the constraints of the system	1 day	Mon 18/02/12	Mon 18/02/12	3
5	✓	Create the project plan	5 days	Tue 18/02/13	Mon 18/02/19	4
6		**Problem Analysis**	**10 days**	**Tue 18/02/13**	**Mon 18/02/26**	
7		Analyze the existing system	6 days	Tue 18/02/13	Tue 18/02/20	3
8	✓	Establish objectives for the improvement of the system	1 day	Wed 18/02/21	Wed 18/02/21	7
9	✓	Update the project plan	2 days	Thu 18/02/22	Fri 18/02/23	8,5
10	✓	Create project propsal's presentation	2 days	Thu 18/02/22	Fri 18/02/23	8
11	✓	Present project proposal	1 day	Mon 18/02/26	Mon 18/02/26	9,10
12	✓	**Requirements Analysis**	**22 days**	**Tue 18/02/27**	**Wed 18/03/28**	
13	✓	Identify the bookstore's system requirements and expectations via interviews and questionnaires	7 days	Tue 18/02/27	Wed 18/03/07	11
14	✓	Analyze the system requirements	3 days	Thu 18/03/08	Mon 18/03/12	13
15	✓	Prioritize business requirements	3 days	Tue 18/03/13	Thu 18/03/15	14

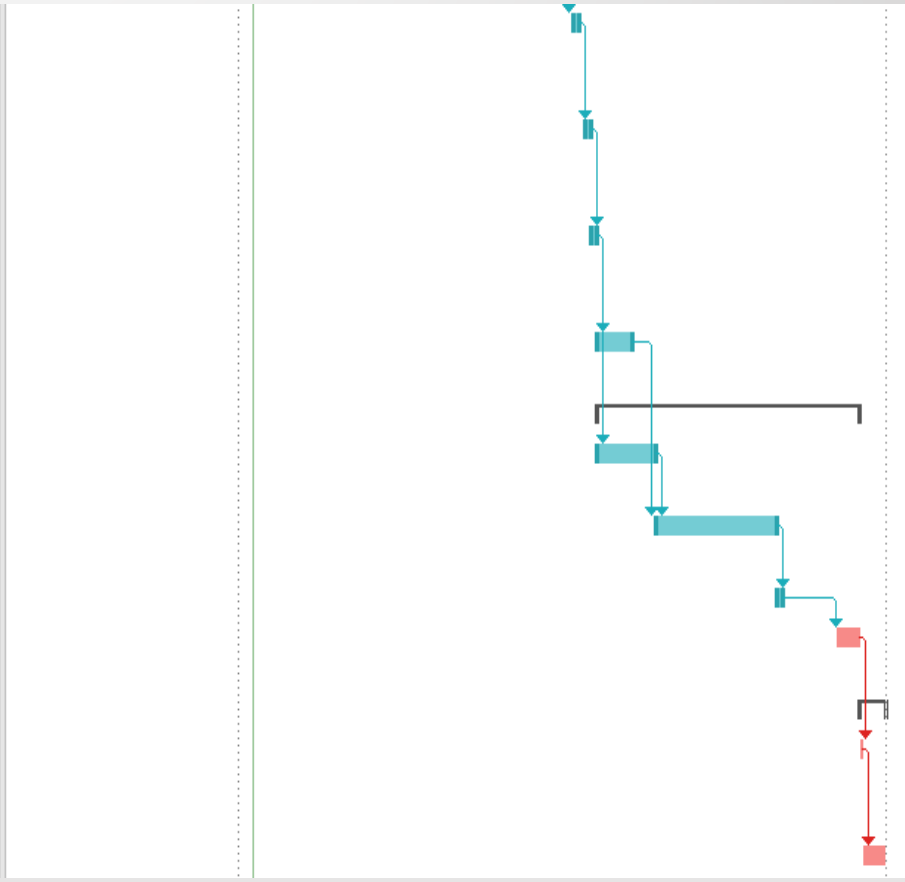
I. PROJECT PLAN continues

			Task Name	Duration	Start	Finish	Predecessors
16	✓		Update the project plan	8 days	Fri 18/03/16	Tue 18/03/27	15
17	✓		Submit the requirements analysis	1 day	Wed 18/03/28	Wed 18/03/28	16
18			**Logical Design**	**15 days**	**Fri 18/03/16**	**Thu 18/04/05**	
19	✓		Translate data and information requirements into logical data models	4 days	Fri 18/03/16	Wed 18/03/21	15
20	✓		Translate business process requirements into logical process models	5 days	Thu 18/03/22	Wed 18/03/28	19
21			Translate business and system interface requirements into logical interface models	6 days	Thu 18/03/29	Thu 18/04/05	20
22			**Decision Analysis**	**8 days**	**Fri 18/04/06**	**Tue 18/04/17**	
23			Identify candidate solutions	2 days	Fri 18/04/06	Mon 18/04/09	21,17
24			Analyze the candidate solutions in terms of technical, operational, risk, economic and schedule feasibility	5 days	Tue 18/04/10	Sat 18/04/14	23
25			Recommend a candidate system as the bookstore's solution to be designed or implemented	1 day	Mon 18/04/16	Mon 18/04/16	24
26			Submit decision analysis	1 day	Tue 18/04/17	Tue 18/04/17	25
27			**Physical Design and Integration**	**14 days**	**Thu 18/07/12**	**Tue 18/07/31**	
28			Determine the physical database design	2 days	Thu 18/07/12	Fri 18/07/13	26



