

Capstone Project Prep 1 part 3

Question 1: Identify minimum 20 Functional requirements.

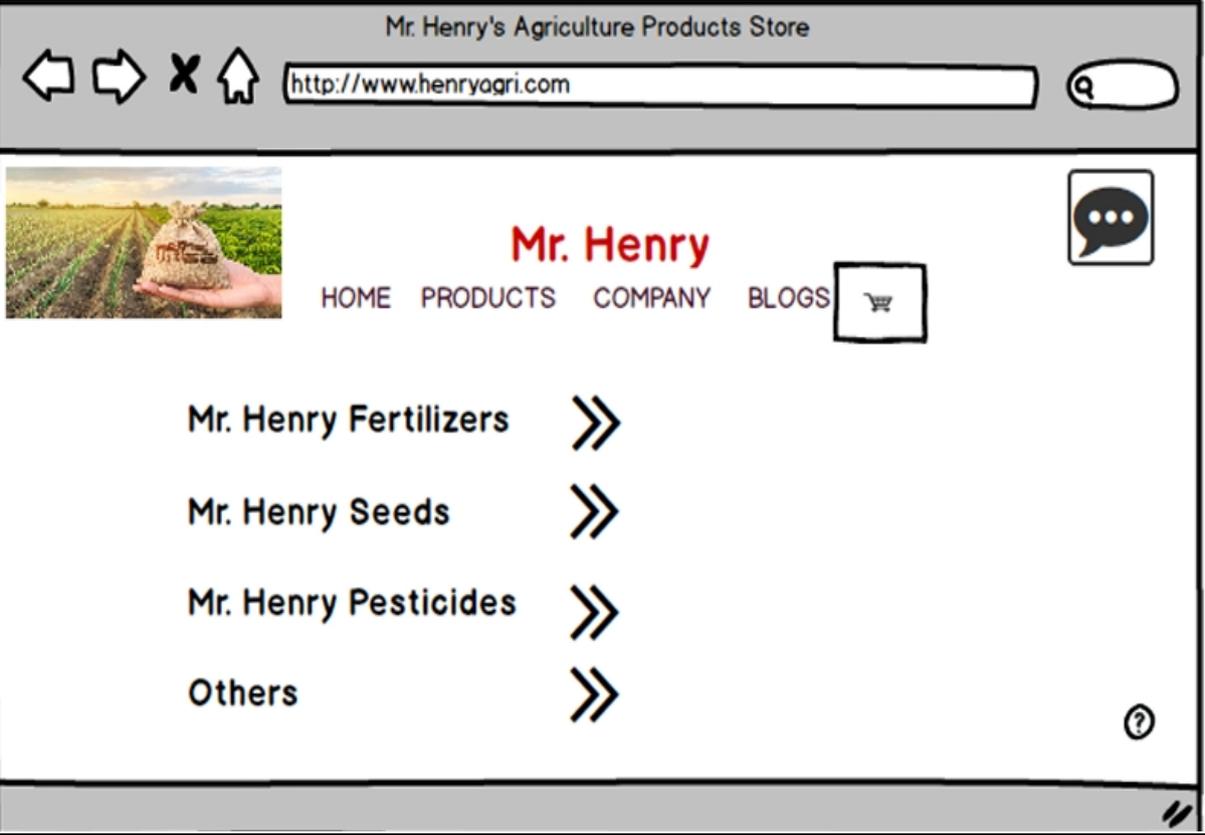
Functional Requirement - It defines the specific actions or behaviours that a system must perform to meet the users' needs and achieve business goals.

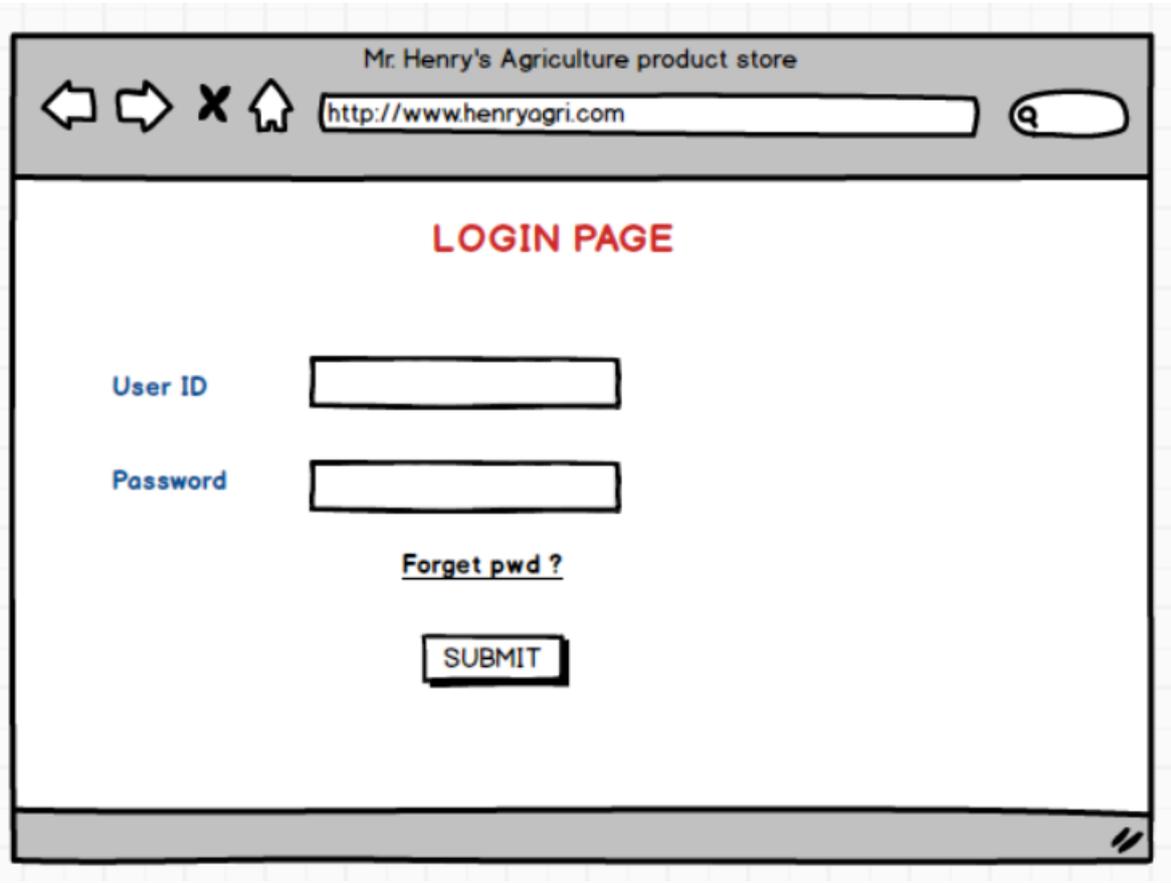
Non- Functional Requirement – It define the quality attributes and characteristics of a system, rather than specifying what the system does.

