Nurturing Process - Capstone Project1

Online Agriculture Products Store

Question 1 – BPM
Identify Business Process Model for Online Agriculture Store – (Goal, Inputs, Resources, Outputs, Activities, Value created to the end Customer?

ANSWER:

Goal: Provide customers with convenient access to high-quality agriculture products while supporting local farmers and distributors.

Inputs: Agriculture products from local farmers and distributors, Pesticides & Seeds list, Website platform, Payment processing system, Pesticides & Seeds list, manufactures login, farmers login.

Resources: Farmers, Manufacturers, Technology team, Mobile/Laptop, Customer service support team, Shipping carrier services.

Outputs: Completed customer orders, Processed payments and payment confirmations, Shipped products to customers.

Activities: Farmer Supplier Engagement, Payment Gateway, Integrated Logistics

Value created to the end Customer: Convenient access to high-quality agriculture products, Easy online ordering, Reliable shipping and delivery services, Customer service support for questions and issues, Easy and Instant availability of Agricultural products at Farmers Fingertips.

Question 2 – SWOT
Mr Karthik is doing SWOT analysis before he accepts this project. What Aspects he Should consider as Strengths, as Weaknesses, as Opportunity and as Threats?

Answer:

Strength: The delivery head is quite resourceful as he got the project through his own connection. Having good terms with the stakeholders is an added advantage. IT company is resourceful. All required manpower is available to make the project successful It's a well-established company, to handle and deliver the project on time with an experienced team. Advanced technology and IT hardware to deliver a successful project.

Weakness: Have to deal with stakeholders with less understanding of digital apps, which may lead to lots of vague or incorrect information from them. Target customers can be reluctant to use app because of not being familiar with digitization.

Opportunity: The budget is 2 crore which is a good amount to continue the project without any obstacle.

Threats: Threat of local sellers' objection as the online store will decrease their business. Local influencers like the village head etc. can negatively influence the farmers in order to get a bribe from us to let us continue the project.

Question 3 – Feasibility study
Mr Karthik is trying to do feasibility study on doing this project in Technology (Java), Please help him with points (HW SW Trained Resources Budget Time frame) to consider in feasibility Study?

Answer:

Hardware: laptop/desktop, printer, scanner, phone, projector.
Software: Strong broadband connection, Java and other necessary applications, Cloud storage**.**
Trained resources: Java developers, DB administrator, Business analysts, testers, network administrator.
Budget: 2crore
Time frame: 18 months

Question 4 – Gap Analysis
Mr Karthik must submit Gap Analysis to Mr Henry to convince to initiate this project. What points (compare AS-IS existing process with TO-BE future Process) to showcase in the GAP Analysis?

Answer:
AS IS: Farmers are struggling to get the pesticides easily, they had to travel to the city bearing travelling expense and not able to get good dealer in city, due to which they end up buying bad products at high prices. Still many required products or equipments are not available in the market.

TO BE: Farmers will be able search all kind of agricultural product in just one click across the globe and can make payment instantly via online payment method. Which is really hassle-free, in compare to go to bank and withdraw money. Added benefit is purchased product will be delivered at their door step at 0 delivery charges**.**

Question 5 – Risk Analysis
List down different risk factors that may be involved (BA Risks And process/Project Risks)?

Answer:

BA Risks:
>Improper information at requirement gathering
>The period of project development
>Choosing improper elicitation technique Relevant
>climate study for crops Change requests given by stakeholder in the last phase
>Multilanguage input for the farmers
>Coding and Java developer coordination are most important
> Easy payment gateway as well proper connection with delivery channel partner

Projects Risks:
>Farmers are not used to digital thing
>Low Internet speed of internet in remote areas, where farmers live
>Old farmers prefer to buy from the store only
>farmers return the product, saying not needed, in case of COD
>Multiple-time return or exchange of products.