1. PROJECT PLAN continues

		Task Name	Duration	Start	Finish	Predecessors
28		Determine the physical database design specifications	2 days	Thu 18/07/12	Fri 18/07/13	26
29		Determine the software design specifications and physical business process	2 days	Mon 18/07/16	Tue 18/07/17	28
30		Determine the physical user and system interface specifications	2 days	Wed 18/07/18	Thu 18/07/19	29
31		Design the system as stated in the specifications	8 days	Fri 18/07/20	Tue 18/07/31	30
32		**Construction and Testing**	**63 days**	**Fri 18/07/20**	**Tue 18/10/16**	
33		Create the database for the new system	14 days	Fri 18/07/20	Wed 18/08/08	30
34		Create the interfaces for the new system	29 days	Thu 18/08/09	Tue 18/09/18	33,31
35		Debug the new system	2 days	Wed 18/09/19	Thu 18/09/20	34
36		Test the new system to ensure that it is satisfactory	6 days	Tue 18/10/09	Tue 18/10/16	35
37		**Installation and Delivery**	**7 days**	**Wed 18/10/17**	**Thu 18/10/25**	
38		Deliver and install the new system. Provide the system manual.	1 day	Wed 18/10/17	Wed 18/10/17	36
39		Train the system users	6 days	Thu 18/10/18	Thu 18/10/25	38



- List and define ALL the acronyms and abbreviations that appear in your document here.
- Do NOT list or define acronyms and abbreviations that do not appear in our document.

2. DEFINITIONS, ACRONYMS and ABBREVIATIONS

Abbreviations

- **PERT Chart:** Program Evaluation Review Technique Chart
- **GUI**: Graphical User Interface
- **COTS**: Commercial Off-The-Shelf
- **EST**: Earliest Start Time
- **LCT**: Latest Completion Time
- FAST, Use Case, etc, etc

Definitions

- **GANTT Chart**: A bar chart that is used to illustrate a project schedule. The tasks are placed on the vertical axis with the time needed for each phase being put on the horizontal axis.
- **PERT Chart:** A tool used to plan, organize, schedule and coordinate tasks within a project.

3. PROJECT DESCRIPTION AND SCOPE

The main objective of this project is to provide a computerized system for the BEAUT ART gallery to automate daily business processes and provide extensive business reporting to support business decisions. In addition the system should provide extensive Help functionality, backup functionality and data must be secured from unwanted access. Before the new system can be used in a production environment, all history data must be loaded from the existing Excel system. The FAST methodology, following several phases, will be used as a formal approach to develop and implement the system. The following functionality will be included in the scope of this project:

Functional requirement = a description of activities and services a system must provide inputs, outputs, processes, stored data

3. PROJECT DESCRIPTION AND SCOPE

The system must satisfy the following functional requirements:

- Maintenance of artworks (inventory)
- Maintenance of clients
- Maintenance of artists
- Maintenance of events
- Buying of artworks
- Selling of artworks, including delivery of the sold items
- Backup of data
- Extensive reporting, including History transactions per period, Monthly cost report, Client report, Artwork report, Purchases for a time period, Sales for a time period, Various management information reports in graphical format

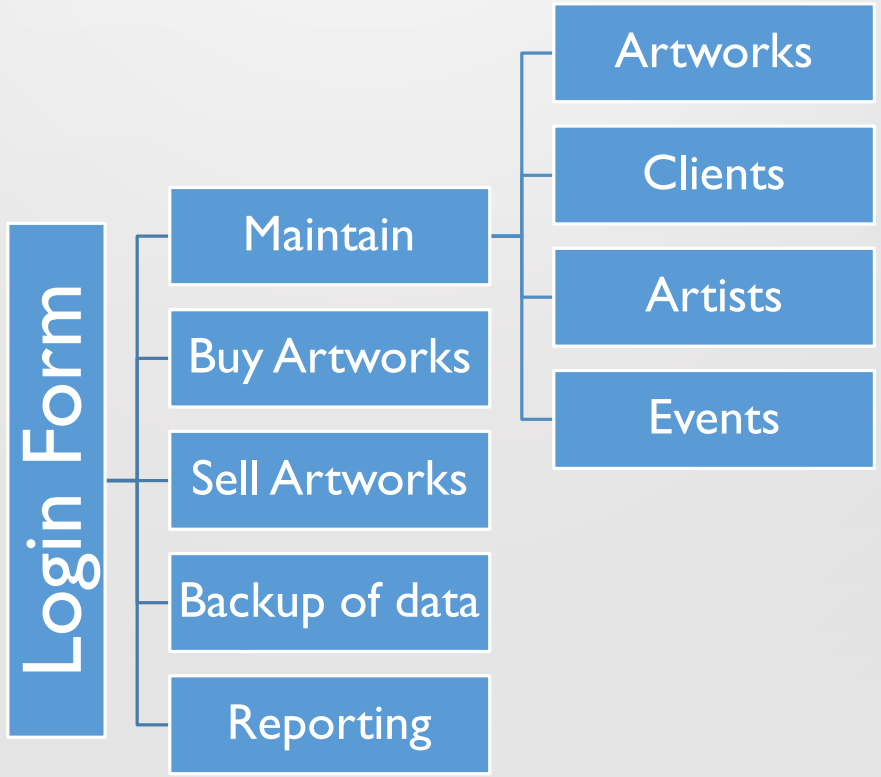
Non-functional requirements = descriptions of other features, characteristics, and constraints that define a satisfactory system (Qualities), e.g. performance, ease of learning and use, budgets, deadlines, documentation, security, internal auditing controls.