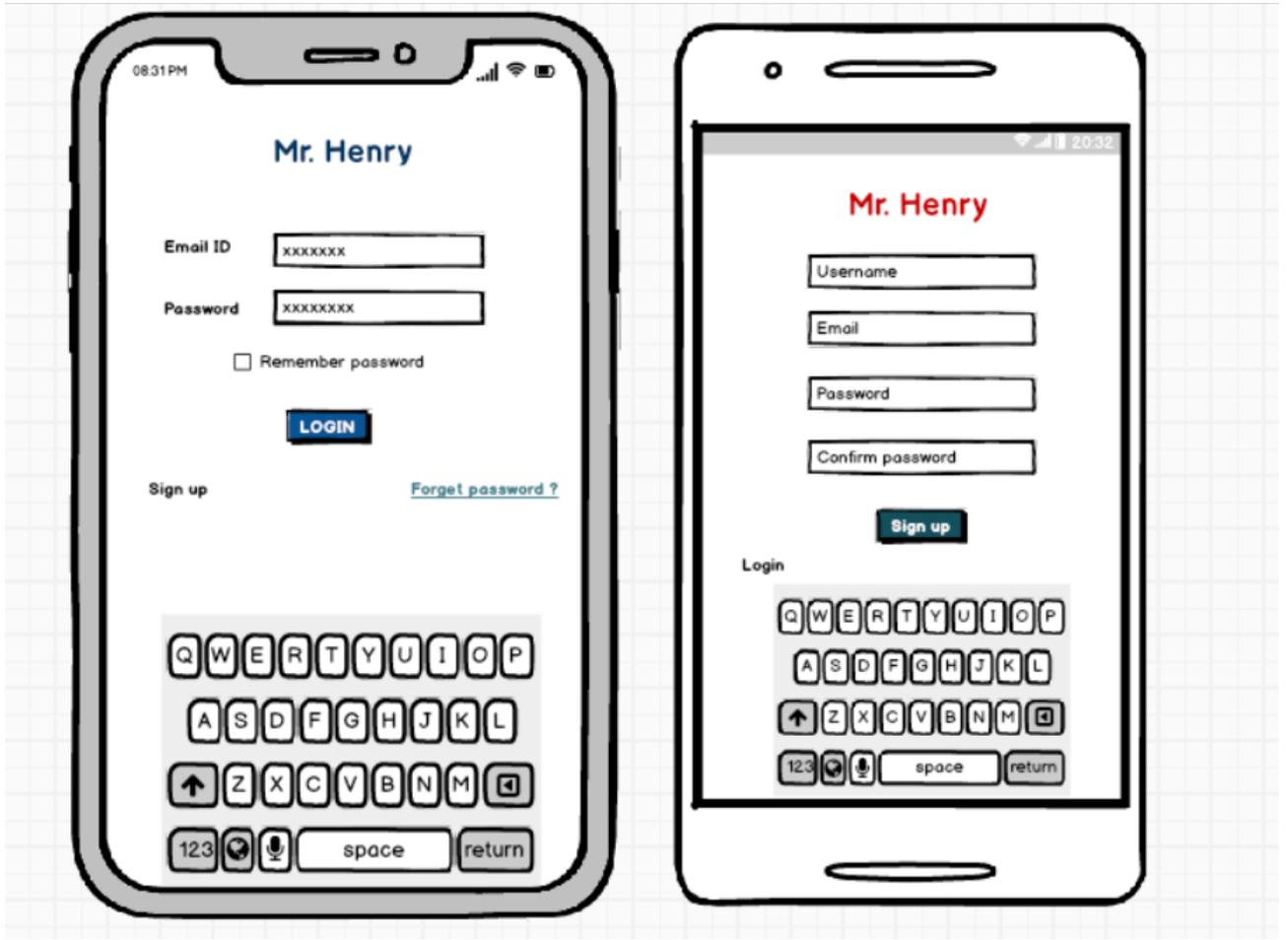
Requirement ID	Requirement Name	Requirement Description	Priority
FR0001	Farmer Registration	Farmers should be able to register with the application	8
FR0002	Farmers Search for products	Farmer should be able to search for available products like fertilizers, seeds, pesticides.	9
FR0003	Printer print the package slip	When an order is fulfilled, the local printer shall print a packing slip.	8
FR0004	Adding the product to the cart	Farmer should be able to add to cart once they select the product.	6
FR0005	Product tracking	Farmer should able must to track the ordered items.	7