Project Risks:
>No proper planning about project, Lack of clarity in roles and responsibilities
>Frequent changes in requirement, High complexity in implementation
>Improper Communication
>Scope Creep

Question 6 – Stakeholder Analysis (RACI Matrix)
Perform stakeholder analysis (RACI Matrix) to find out the key stakeholders who can take Decisions and Who are the influencers?

Answer:

PROJECT TASK	**BA (RUPESH)**	**SOONY COMPANY**	**PM (VANDANA M)**	**Kartik Delivery Head**	**MIKE& JOHN (ADMIN)**	**JASON & ALKEYA (TESTER)**	**PETER KEVIN BEN**
Budgeted Decision	R	C	I	A	I	I	C
Risk Factor	R	I	R	I	I	A	I
User Testing	A	I	I	C	I	R	I
Application Security	I	C	I	A	R	R	I
Delivery Tracking	R	A	I	I	C/R	I	I

BA	Business analysts work with organisations to help them improve their processes and systems. They conduct research and analysis in order to come up with solutions to business problems and help to introduce these systems to businesses and their clients.
Project Executive	The Project Executive is responsible for the part of the workplace management team that directly manages short- and long-term projects. Project Executives are typically responsible for developing strategic program and project goals and monitoring program and project performance.
Project Manager	Project managers (PMs) are responsible for planning, organizing, and directing the completion of specific projects for an organization while ensuring these projects are on time, on budget, and within scope.
Technical Architect	Technical architects are systems logistics specialists that design, implement, and maintain IT systems for business clients. They are responsible for designing the structure of new technology systems, overseeing the implementation of programs, and liaising with the software development team.
App Developers	An application developer's typical responsibilities include coding, designing, application management, troubleshooting, monitoring updates and possible security threats, and providing end user support. They may also handle some project management tasks on the journey to building a new application.
Decision Maker	Project Decision Making is the process whereby the project leader and project team decide upon project strategy, tactics, and acceptable actions. For Project Stakeholders, the decisions normally concern project boundaries. For Project Core Team members, the decisions normally concern project plans and execution.
Influencer	The project management term influencer refers to the particular person, group, or individual who, while not directly related to the project in question, not a member of the specific project team or a project team leader, and not a financial representative of the company that may be financially responsible for the project, nevertheless for one reason or another may bear significant influence or weight on the project in general, or to the acquisition and purchase of a number of activity related products and services in general.

Question 7 – Business Case Document
Help Mr Karthik to prepare a business case document?

ANSWER:

The Project	The farmers are currently facing problems in buying of fertilizers, seeds, pesticides. They are unable to procure them due to less accessibility as they stay at remote places. Hence to resolve their problems we need to develop an online portal where they can get all necessary products related to farms. AIM- to make availability of products to farmers by delivering them at right time through online portal. Bring them knowledge related to various products regarding farming. To make them available different range/variety of products related to farms.
The History	Farmers currently facing problem to buy fertilizer, pesticides and Seeds etc, due to which they are lacing to produce the expected production from their farms. The main reason is they all are staying in remote area where products are not available at ease.
Limitation	Weather condition: Due to poor weather condition storage issue can be occur. Delivery Option: Delivery issue is also challenging to find out person who can delivers products in remote area.
Approach	Usage of proper tools Availability of Product on App Application Developers
Benefits	Less Time consumption to purchase product Online trading of product through seller can happen Easy accessibility of product

Inclusions: A description of tasks, items, and actions that are specifically “included” in the project scope. For example, 200 employees, working hours of each, technology, remote area”
· Exclusions: A description of tasks, items, and actions are specifically “excluded” in the project scope.
· Assumptions: A description of tasks, items, actions, and circumstances that are assumed to be the case but have not been clearly defined or require further investigation.

Question 8 – Four SDLC Methodologies
The Committee of Mr. Henry ,Mr Pandu , and Mr Dooku and Mr Karthik are having a discussion on Project Development Approach. Mr Karthik explained to Mr. Henry about SDLC. And four methodologies like Sequential Iterative Evolutionary and Agile. Please share your thoughts and clarity on Methodologies?