3. PROJECT DESCRIPTION AND SCOPE

In addition the system must satisfy the following non-functional requirements:

- Extensive Help functionality
- Provide unique identifiers (e.g. username and password) for each user to secure access to the system
- The database will be holding data for approximately 2000 artworks and 16 events attended by 200 guests each, per year.
- Queries on the database should take no longer than 3 seconds.
- The system will be used by 2 types of users. An administrator will have access to all functionality of the system and an assistant will have access to only specified functionality.

4. GRAPHICAL USER INTERFACE REQUIREMENTS



Do this for every scope item identified as part of the functional scope

4. FUNCTIONAL DATA, PROCESS and INTERFACE REQUIREMENTS

Maintenance of artworks (inventory)		
Add new Artwork		
Input Data	**Processing**	**Output**

• Description
• Artist ID (select artist name from list)
• Price Paid
• Sell Price
• Medium Code (select medium description from list)
• Width
• Length
• Image of artwork
	• If artworks from the same artist with similar description exist within the entered price range, give a warning message.
	• Validate that:
	  • all attributes have been entered
	  • Price Paid, Sell Price, Width and Length are numeric
	• After user has clicked on the *Save* button and no similar artwork exists, save the detail of the new
		• Warning message if similar artwork exists.
		• Message including the Artwork ID to indicate the new artwork has been successfully added.

Do this for every item identified as part of the functional scope

4. FUNCTIONAL DATA, PROCESS and INTERFACE REQUIREMENTS

Maintenance of artworks (inventory)		
Change details of existing Artwork		
Input Data	**Processing**	**Output**

• Artwork ID (select artwork description from list)
• Description
• Price Paid
• Sell Price
• Medium Code (select medium description from list)
• Width
• Length
• Image of artwork
	• Display all attributes of selected Artwork and allow user to change.
	• Validate that:
	  • all attributes have been entered
	  • Price, Width and Length are numeric
	• After user has clicked on the *Save* button and no similar artwork exists, save the detail of the updated artwork to the corresponding database table.
		• Warning message if similar artwork exists.
		• Message including the Artwork ID to indicate the new artwork has been successfully updated.

Do this for every item identified as part of the functional scope

4. FUNCTIONAL DATA, PROCESS and INTERFACE REQUIREMENTS

Maintenance of artworks (inventory)		
Delete existing Artwork		
Input Data	**Processing**	**Output**
• Artwork ID (select artwork description from list)	• Display all attributes of selected Artwork • After user has clicked on the *Delete* button remove the artwork from the corresponding database table.	• Message including the Artwork ID to indicate the artwork has been successfully deleted.

Do this for every item identified as part of the functional scope

4. FUNCTIONAL DATA, PROCESS and INTERFACE REQUIREMENTS

Buying of Artworks		
Input Data	**Processing**	**Output**
• Artwork ID (select artwork description from list)	• Execute **Add new Artwork** • Display all attributes of selected Artwork • After user has clicked on the *Save* button a new record is written to the *Sales* database table.	• Message including a unique Sales ID. • A hard copy Receipt document to be signed by the artist.

Do this for every item identified as part of the functional scope

4. FUNCTIONAL DATA, PROCESS and INTERFACE REQUIREMENTS

Backup of data		
Input Data	**Processing**	**Output**
• Click on *Backup Data* button	• Verify that external drive is connected and there is enough space available on the external drive • Close the database • Copy the database to the external hard drive • A new record is written to the *Backup Data Log* database table.	• Message to inform user to connect the external hard drive to the workstation • Message to inform user that backup has been successfully made or error has occurred

Categorize each requirement according to the PIECES framework, i,e

- Performance,
- Information and Data,
- Economics,
- Control or Security,
- Efficiency of People and Processes, Service to Stakeholders

5. NON-FUNCTIONAL REQUIREMENTS

REQUIREMENTS	PIECES CATEGORIES
Extensive Help functionality	**Efficiency of People and Processes**
Provide unique identifiers (e.g. username and password) for each user to secure access to the system.	**Security**
The database will be holding data for approximately 2000 artworks and 16 events attended by 200 guests each, per year.	**Performance** **Information and Data**
Queries on the database should take no longer than 3 seconds.	**Performance**
The system will be used by 2 types of users. An administrator will have access to all functionality of the system and an assistant will have access to only specified functionality.	**Control or Security**