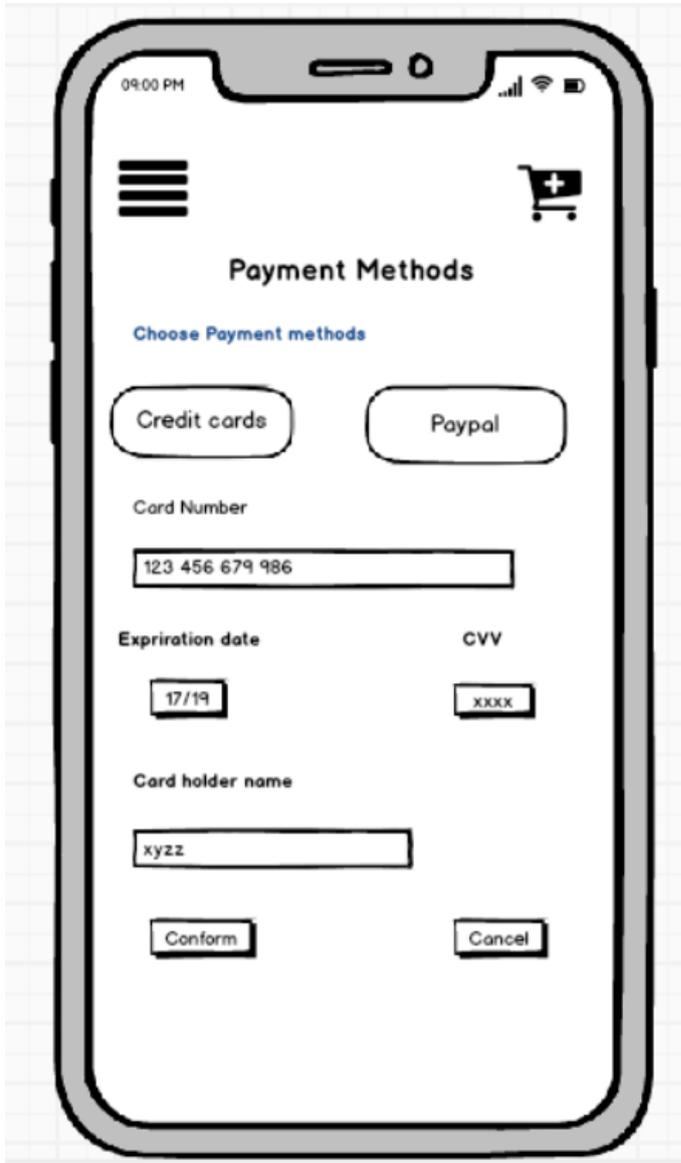
FR0006	New User Email Verification	For a new customer he has should do the email verification for the doing login.	6
FR0007	Payment option for The customer	The farmers should have the payment options either UPI, COD or through cards	5
FR0008	After Cancellation refund option	After cancellation the product refund to be followed	6
FR0009	Manufacturing tracking facility	When item is in the payment the OTP is send to registered mobile number.	7
FR0010	OTP initiation for payment	When item is in the payment the OTP is send to registered mobile number.	8
FR0011	Address update option	The farmers should be able to update his address every time of checkouts.	9
FR0012	Return policy	Availability of products return policy option/ cancelation of products in the application.	5
FR0013	Page loading time	Each page should load within 2 second time limit	6
NFR0014	Payment receipt	The farmer should get the receipt within hour of order.	7
NFR0015	Page timeout	After 15 min of activity the page will logout	7
NFR0016	Fascinating Home page	The home page should not contain much information and should look good	7
NFR0017	Quick payment options	Payment option should be quick and fast	8
NFR0018	Review options	After every order customer should be able to give review.	8
NFR0019	Security of data	Information of farmers could should not be shared	8
NFR0020	Web content accessibility guidelines (WCAG) 2.1	The system must meet web content accessibility guidelines WCAG 2.1	9

Question 2 – 5-page design (Wireframe and prototype)









Question:3 – Tools (MS Visio, Balsamiq)

Microsoft Office Visio -

Microsoft Visio is a powerful diagramming and vector graphics application that helps professional transform complex information into clear, visual representation. As a part of Microsoft family Visio enables users to create everything from simple flowchart to sophisticated network diagrams and architectural plans.

Microsoft Visio is diagramming software that allows users to create a wide variety of visual representation including flowcharts, organization charts, floor plans, network diagrams, UML diagrams, mind maps and more.

Following things can draw BA by using MS Office Visio.

1. Flowchart – A flowchart helps to show the step is sequential order. These are step that need to be taken to complete a certain process. It is effective in conveying information. Thus, it can be used in various other fields too.
2. Organization chart - An organization chart displays the roles and reporting relationships in a business organization. It can be used in also any other organization. It depicts the names and positions of employee in a company. In short, we can say it show the structure of an organization.
3. Floor Plans - A floor plans is a structure of a room or a floor. Architects use floor plans to place door, windows, and other objects. Visio also offers a floor plans template.
4. Business Process Modelling Notation – BPMN is a floor chart method of displaying all the process in a business that is to be taken. In other words, it is help in give a clear understanding of the processes in a particular business through visual representation.

Balsamiq –

Balsamiq Mockups is an effective tool for presenting the software requirements in the form of wireframes. This helps the software development team to visualize how the software projects will look like in the very early stage of development. This is a small tutorial where we will cover all the basics steps needed to start with Balsamiq Mock-ups.

Question 4 - RTM

ID	Req Name	Req Description	Design	D1	T1	D2	T2	D3	T3	D4	T4	UAT
FR0001	Farmer Registration	Farmer should be able to register with email Id or mobile in to the application	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FR002	Farmer search for products	Farmer should be able to search for the available products in fertilizers, seeds, pesticides.	✓	✓	✓	✓	✓	✓	✓	✓	✓	x
FR003	Product Selection	Farmer should be able to select the product as per need	✓	✓	✓	✓	✓	✓	✓	x	x	x
FR004	Farmer Compare the products	Farmer should be able to view various products on same screen for comparison purpose the product with other manufacturer	✓	✓	✓	✓	✓	✓	x	x	x	x
FR005	Filter	As per brand, price and crop etc. farmer should able to filter	✓	✓	✓	x	x	x	x	x	x	x
FR006	Finalize the Product	Farmer should be able to add his finalize product add to cart	x	x	x	x	x	x	x	x	x	x
FR007	Suggestion of products	After the finalize product application should display some suggestion products	✓	✓	✓	x	x	x	x	x	x	x

Question 5 – Test case design

1.