ANSWER:
7 Stages of the System Development Life Cycle
There are seven primary stages of the modern software development life cycle. Here’s a brief breakdown:

1. Planning Stage- The planning stage is exactly what it sounds like: the phase in which Client will plan
for the upcoming project.
2. Feasibility or Analysis of Requirements Stage- The analysis stage includes gathering all the specific
details required for a new system as well as determining the first ideas for prototypes.
Teach team may:

- Define any prototype system requirements
- Evaluate alternatives to existing prototypes
- Perform research and analysis to determine the needs of end-users

3. Design and Prototyping Stage- The design stage is a necessary precursor to the main developer stage.
Design team will first outline the details for the overall application, alongside specific aspects, such as its:

- User interfaces
- System interfaces
- Network requirements
- Databases

4. Software Development Stage- The development stage is the part where Programmers actually write code and build the application according to the earlier design documents and outlined specifications.
5. Software Testing Stage- During the testing stage, Testers will go over their software with a fine-tooth comb, noting any bugs or defects that need to be tracked, fixed, and later retested.
6. Implementation and Integration- After testing, the overall design for the software will come together. Different modules or designs will be integrated into the primary source code through developer efforts, usually by leveraging training environments to detect further errors or defects.
7. Operations and Maintenance Stage- The SDLC doesn't end when software reaches the market.
Teach team must now move into a maintenance mode and begin practicing any activities required to handle issues reported by end-users.

Methodologies

1. Sequential (Waterfall)
    - Requirement Gathering – BA/PM
    - Requirement Analysis – BA/PM
    - Designing – Teach Team
    - Development – Developers/Programmers
    - Testing – Tester
    - UAT

2**. Iterative (Rational Unified Process RUP)**

- Business Modelling
- Requirements
- Analysis and Design
- Implementation test
- Deployment

3. Evolutionary (SPIRAL)

- Planning
- Risk Analysis
- Engineering
- Evaluation

4. Agile (SCRUM)

- Plan
- Design
- Develop
- Test
- Release
- Feedback

Question 9 – Waterfall RUP Spiral and Scrum Models
They discussed models in SDLC like waterfall RUP Spiral and Scrum .You put forth your understanding on these models

ANSWER:
Waterfall: A common SDLC model where each phase completes entirely before beginning of next phase. In the end of each phase, review takes place to determine if project is on the right path/to continue or discontinue.

RUP: An iterative SDLC model based on certain Building blocks like what exactly to be produced, skills required, step by step explanation of how specific goals to be achieved.

Spiral: An SDLC model with more importance to Risk Analysis where project passes though 4 phases: Planning, Risk Analysis, Engineering and Evaluation. A prototype is produced at the end of Risk analysis phase along with Testing

Scrum: A lightweight SDLC model to be implemented where faster delivery is required. It relies on Cross functional teams to deliver product/service in short span of time enabling

- Fast Feedback
- Continuous improvement
- Rapid Adaptation to change
- Quicker innovation

When the APT IT SOLUTIONS company got the project to make this online agriculture product store, there is a difference of opinion between a couple of SMEs and the project team regarding which methodology would be more suitable for this project. SMEs are stressing on using the V model and the project team is leaning more onto the side of waterfall model. As a business analyst, which methodology do you think would be better for this project?
ANSWER:
As a BA if I have to choose anyone between waterfall and V model, then will select V model, because under V model development and testing happens parallel and we can detect error at early stage

Question 10 – Waterfall Vs V-Model

20Write down the differences between waterfall model and V model.

ANSWER:

Waterfall	V Model
Cost is low	Cost is high
Flexibility of Model is Rigid	Flexibility of Model is little flexible
Testing post deployment	Testing happens in parallel manner
Guarantee of Success is very low	Guarantee of Success is very high
Continuous Process	Simultaneous Process

Question 11 – Justify your choice

As a BA, state your reason for choosing one model for this project?