This example is for a bookstore system to be developed

6. CANDIDATE SYSTEMS MATRIX

Characteristics	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
The portion of the bookstore's system that will be covered by the candidate. **A brief description of all of the aspects of the bookstore's system that would be computerized in this candidate.**	Everything is already covered by the candidate, but nothing will be computerized which means that it will be inefficient at best. Records will have to be taken by hand.	The candidate will be able to cover all of the bookstore's basic needs, except the ability to distribute fines.	A custom system will be created that will be able to cover all of the bookstore's needs. It will also be able to cover things that a pre-purchased system cannot, such as the addition of fine distribution and the feature that allows pupils to view their own bookstore profiles.
Benefits **A brief description of the business benefits that would be realized for this candidate.**	Negligible cost	The system can be implemented immediately but will lack core features such as (***Name the features or functionality not provided here*****). There is technical support available, however, there may be the possibility of waiting time. Most of the bookstore's needs are covered	The system is tailored to the bookstore's needs. Pupils will be able to log into their own accounts to view the books they own and see if they have any fines due. The system can be adapted in the future should the bookstore's needs change or extra needs arise. Technical support will be available for this candidate within a reasonable timeframe. Reports that are

This example is for a bookstore system to be developed

6. CANDIDATE SYSTEMS MATRIX (continues)

Characteristics	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Additional software **A description of the software needed to support the candidate's basic functions and capabilities.**	N/A.	The server will use Linux. PostgreSQL is needed to support the candidate's database.	Microsoft Access supports the candidate's database capabilities.
Servers and Workstations **A description of the servers and workstations needed to support this candidate.**	N/A. All of the textbooks' information is stored in physical form.	An entry-level computer with Linux installed is needed. The workstations can be comprised of entry-level computers with Microsoft Windows, Linux or Mac OS installed can be used. A barcode scanner is needed at the workstations to scan the books' ISBN codes into the database.	An entry level computer is required for the server and workstation computers. The computers must have a compatible version of Microsoft Windows installed. A barcode scanner is needed to scan the textbooks' custom barcodes.

This example is for a bookstore system to be developed

6. CANDIDATE SYSTEMS MATRIX (continues)

Characteristics	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Software Tools Needed **Software tools needed to design and build the candidate Not generally applicable if applications software packages are to be purchased.**	N/A.	N/A.	The candidate will be programmed in the C# language using Visual Studio 2017. The database(s) will be constructed in Microsoft Access. The candidate will be usable on any compatible Microsoft Windows.
Method of Data Processing **Generally, some combination of online, batch, deferred batch, remote batch, and real-time.**	Teachers search through a class list, find the pupil's name and then assign a book to the pupil or collect a book from the pupil.	All data is processed in real-time on a server.	All of the data will be processed in real-time on workstation computers. If a server is used, the server's database(s) will the also be updated when needed.

This example is for a bookstore system to be developed

6. CANDIDATE SYSTEMS MATRIX (continues)

Characteristics	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Application Software **A description of the software to be purchased, built, accessed, or some combination of these techniques.**	N/A. The textbook's owner is indicated by the class lists that teachers use.	This candidate system is a scalable library system that is used to circulate books between the library and its patrons. It also manages and catalogues these books. The library system, however, lacks the ability to distribute fines. It is possible to add features because the software is open source, however, it may still require some time to implement these additions. A fully functional system could also be created by combining the candidate with another system. It could also prove difficult to correctly implement these additions because of the difference in programming languages and styles. The needs of the bookstore also differ slightly from regular libraries.	Microsoft Windows may have to be purchased if it is not already owned. The candidate system will cover all of the bookstore's needs, such as: • The editing, removal and addition of pupil accounts in the database. • The editing, removal and addition of textbooks in the database. • The ability to fine pupil for any books that have been lost or damaged beyond further use. A barcode scanner will be used to scan a custom-made barcode that will be placed in the school's textbooks. This barcode will allow the bookstore to see which pupil currently owns which textbook. The textbooks will be unassigned from the pupil when the book is scanned again after it has been handed in. Other needs and expectations will also be covered.

This example is for a bookstore system to be developed

6. CANDIDATE SYSTEMS MATRIX (continues)

Characteristics	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Output Devices and Implications **A description of output devices that would be used, special output requirements, (e.g. network, pre-printed forms, etc.), and output considerations (e.g., timing constraints).**	N/A.	The output will be displayed in the system and will be viewable on a monitor.	The output from the system, such as reports, will be viewable on a monitor. It can also be viewed on Google's built-in PDF-reader. The PDF-generated reports can be viewed on mobile devices, meaning that it can be used even when users are constantly moving. The reports can also be printed out. The methods of displaying output are versatile.
Input Devices and Implications **A description of Input methods to be used, input devices (e.g., keyboard, mouse, etc.), special input requirements, (e.g. new or revised forms from which data would be input), and input considerations (e.g., timing of actual inputs).**	N/A.	A keyboard and mouse is required for basic GUI input. A barcode scanner is needed to add books to the system's database by scanning the ISBN of textbooks.	A keyboard and mouse is required for basic GUI input. A barcode scanner is needed to add or remove textbooks form a pupil's account.