Test Case ID	PQ9437	Test Case Name	Login
Project ID	1234	Project Name	Farmer Websites
PMID	786	PM Name	Mr. Vandanam
Test Strategy ID	PQ9437	Tester ID	
Test Plan ID	PQ9437	Tester Name	
Test Schedule ID	PQ9437	Date of Test	

Scenario: Websites for online shopping of farm products, in that we have login we have 4inputs 3compulsory 1 optional and after the results are being shown

Link to that page

	Set 1				
Input Data	1.User ID 2.Password 3.OTP				
Expected behaviour	Home page/error page/pop ups				
Actual Behaviour	Home page/error page/ pops up				
Comments	Test was good				
Pass/fail	pass				

2.

Test case ID	PQ9437	Test case Name	New user
Project ID	1234	Project Name	Farmers websites
PMID	786	PM Name	Mr. Vandanam

Test Strategy ID	PQ9437	Tester ID	
Test Plan ID	PQ9437	Tester name	
Test Schedule Id	PQ9437	Date of Test	

Scenario: websites for online shopping of farm products, in that we have new user we have 1 4compulsary 1 optional and after that results are being shown.

Link to that page

Input Data	1.User name 2.Set password 3. Mail 4.Mobile OTP				
Expected Behaviour	Registered done and home page shows				
Actual behaviour	Home page comes				
Comments	Test was good				
Pass/fail	Pass				

3.

Test Case ID	PQ9437	Test case Name	Online purchasing
Project ID	1234	Project Name	Farmer website
PMID	786	PM Name	Mr. Vandanam
Test Strategy ID	PQ9437	Tester ID	
Test plan ID	PQ9437	Tester Name	

Test Schedule ID	PQ9437	Date of Test	
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Scenario: Website for online shopping of farm products, in that we perform online purchasing we have 1 compulsory 1 optional and after that results are being shown

Link to that page

Input Data	1.product name 2.filters				
Expected Behaviour	Product options				
Actual Behaviour	Different products pops				
Comments	Test was good				
Pass/fail	Pass				

4.

Test Case ID	PQ9437	Test Case Name	Product Availability
Project ID	1234	Project Name	Farmers websites
PMID	786	PM name	Mr. Vandanam
Test Strategy ID	PQ9437	Tester ID	
Test plan ID	PQ9437	Tester ID	
Test Schedule ID	PQ9437	Date of Test	

Scenario: Websites for online shopping of farm products, in that we should have products available in which we have 3 inputs 3 compulsory and after that results are being shown

Link to that page

Input Data	1.Manufacturing code 2.Password				

Scenario: Websites for online shopping of farm products, in that we should Have Payment Gateway in which we have 4 inputs 4 compulsory and after that result are being shown.

Link to that page

Input Data	1.Expiry 2.cvv 3.OTP 4.Name				
Expected behaviour	Transaction page				
Actual Behaviour	Same as expected				
Comments	Test was good				
Pass/ fail	pass				
Expected Behaviour	Stock information				
Actual Behaviour	Same as expected				
Comments	Test was good				
Pass/fail	Pass				

5.

Test Case ID	PQ9437	Test Case Name	Payment gateway
Project ID	1234	Project Name	Farmers Websites
PM ID	786	PM name	Mr. Vandanam
Test strategy ID	PQ9437	Tester ID	
Test plan ID	PQ9437	Tester name	
Test Schedule ID	PQ9437	Data of test	

6.

Test case ID	PQ9437	Test Case Name	Browse Products
Project ID	1234	Project Name	Farmers Website
PMID	786	PM Name	Mr. Vandanam

Test Strategy ID	PQ9437	Tester ID	
Test plan ID	PQ9437	Tester name	
Test Schedule ID	PQ9437	Date of test	

Scenario: Website for online shopping of farm products, in that we should have browse products in which we have 4 inputs 4 compulsory and after that results are being show.

Link to that page

Input Data	1.category 2.size 3.availability 4.price range				
Expected Behaviour	Different products options				
Actual Behaviour	Same as expected				
Comments	Test was good				
Pass/fail	Pass				

7.

Test case ID	PQ9437	Test Case Name	Experience rating
Project ID	1234	Project Name	Farmers website
PM ID	786	PM Name	Mr. Vandanam
Test Strategy ID	PQ9437	Tester ID	
Test plan ID	PQ9437	Tester Name	
Test Schedule ID	PQ9437	Date of Test	

Scenario: Website for online shopping of farm products, in that we should have browse products in which we have 4 inputs 3 compulsory and after that results are being shown.

Link to that page

Input Data	1.experience 2.name 3.phone number				
Expected Behaviour	Review done				
Actual behaviour	Same as expected				
Comments	Test was good				
Pass/fail	Pass				

8.

Test Case ID	PQ9437	Test Case Name	Product cancel
Project ID	1234	Project Name	Farmer website
PM ID	786	PM Name	Mr. Vandanam
Test Strategy ID	PQ9437	Tester ID	
Test plan ID	PQ9437	Tester name	
Test Schedule ID	PQ9437	Date of Test	

Scenario: Website for online shopping of farm products, in that we should have products cancel in which we have 2 inputs and click ok and after that results are being shown.

Link to the page

Input Data	Order Id Captcha				
Expected Behaviour	Order cancellation Page				
Actual behaviour	Yes, same as expected				
Comments		Test was good			
Pass/fail		Pass			

9.