ANSWER:

As a BA I will choose V model because it is very much flexible and all testing activity happens parallel with development activity hence it acts as a proactive defect tracking that is defects are found at early stage.

Question 12 – Gantt Chart

The Committee of Mr. Henry, Mr Pandu, and Mr Dooku discussed with Mr Karthik and finalised on the V Model approach (RG, RA, Design, D1, T1, D2, T2, D3, T3, D4, T4 and UAT) Mr Vandanam is mapped as a PM to this project. He studies this Project and Prepares a Gantt chart with V Model (RG, RA, Design, D1, T1, D2, T2, D3, T3, D4, T4 and UAT) as development process and the Resources are PM, BA, Java Developers, testers, DB Admin, NW Admin.

ANSWER:

Project Leader Mr. Vandanam	**GANTT chart for online Agriculture Store**																		
	Start Month	End Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Requirement Gathering	1	3																		
Requirement Analysis	4	5																		
Design	6	7																		
D1	8	10																		
T1	8	10																		
D2	11	13																		
T2	11	13																		
D3	14	15																		
T3	14	15																		
D4	16	18																		
T4	16	18																		
UAT	18	18																		

Question 13 – Fixed Bid Vs Billing

Explain the difference between Fixed Bid and Billing projects?

ANSWER:

Fixed bid model means budget and time is fixed whereas under billing model resources working in the project are billed to the client on hourly basis.
A fixed Bid pricing model is a model that guarantees a fixed budget for the project, regardless of the time and expense. The main advantage of a fixed Bid model is that it allows the client to plan and set an exact budget. Fixed bid pricing model approach is best suitable for projects with a strictly defined scope and requirements that won't change. Any changes will require additional estimation and additional contract. So, one of the main requirements of using the fixed bid pricing model is to precisely define the scope and technical requirements up front.

Billing Model is the simplest and most common recurring billing model. A product or service is provided for a single agreed price (per person/skill/task type etc if needed) and charged on a recurring basis. It provides some key advantages to both businesses and their subscribers. With a time and material contract, you're charged for an actual time spent on development by an hourly rate of each outsourced specialist involved. The projects based on the time and material model are Agile-oriented. As a rule, a vendor issues monthly invoices accompanied by reports to give you an integrated insight into the work completed.

The Committee freeze the Billing Model and agreed to release funds against the time sheets submitted for every 2 weeks. Every Alternate Friday EOB, Mr Karthik will forward the Development Team Time sheets and in 3 working days, The Committee will verify and release funds. The Committee proposed to have a Quarterly Audit on the Project progress.

Question 14 – Preparer Timesheets of a BA in various stages of SDLC

- **Design Timesheet of a BA**

Design Timesheet of a BA					
1st Jan 2022- 3rd Jan 2022					
	Sr No	**Task**	**start Time**	**End time**	**Hours**
Design	1	Log in and check mail	9.00 am	9.30 am	30 Min
	2	Analyse Software requirement specification	9.30am	11.30am	2 Hours
	3	Prepare Design of Network Database	11.30 pm	12.30 pm	1 Hours
	4	Analyse technical details to know which technologies have to use	12.30 pm	1.30 pm	1 Hours
	5	Lunch Break	1.30 pm	2.30 pm	1 Hours
	6	Prepare logical plan with Techinical Architect & Developers	2.30 pm	3.30 pm	1 Hours

	7	Discuss logical plan which is reveiew by all stakeholders	3.30 pm	4.30 pm	1 Hours
	8	Design a contingency, training, maintenance, and operation plan.	4.30 pm	5 .30 pm	1 Hours
	9	prepare a design document which will be used during next phases. & log off	5.30 pm	6.00 pm	30 Min
			Total Hours		9 Hours