This example is for a bookstore system to be developed

6. CANDIDATE SYSTEMS MATRIX (continues)

Characteristics	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Storage Devices and Implications **A brief description of what data would be stored, what data would be accessed from existing stores, what storage media would be used, how much storage capacity would be needed, and how data would be organized.**	The class lists containing the information about the textbooks are stored in files and/or cabinets. These lists can sometimes be lost.	All of the candidate's storage requirements are met with the use of a server. This means that even if a single workstation is being needed, a server is still essential. The workstation computer can be used as a server, but if the computer is entry-level it may be insufficient to work properly. Cloud storage (such as Dropbox) is also used to store data on storage devices over the internet.	The candidate's databases can be stored on a workstation computer's hard drive or on a central server if there are two or more workstations. This means that the system is versatile enough to be used for any number of workstations.

This example is for a bookstore system to be developed

6. CANDIDATE SYSTEMS MATRIX (continues)

Characteristics	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Output Software **The software needed by the system to display certain forms of output from the system.**	N/A	The candidate is independent of other output applications and formats.	The candidate produces most of its own output, but a PDF reader, such as Adobe Reader or Google's built-in PDF reading capabilities is required for viewing.

This example is for a bookstore system to be developed.

- Use own Weights, Candidates and Motivations
- Calculate own Scores
- Must have exactly the same candidates as in Cadidate System Matrix

7. FEASIBILITY ANALYSIS MATRIX

Description	Wt.	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Technical feasibility	20	This candidate can be used, but it cannot be changed by the project team. Score: 0	This candidate can be installed with relative ease, however, the adjustments that need to be made to the system could prove to be difficult because the project team is not familiar with the programming languages and database systems used by the system. This means that the editing of the system and its interfaces could take a considerable amount of time. Score: 40	This candidate will be programmed in a language and database software that is well-known by the project team. The project team's members have the required knowledge to design and program the entire system and all of its interfaces. Score: 80

This example is for a bookstore system to be developed

7. FEASIBILITY ANALYSIS MATRIX (continues)

Description	Wt.	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Operational feasibility	10	The candidate solution, which is currently in use at the school, will fulfil the users' requirements but is inefficient and susceptible to the loss of data. It has the inability of easily finding the pupils who still need to return their books. This candidate is time-consuming and is generally seen as a frustrating task by its users. **Score: 30**	This candidate will fulfil most of the system users' requirements, except for the fining system. The candidate will make the work environment more efficient and will decrease the teachers' workload greatly, which means that they can focus on their classes quicker. Books will now be assigned and collected from the school's bookstore. However, the system is complex and users may struggle to learn how to use it. Users may, however, place their trust in the system because it is well known. **Score**: **70**	This candidate will fulfil all of the system users' requirements and will include extra features that will allow pupils to view which books are assigned to them and if they have any fines due. The candidate will, like candidate 2, make the work environment more efficient and will decrease the teachers' workload greatly. The teachers can now focus on their classes sooner and don't have to struggle with the task of handing out their subjects' textbooks. The system will be created to have simple and easily usable interfaces, meaning that users will easily be able to use the system. A users' manual will also be included with the system's delivery. Technical services will also be provided. The system users may at first feel unsure about the ability of the system, which is an obstacle that must be overcome. **Score: 85**

This example is for a bookstore system to be developed

7. FEASIBILITY ANALYSIS MATRIX (continues)

Description	Wt.	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Risk feasibility	20	The system uses physical representations of data, which could be lost and damaged. **Score: 0**	There is a high probability that the implementation and adjustment of the system will be unsuccessful because the technologies are not familiar with the project team. **Score: 20**	The project team has a substantial amount of experience in the programming language and software used to create the system. The failure to implement the system successfully is low. **Score: 90**

This example is for a bookstore system to be developed

7. FEASIBILITY ANALYSIS MATRIX (continues)

Description	Wt.	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Economic feasibility	20			
The cost to develop:		N/A	Approximately R157 440 (excluding monthly costs)	Approximately R472 320
Payback period:		N/A	An unknown period of time. The system is an investment.	An unknown period of time. The system is an investment.
Net present value:		N/A	R104 960	R104 960
Detailed calculation:		N/A	See Attachment A	See Attachment A
		Score: 100%	**Score: 90%**	**Score: 60%**

This example is for a bookstore system to be developed

7. FEASIBILITY ANALYSIS MATRIX (continues)

Description	Wt.	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Schedule feasibility	10	If this candidate is chosen, no changes will have to be made. **Score: 10**	The team is not familiar with the programming language and software used, thus it cannot be guaranteed that the system will be completed within the scheduled time. Additional time may be needed to complete the system. (~3 months needed for adjustments) **Score: 40**	The candidate requires the project team to create all interfaces from scratch, thus by means of reverse scheduling and resource levelling the system can be will likely be completed in the scheduled time. (~9 months needed) **Score: 80**