Test Case ID	PQ9437	Test Case Name	Helpline
Project ID	1234	Project Name	Farmer Website
PM ID	786	PM Name	Mr. Vandaman
Test Strategy ID	PQ9437	Tester ID	
Test plan ID	PQ9437	Tester Name	
Test Schedule ID	PQ9437	Date of Name	

Scenario: Website for online shopping of farm products, in that we have helpline options in which we have 4 inputs and click ok and after that results are being shown

Link to that page

Input data	Name Number Query				
Expected behaviour	Call Person Calls you				
Actual behaviour	Same as expected				
comments	Test was good				
Pass/fail	Pass				

10.

Test Case ID	PQ9437	Test Case Name	Download payment receipt
Project ID	1234	Project Name	Farmer Website
PM ID	786	PM Name	Mr. Vandanam
Test Strategy ID	PQ9437	Tester ID	
Test plan ID	PQ9437	Tester Name	
Test schedule ID	PQ9437	Date of test	

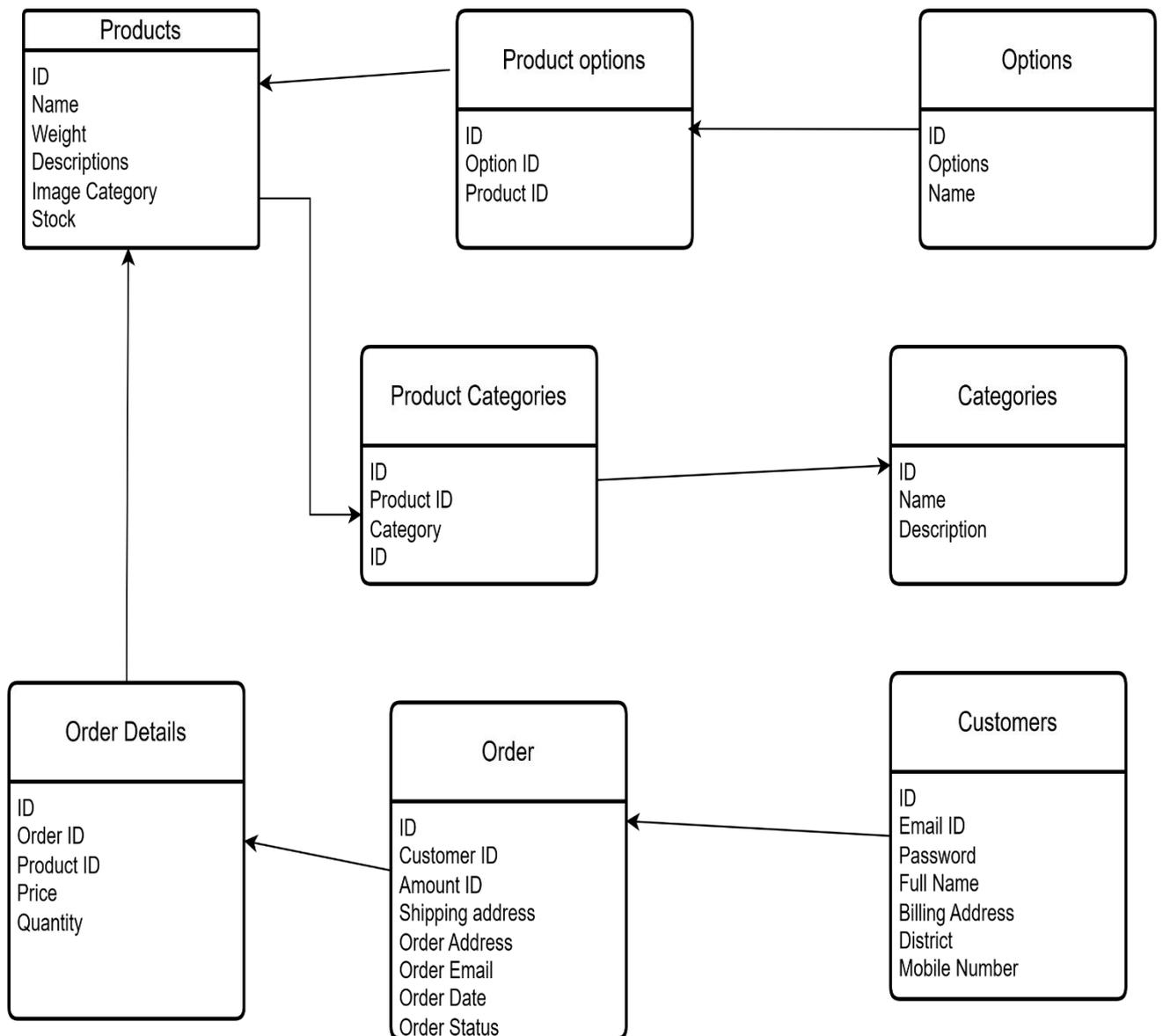
Scenario: Website for online shopping of farm products, in that we have payment receipt option in which we have 3 inputs and click ok and after that results are being shown