- **Development Timesheet of a BA**

Development Timesheet of a BA					
1st Jan 2022- 3rd Jan 2022					
	Sr No	**Task**	**start Time**	**End time**	**Hours**
Development	1	Log in and check mail	9.00 am	9.30 am	30 Min
	2	Took all design document and tranform them into actual system	9.30am	11.30am	2 Hours
	3	Build the technical architecture, database & Program	11.30 pm	12.30 pm	1 Hours
	4	Analyse technical details to know which technologies have to use	12.30 pm	1.30 pm	1 Hours
	5	Lunch Break	1.30 pm	2.30 pm	1 Hours
	6	start to code as per the requirements and the developed design.	2 .30 pm	3.30 pm	1 Hours
	7	observe database setup by database admin	3.30 pm	4.30 pm	1 Hours
	8	develop unit tests for their module	4.30 pm	5 .30 pm	1 Hours
	9	execute unit tests & Logg off	5.30 pm	6.00 pm	30 Min
			Total Hours		9 Hours

- **Testing Timesheet of a BA**

1st Jan 2022- 3rd Jan 2022					
	Sr No	**Task**	**start Time**	**End time**	**Hours**
Testing	1	Log in and check mail	9.00 am	9.30 am	30 Min
	2	Did quality check on developed software and find all requirement are met	9.30am	11.30am	2 Hours
	3	Write the test condition and perform the testing of the system.	11.30 pm	12.30 pm	1 Hours
	4	validate whether the application addresses all User Requirements, technical performance.	12.30 pm	1.30 pm	1 Hours
	5	Lunch Break	1.30 pm	2.30 pm	1 Hours
	6	the focus to find the defects in technical test	2.30 pm	3.30 pm	1 Hours
	7	report error to Test Management tool	3.30 pm	4.30 pm	1 Hours
	8	Check error are valid or invalid with Defect Life cycle	4.30 pm	5 .30 pm	1 Hours
	9	Did testing approach again & Logg off	5.30 pm	6.00 pm	30 Min
			Total Hours		9 Hours

- **UAT Timesheet of a BA**

UAT Timesheet of a BA					
1st Jan 2022- 3rd Jan 2022					
	Sr No	**Task**	**start Time**	**End time**	**Hours**
UAT	1	Log in and check mail	9.00 am	9.30 am	30 Min
	2	Identify UAT testers	9.30am	11.30am	2 Hours
	3	Planning UAT tests	11.30 pm	12.30 pm	1 Hours
	4	Create a separate test plan for each type of User who will participate in UAT	12.30 pm	1.30 pm	1 Hours
	5	Lunch Break	1.30 pm	2.30 pm	1 Hours
	6	Give the tester appropriate instructions for testing each business scenario	2.30 pm	3.30 pm	1 Hours
	7	check the system operates as required and handles data and computations correctly	3.30 pm	4.30 pm	1 Hours
	8	ensure that each requirement should tested by all users	4.30 pm	5 .30 pm	1 Hours
	9	Collect feedback from Users & Logg off	5.30 pm	6.00 pm	30 Min
			Total Hours		9 Hours

- **Deployment n Implementation Timesheet of a BA**

Deployment n Implementation Timesheet of a BA					
1st Jan 2022- 3rd Jan 2022					
	Sr No	**Task**	**start Time**	**End time**	**Hours**
Deployment n Implementation	1	Log in and check mail	9.00 am	9.30 am	30 Min
	2	Write detailed user documentation and provide training for the system user	9.30am	12.30pm	3 Hours
	3	Ensure the application continues to function, while the deployment is in progress.	12.30 pm	1.30 pm	1 Hours
	4	Lunch Break	1.30 pm	2.30 pm	1 Hours
	5	Deploying the build to production	2.30 pm	4.30 pm	2 Hours
	6	Validate project is in exsiting application or not	3.30 pm	4.30 pm	1 Hours
	7	Find out prodcution deployment time prepare date and logg off	4.30 pm	6.00 pm	1 Hours 30 min
			Total Hours		9 Hours