This example is for a bookstore system to be developed

7. FEASIBILITY ANALYSIS MATRIX (continues)

Description	Wt.	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Cultural feasibility	10	The users show resistance to this solution. **Score: 0**	The users may show less resistance to this candidate, but may still be intimidated by this solution. **Score: 80**	The users may show resistance to this candidate, but this can be limited by tailoring the system to their needs and expectations. The system also covers the needs of pupils by providing them with information about their books and fines. **Score: 60**

This example is for a bookstore system to be developed

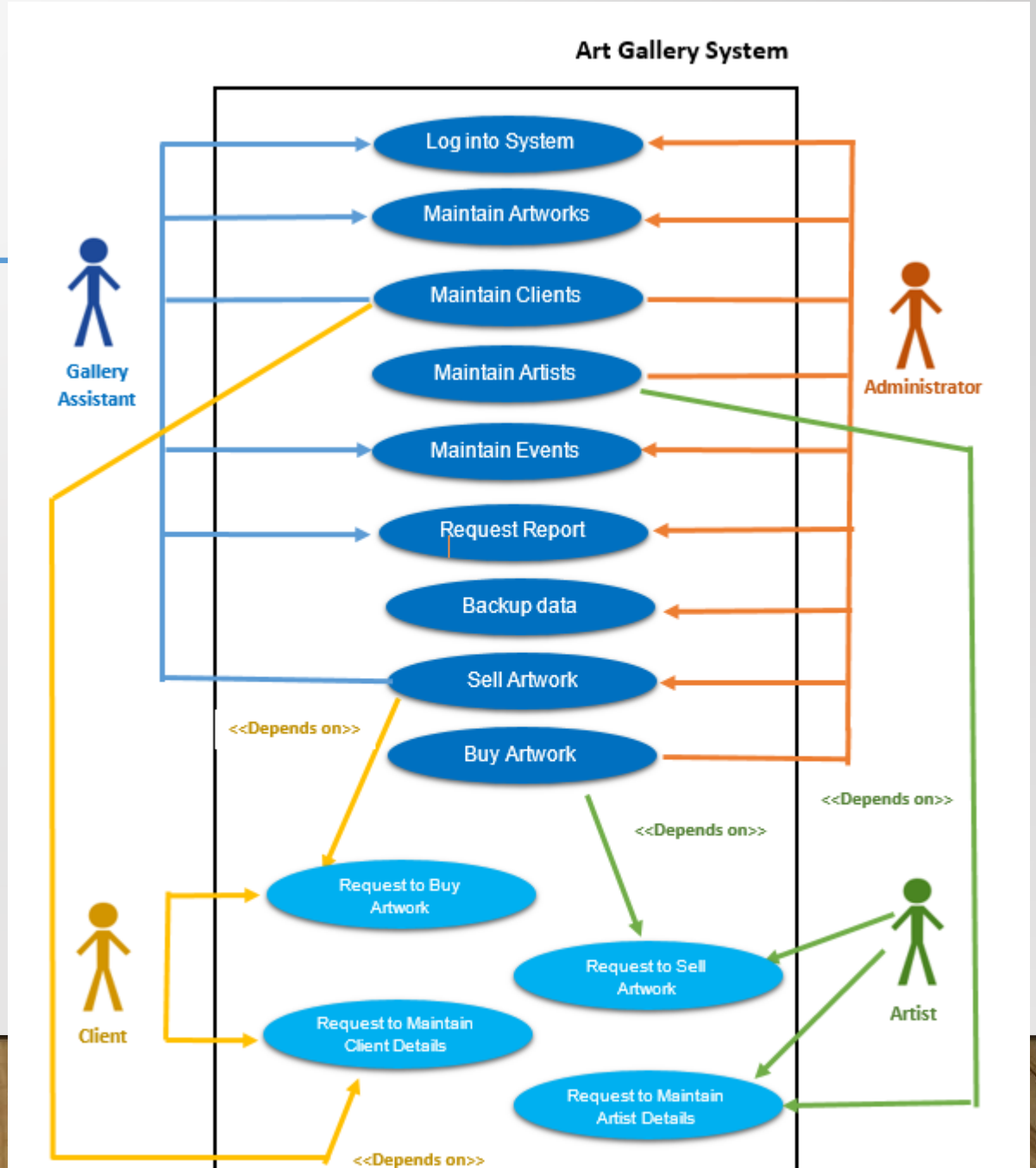
7. FEASIBILITY ANALYSIS MATRIX (continues)

Description	Wt.	Candidate 1 AS – IS	Candidate 2 COTS Package Software Solution (Evergreen ILS)	Candidate 3 Custom Designed Solution
Legal feasibility	10	There are no foreseeable legal problems with this candidate. **Score: 100**	There are no foreseeable legal problems with this candidate. **Score: 100**	There are no foreseeable legal problems with this candidate. **Score: 100**
Weighted feasibility	**100%**	**34%**	**59%**	**78,5%**