Link to that page

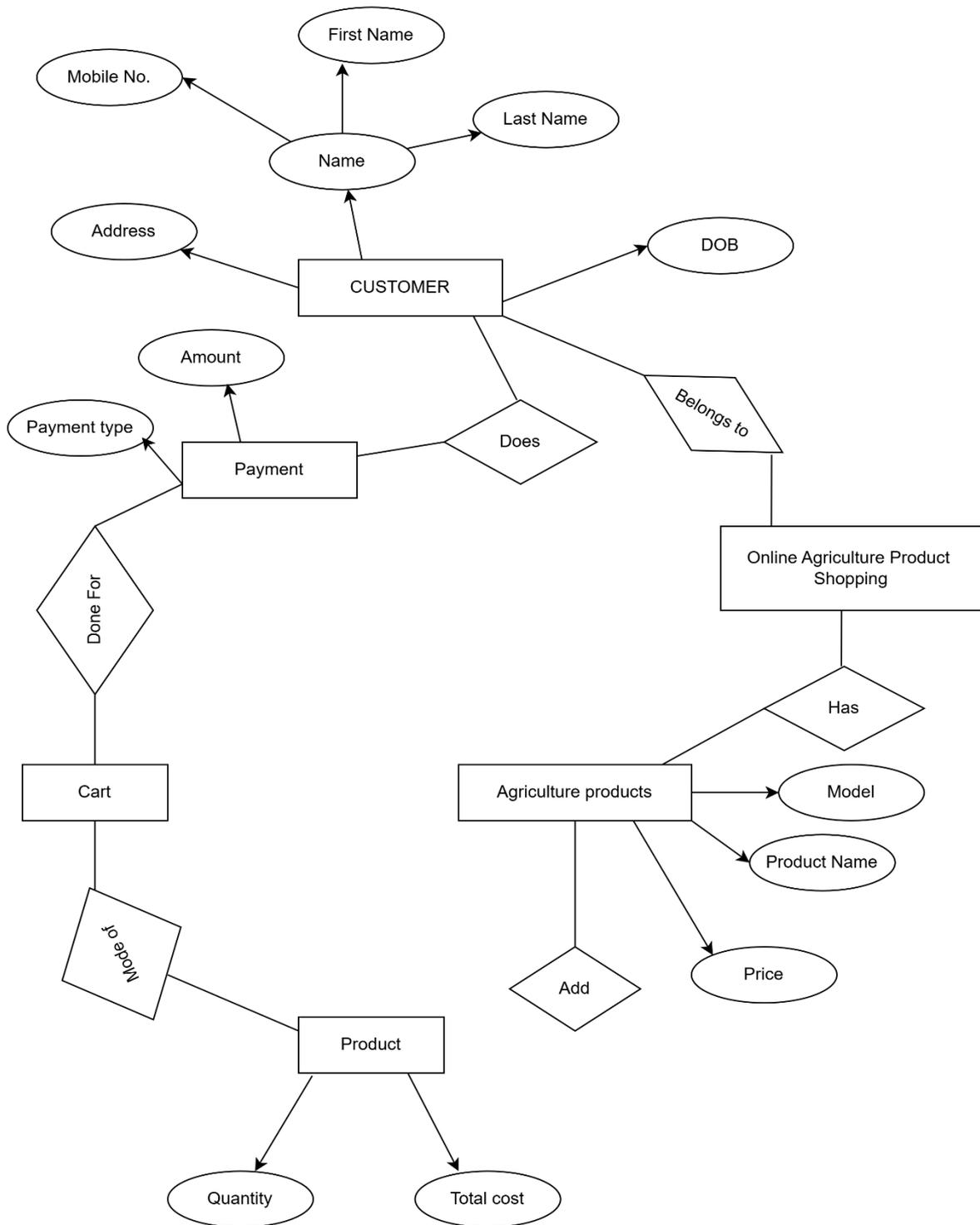
Input Data	Order Id captcha Password				
Expected behaviour	Shows payment receipt				
Actual Behaviour	Same as expected				
Comments	Test was good				
Pass/fail	Pass				

Question 6 - Database Design

Database design - Database design is a crucial component of business analysis that involves structuring data to support an organizations operation and decision-making processes. In the context of business analysis, it bridges the gap between needs and technical implementation.