8. USE-CASE GLOSSARY

Use Case Name	Use Case Description	Participating Actors and Roles
Log into system	The event where a user get access to the system by providing a username and password.	Administrator(s) Gallery assistant
Maintain Artworks	The event where a new artwork will be added to the system, the details of an existing artwork is changed or an existing artwork is removed from the system.	Administrator(s) Gallery assistant
Maintain Clients	The event where a new client will be added to the system, the details of an existing client is changed or an existing client is removed from the system.	Administrator(s) Gallery assistant
Maintain Artists	The event where a new artist will be added to the system, the details of an existing artist is changed or an existing artist is removed from the system.	Administrator(s)
Maintain Events	The event where a new event will be added to the system, the details of an existing event is changed or an existing event is removed from the system.	Administrator(s) Gallery assistant
Buy artworks	This use case describes the event where new artwork is bought from an artist.	Administrator(s)
Sell artworks	This use case describes the event where artwork is sold to a client.	Administrator(s) Gallery assistant
Backup data	This use case describes the event where the database is backed up (copied) to an external hard drive.	Administrator(s)
Request report	This use case describes the event where a report is requested from the system and viewed on the screen. A hard copy can also be printed.	Administrator(s) Gallery assistant

8. USE-CASE MODEL DIAGRAM



9. EXAMPLES OF DATA, QUESTIONNAIRES AND FACT_FINDING TECHNIQUES USED

E.G. FOR INTERVIEW, INCLUDE INTERVIEW PLANNING DOCUMENT (ATTACHED)