ER Diagrams -



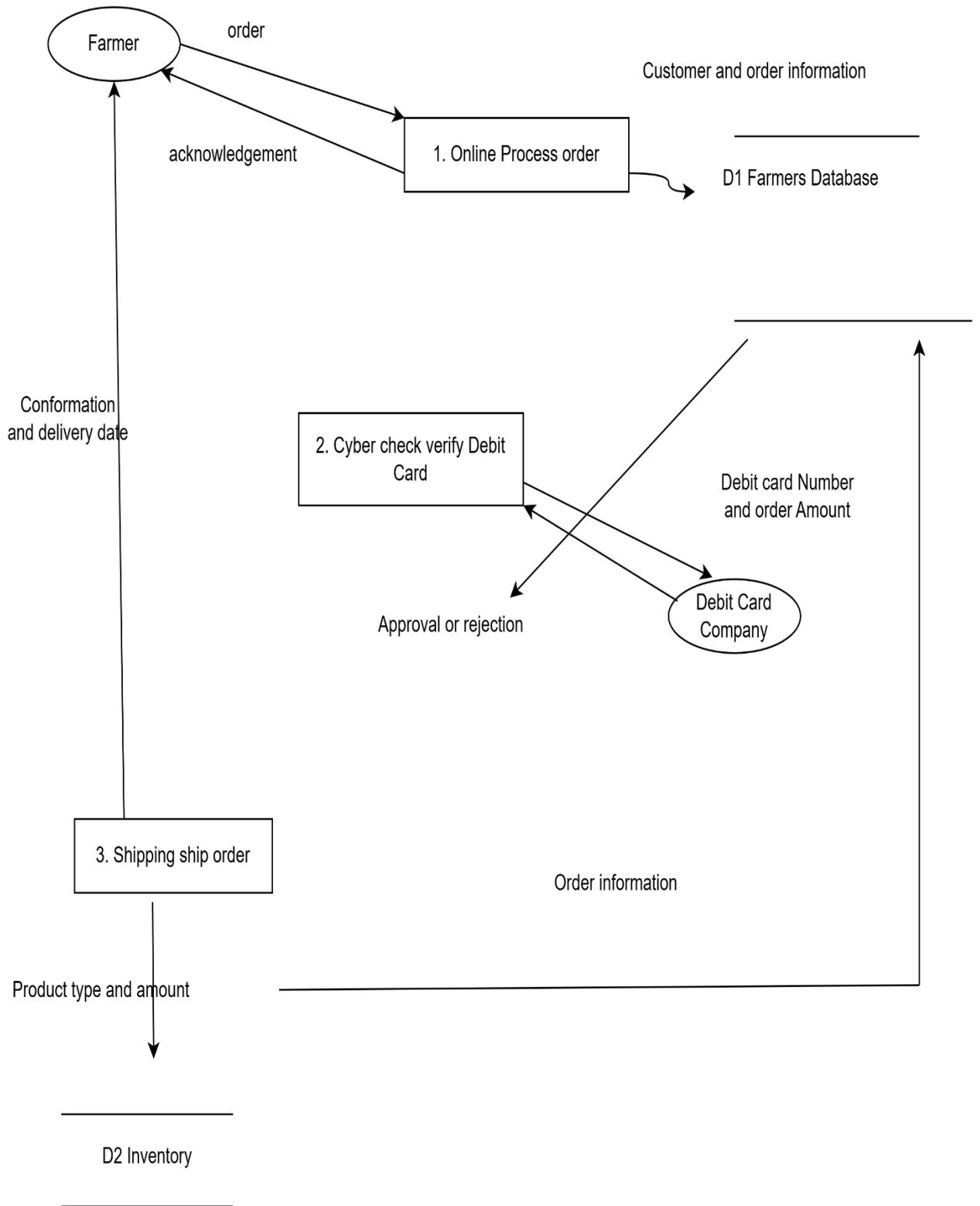
Question 7 -Dataflow Diagrams

Dataflow diagrams – A dataflow diagrams is a way of representing a flow of data through a process or a system. The dataflow diagrams also provide information about the outputs and inputs of each entity and the process itself. A dataflow diagram has no control flow there are no decision rules and no loops.

A dataflow diagrams is a visual representation of how data moves through a system or business process. It helps business analyst and stakeholder understand:

- Where data comes from (sources)
- How data is processed
- Where data is stored
- Where it goes

Dataflow diagrams are crucial in business process modelling, requirement gathering, and system design, as they provide a clear, structured way to communicate how information flows within an organization.



Question 8 – Change request

Change request – A change request is a formal proposal to modify a project scope, requirements, deliverables, timelines, or resources. In Business analysis change request are used to document and manage alterations to business needs, processes, or solutions after the initial requirements have been approved.

As a business analyst when I receive a request of change from the client due to change in government taxation structure, first I will analyse the request and clarifies exactly what the request is asking me to do in that agriculture products store. I will perform some activities to improvise and change the project as per the client requirement.

In which first I do Feasibility study

Basically, this is the first step I am as business analyst does whenever come across the change request. This Feasibility study helps me in answering the possible questions like “Are we supposed proceed with the proposed projects change requirement?” If yes, he will go accept the change request and goes to the impact analysis.

This change has occurred due to change in government taxation structure changes as BA we need to change privies taxation structure change.

When a change is requested, as a business Analyst I should follow the following steps. In simple terms.

1. First, I need to documented the change request.
2. BA identifies whether the change in the ongoing project is really worth it or not.
The taxation structure change by government is priority to consider point according to that I need to develop documents and into on-going sprints.
3. Project manager should approve the change request. If yes, the project will move furtherly. As a BA I will Take approval from PM and PO on email and forward this email to all team and done this change on priority basis.
4. Business Analyst along with the project manager ensures whether the change request is minor or a major change.
If the policy change by government the it is major change request according to government instruction, we need to make change within a given time.
5. If the new requirement is a major change, they make sure that it should not impact the delivery date of the project or any changes in the project scope.
6. Also try to help the other stakeholder to understand the importance of change request which helps to reduce the negative impact of the project.

Question 9 – Change request vs Enhancement

According to my understanding change request mean in any IT project we can change all process or we add new process or system instance of old removed. Enhancement is a part of change request. For example, we provide only service through web and we are not available at application services and we launch new application at android platform that change request.

Enhancement means add something new in existing process or system for example if farmer can process payment by only UPI and Debit card and now, we add new features farmer can pay payment by credit card and online banking.

According to IBM.com A change request is a proposal from a stakeholder in the software development process to change something in a product or in a product process.

According to IBM.com Common change request includes defects and request for products enhancements or new features.

As the project is in process, Ben and Kevin has contacted you. The reason is to informed you that they want the farmers to sell their crop yield through this application i.e. Farmers should be able to add their crop yields or products and display to general public and should be able to sell them. They also want to introduce Auction system for their crop yields. As a BA, what will be your response?

As BA I will check introduce new link in online agriculture product store Buy and sale product from farmers. And in that add auction link also farmers can able to sale their agriculture product to the farmers by location wise we are already into delivery service of small amount of agriculture products is sale by farmers then can choose delivery service through application also.

Question 10 - Estimations

In business analysis, estimation in man hours refers to the process of predicting the amount of time (measured in hours) that a task, project, or deliverable will require from one or more team's members. It is a traditional method used to quantify labour effort, allocate resources, and calculate projects costs.

Man-hours (or person- hours) – Represents the total labour time needed to complete a task.

Variables rates – Not all roles cost the same. A senior analyst hour may be billed higher than a junior. Total cost requires factoring in hourly rates.