Interview for system development

Interviewee: Piet Boysen, System owner and high school principal

Location: Randburg Highschool, Weltevreden Park, Johannesburg

Time:13:00

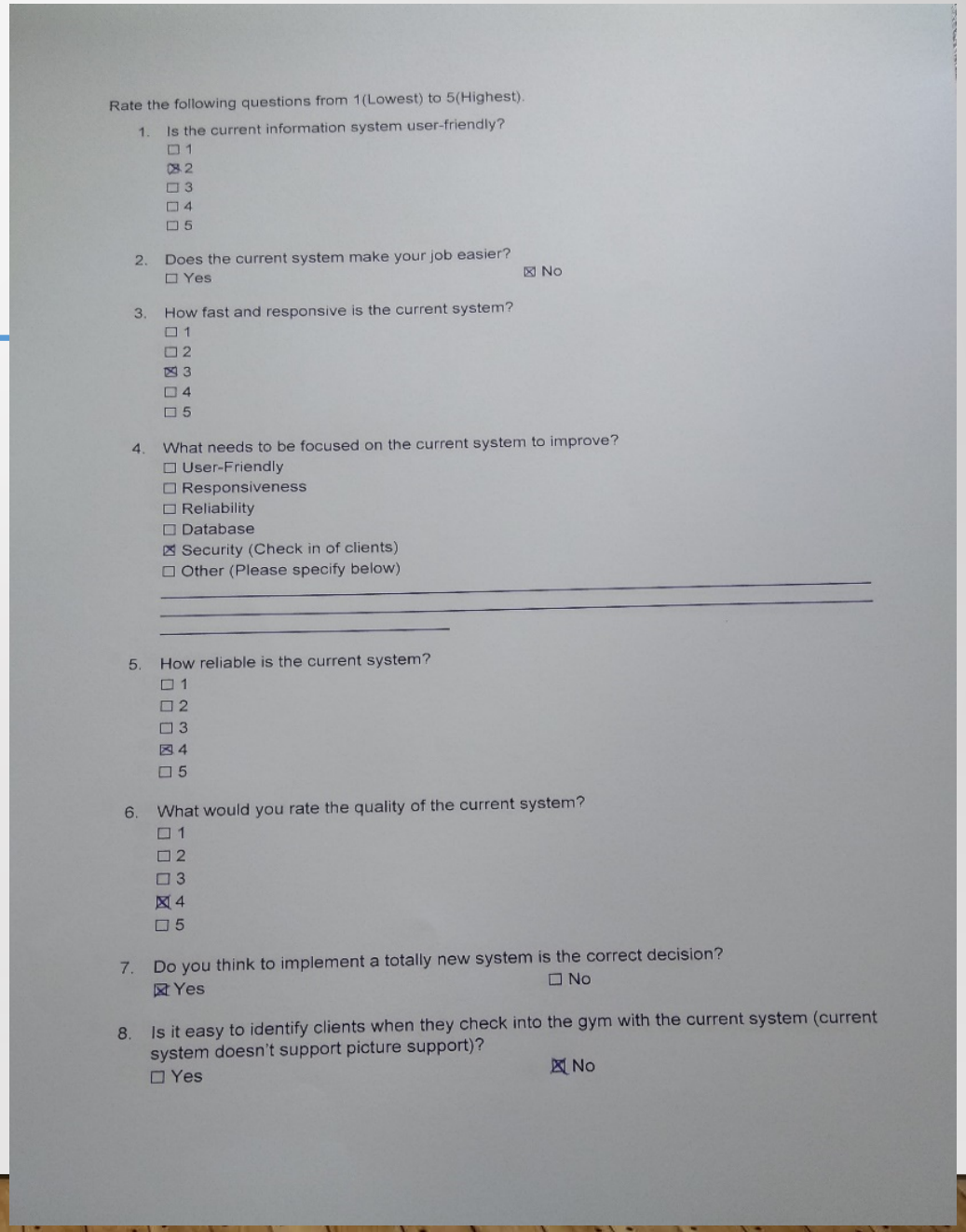
Date: 27 February 2018

Reason for interview: Gain user requirements and define system problems

Time Allocated	Interview Question/ Action	User response
2 Min	State the reason for the interview and also inform the owner what this information will be used for.	
4 min	Which system is currently implemented within your school to keep track of the government books that are lent to the pupils at the start of each year? (Follow up on the question if necessary)	The school currently uses a pen and paper method to document and assign books to students. Students receive the book and fill the book's unique information in by hand before they take the books.
4 min	What flaws are currently in your system that you wish for us to improve upon with the newly developed system?	Their system is currently incredibly time-consuming and labour intensive. Mistakes are also easily made since no verification is done and locating a specific book can be incredibly difficult.
4 min	If we were to develop a system would you be willing to pay a fee for us to maintain the system for you? A fully detailed budget can be given if required.	The school would be willing to pay a fee if it reasonable and affordable for the school so long as the system fulfils all of their requirements and is implemented on time.

9. EXAMPLES OF DATA, QUESTIONNAIRES AND FACT_FINDING TECHNIQUES USED

E.G. FOR QUESTIONNAIRES INCLUDE COMPLETED QUESTIONNAIRES



Rate the following questions from 1(Lowest) to 5(Highest).

1. Is the current information system user-friendly?
   - ☐ 1
   - ☒ 2
   - ☐ 3
   - ☐ 4
   - ☐ 5
2. Does the current system make your job easier?
   - ☐ Yes
   - ☒ No
3. How fast and responsive is the current system?
   - ☐ 1
   - ☐ 2
   - ☒ 3
   - ☐ 4
   - ☐ 5
4. What needs to be focused on the current system to improve?
   - ☐ User-Friendly
   - ☐ Responsiveness
   - ☐ Reliability
   - ☐ Database
   - ☒ Security (Check in of clients)
   - ☐ Other (Please specify below)
5. How reliable is the current system?
   - ☐ 1
   - ☐ 2
   - ☐ 3
   - ☒ 4
   - ☐ 5
6. What would you rate the quality of the current system?
   - ☐ 1
   - ☐ 2
   - ☐ 3
   - ☒ 4
   - ☐ 5
7. Do you think to implement a totally new system is the correct decision?
   - ☒ Yes
   - ☐ No
8. Is it easy to identify clients when they check into the gym with the current system (current system doesn't support picture support)?
   - ☐ Yes
   - ☒ No

9. EXAMPLES OF DATA, QUESTIONNAIRES AND FACT_FINDING TECHNIQUES USED

INCLUDE SUMMARY OF FINDINGS

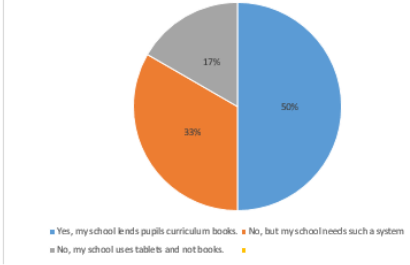
School Bookstore Research

A questionnaire with a summary of findings (Teacher perspective)

*One teacher per school was asked to complete the questionnaire.

1) Does your school have a program where they lend pupils curriculum books for the school year?

Answer:	Count:
Yes, my school lends pupils curriculum books.	3
No, but my school needs such a system.	2
No, my school uses tablets and not books.	1



2) What type of record system does your school use to keep track of books?

Answer:	Count:
Pen and paper are used to keep track of who gets what book.	3
My school uses an electronic system to hand out books and keep track of who gets what book.	1
My school uses tablets as books.	1
My school has no such system implemented.	1

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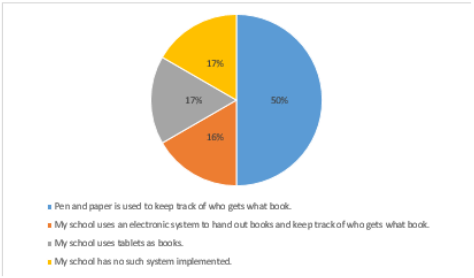
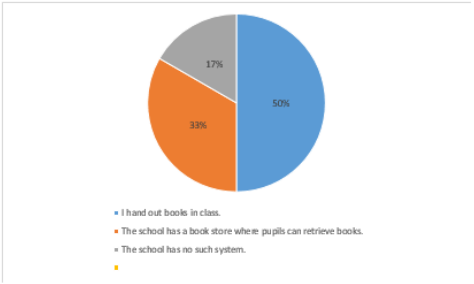


3) If "Yes" in question 1, how are the books distributed to students?

Answer:	Count:
I hand out books in class.	3
The school has a book store where pupils can receive books.	2
The school has no such system.	1



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10. SUMMARY, FUTURE & FURTHER PLANNING (PERT CHART)

This document covered the requirements for the Art gallery system. This concludes the Requirements Analysis Phase for the project. The Scope Definition, Problem Analysis and Requirements Analysis phases of the project have now been completed. After the acceptance of this Requirements document, the project team will proceed with the Logical Design phase of the project to be completed on 22 April 2019.

10. SUMMARY, FUTURE & FURTHER PLANNING (PERT CHART)