- **PM** - \$130/Hr
PM work every month 60 Hr

Total work cost \$64800

- **Sol Architect** - \$55/Hr
Sol Architect work entire month 80 Hr
For entire project he works 1440 Hr
Total work cost \$115200
- **Programmers** - \$50/Hr
Programmers work every month 90Hr
For entire project he worked 1620 Hr
Total work cost \$145800
- **Sr. Programmers** - \$80/Hr
Sr. programmer works every month 85hr
For entire project he works 1530 Hr
Total works costs \$122400
- **Network Engineer** - \$80/hr NE work every month 65 Hr
For entire project he worked 1170hr
Total work costs \$93600
- **Database Admin** - \$80/hr
DBA works every month 70/hr
For entire project he works 1260 hr
Total work cost \$88200
- **Business Analyst** - \$60/hr
BA works every month 90Hr
For entire project he works 1620 Hr
Total work cost \$145800

Total man- hours Required for project = 9720 Hr

Total costs for the project = \$775, 800

Question 11: UAT

UAT – In business analysis UAT stands for user acceptance testing. It is the final phase of the software testing process where end users(clients) validate that the system meets their business requirement and is ready for production.

The business Analyst role is all about ensuring that online agriculture products store project delivers the value the business needs and expects. Actively participating in planning for and running user Acceptance Testing is an important way for the BA to ensure that value is indeed delivered.

I understand the functionality the system is supposed to delivered as such, have the knowledge needed to validate the system (confirm whether the solution meets business needs or not). The fact that a system has been built to specification does not make it automatically acceptable. UAT helps stakeholder to determine whether the system can be put to use in real-life business scenarios or not.

- Steps in UAT –

Analyse Requirement – Requirement should be analyzed and documented properly before conducting UAT sessions. Even the user agreed with the Software requirement specification, there will be change request after going through a UAT. That's where the users get the real look and feel of the system.

Identify major Test case scenarios and prepare the UAT plan – UA Test plan is the documents that outline to identify test case which validate the deliverables.

Create UAT test cases – Test case are the steps to the user to guide the system in testing. It's important to write the proper test cases to conduct a good UA Test. User case which identify in requirement elicitation can be used to write the UA test cases.

Run the Test - To run the UAT test cases, testers should be the real-world end users of the business.

Record the Test - When conducting a proper UAT scenario, it needs to be documented the progress and issues in a defect log. Defects need to be documented to evaluate and fix.

Confirm the business objectives are met – If the requirement hasn't met the product will send to further development. If there any change request from users, they will be hand over to the development.

UAT document created by business analyst.

UAT plan

UAT test cases

Defect Log (after conducting the UAT)

Challenges when conducting a UAT sessions.

UAT environment installation and proceeding. In some cases, it's difficult to allocate time from end users and their environment as not to distract the business process.

Problems can be arising when the test plan is not completed properly. UAT plan is one important document that need to be organized and accurate to conduct the UA test.

User with low business process knowledge and lack of training. When selecting testers, select end users with a good business knowledge.

I hope this article will help Business analysts and those who want to learn about UAT. Your review is mostly welcome.

Question 12 - Project Closure Document

In business analysis, Product closure documents are formal records that captures the final state of a product, project, or initiative at the time of its closure. These documents ensure that all stakeholders have a clear understanding of what was delivered, lessons learned, and any remaining actions.

The project closure document prepared the main purpose document of to make note note of what went wrong the correct approach adopted deposited vie and negatives during the project. Varies initiatives taken by the team issues face by the member and solutions obtaining in short, this document is existing of all positives negatives of the project which helps to avoid same mistakes in future projects it also helps to improve performance of the team member in future. In short closure report is a tool for management to access success of the project and its team members.

Project closure

Online Agriculture Product Store

Revision Date: MM/DD/YYYY

Submit the document to the Project Sponsor, Business owner, and PPMO/PMO Division, and archive this closure documents with the project artifacts once completed.

Approver Name	Title / Role	Signature	Date
Peter and Ben	Project Stakeholders	Ok	Xx/xx/xxxx
Mr. Henry	Executive Sponsor	Ok	Xx/xx/xxxx
Mr. Pandu	Financial Head	Ok	Xx/xx/xxxx
Mr. Vandanam	Project Manager	Ok	Xx/xx/xxxx
Mr. Kartik	Delivery Head	Ok	Xx/xx/xxxx
Mr. Dooku	Project Coordinator	Ok	Xx/xx/xxxx

By authorizing this project closure, the project champion, Projects stakeholders, and Executive sponsor agrees to all terms within this document.

Revision History

Identify document changes.

Version	Date	Name	Description
1.0	Xx/xx/xxxx	Mr. Henry	Ok to process

Section 1. General information

Project Activity	Date
Project start	(01/01/2025)
Project Closure	(31/07/2026)

Section 2: Business Deliverables

As identify in section 2.2 of the business case.

Business case Ref ID	Business Objective	Met/Not Met	Comments
BIOOO1	Farmer should able to buy and send agriculture products by online	Yes	Ok

In addition to the project specific goals and objectives identified by the project champion/project stakeholders.

Section 3: Customer Expectation Management

Item	Question	Description
1	Where all expected benefits and business outcomes realized?	Yes
2	Where all expected performance standards satisfied?	Yes

1 Date of project closure refers to the project finish date, meaning all project tasks have been completed

Item	Question	Description
Comments	ok	

Section 4: Outstanding Actions Items and Issues

Action Item and / or Issue	Transition and / or Resolution

Section 5: Project Office Checklist

Deliverable	Description
Risk Assessment completed and posted on suitable shared storage.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Business Case completed and posted on suitable shared storage	Yes <input type="checkbox"/> No <input type="checkbox"/>
Project Charter completed and posted on suitable storage.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Meeting Notes completed and posted on suitable shared Storage.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Additional project documentation and artifacts posted on suitable shared storage, including Requirement templates, projects change request, Milestone timelines, work Breakdown Structure etc.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Lessons Learned Documents	Yes <input type="checkbox"/> No <input type="checkbox"/>
Project folder moved completed-projects on suitable shared storage.	Yes <input type="checkbox"/> No <input type="checkbox"/>

<i>Deliverable</i>	<i>Description</i>
Support Handover Document completed archived and products to UCT Support Centre and Student Assistant centre.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Comments Ok to process application running properly	