**CAPSTONE PROJECT 1 Q&A**

**ONLINE AGRICULTURE PRODUCT STORE**

**Q1 Identify Business Process Model (BPM) for online agriculture store – (goal, inputs, resources, outputs, activities, value created to the end customer)**

Answer:-

 **Goal –** To build user friendly online store for buying and selling agriculture products.

**Inputs-** Customer Data ,Trained Employees , Marketing Campaigns, Seller, Buyer, Online store.

**Resources-** Internet connectivity, mobile, laptop, products range, marketing media, funds, business knowledge, ideas, strategy, JAVA , CDM,

**Output**-Consumers can directly purchase agriculture products from seller from different locations using online web/ mobile application.

**Activities-** Login to application

Enable shoppers to search for product options and find specific brand items,

Add to cart followed by check out.

Payment options, once payment accepted the product to be deliver to buyer’s selected address

Return and exchange option

Refunds and cash backs

**Value created to end customer-**  easy solution for buyers to purchase online agriculture products available for 24x7, help customer to save time & traveling cost.

For seller its best possible value cost for the product or service.

**Q2 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:-

**STRENGTHS :** All the internal factors which leads to organization success.

Good IT team and professionals available

Fingertip services easy to use

Pricing benefit, product selection, shipping return policy

One can shop for variety of products

No crowd no rush Saving time and money for travelling

**WEAKNESS**: Internal factors which act as barriers to project like

Art to develop application to provide user friendly app

Limit time to finish the project

New Domain for user

Internet connectivity issue

Required huge funds for marketing activity

Missing touch and few perishable products

Shipping cost, cost of maintaining product in warehouse

Customer feedback and support

**OPPURTUNITUES**: All the external factors which leads to success of the product

Growing market globally

Market Exposure

New market for fruits and vegetable for farmers

Changing trends and digitalization

Wide business growth and opportunities

**THREATS**: Anything that can negatively affect business from outside

Politicians

Third Party Stakeholders

New policies to be introduced by govt.

Data and privacy concerns, security

Risk, competitors like retail shop owners

Weather effect flood and dry land

**Q3 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:-

**Technical feasibility**: Hardware and Software, existing new technology, manpower

**Financial feasibility**: Initial investment, resources to procure capitals: bank, venture capitalist, investors

**Market feasibility**: Type of industry, demand and supply of products

**Organizational feasibility**: Staff contract or using permanent resources within 18 months with the cost of 2cr.

**Q4 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 PROCESS:** As of now client is facing difficulties and need to go to retail store for procuring fertilizers, seeds, pesticides, and other agriculture products which is important for farming. This is time consuming and slow process.

**TO BE PROCESS**: To avoid manual buying agriculture product client decided to make an online ecommerce portal for online agriculture store.

A farm to shelf marketplace connecting small farmers to commercial produce buyers, online,

anywhere and anytime

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anywhere and anytime

A farm to shelf marketplace connecting small farmers to commercial produce buyers, online,

anywhere and anytime

Marketplace connecting buyers and sellers for agriculture product buys online, anywhere, anytime which saves time and give fast services.

**GAP:** The manual payment process also introduces procedural inefficiencies such as delays in payment settlement to merchants. To overcome this issue agriculture e-commerce can integrate mobile money services into their platform.

OUTCOME: Reduce wastage; improve income, increase productivity, convenient & user friendly method.

**Q5 RISK ANALYSIS**

**List down different Risk factors that may be involved (BA Risks And process/Project Risks)**

ANSWER :-

**Logistics**: Agriculture ecommerce requires a logistic network to facilitate the physical movement of goods. A lack of logistics infrastructure can cost agriculture ecommerce businesses and prevents the expansion of services into new regions.

**Perishability**: Agri product such as fruits and vegetables can only be stored for limited time before it deteriorate in quality. As a result agri ecommerce business can balance the demand and supply on their platforms.

**Cash on delivery payments**: Farmers depend on middle man for support beyond selling their produce. As a result Farmers can get direct payment from buyers.

**Others**: Quality of products sold on application

Checking it accordingly certain standards.

Handling customer complains

Costing of product will increase on long distance relationships

**Q6 STAKEHOLDER ANALYSIS:**

**Perform stakeholder analysis (RACI Matrix) to find out the key stakeholders who can take Decisions and who are the influencers**

ANSWER:-

There are mainly three stakeholders as below

**Business stakeholder:-** Mr.. Henry, Peter, Kevin and Ben, other farmers and manufacturing companies.

**Project stakeholder:-**

Mr. Pandu ( Financial Head)

Mr. Dooku ( Project Coordinator)

Mr. Vandanam (project Manager)

Ms. Juhi (Senior Java Developer),

Mr. Teyson, Ms Lucie, Mr. Tucker, Mr. Bravo( Java Developers),

Mr. Mike (Network Admin),

Mr.John (Data base Admin),

Mr. Jason and Ms Alekya (Tester).

Mr. Karthik (Delivery Head)

**Third party stakeholder: -** Competitors, Deliver agents

**RACI Matrix-**

R- Responsible /Mr. Dooku

A-Accountability /Mr. Pandu

C- Consultant /Peter, Kevin and Ben

I-Informed /Henry

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| --- | --- | --- | --- | --- |
|  | **Project Manager** | **BA** | **Design Team** | **Testing Team** |
| **BRD** | **A** | **R** | **I** | **I** |
| **Mockup Design Templates** | **I** | **A** | **R** | **I** |
| **Test Plan** | **I** | **A,C** | **I** | **R** |
| **Project Plan** | **R,A** | **C** | **I** | **I** |

**Q7 : BUSINESS CASE DOCUMENT**

**Help Mr.. Karthik to prepare a Business case document**

ANSWER:-

CAPSTONE PROJECT PREP 1 PART 1

 The aim of business case is to convenience decision makers that a particular course of

action will result in the best outcome for an organization.

Q-Why is this project initiated?

Ans- This project is initiated to to solve the problem of remote areas farmers so that they can buy and sell their product easily

Q- What are the current problems?

Ans- Current problem is non availability of raw material to farmer and limitation of buying and selling

Q-With this project how many problem could be solved?

Ans- With this project we can solve various problems such as availability of raw material to farmers , Selling of products globally, benefit to company by making the application , people can buy products directly from farmers on best rate , It will be beneficial for all

Q –What are the resources required?

Ans- Internet connectivity, mobile, laptop, products range, marketing media, funds, business knowledge, ideas, strategy, JAVA , CDM

Q-How much organization change should be required to adopt this technology?

Ans- A team should be build , Including Sponsors and stakeholders.

There should be brief and convey only the essential required in the document to make appropriate and understandable.

It needs to make the business case much more Interesting, clear, and concise so that it won’t make bore to the other party in understanding point of view.

It needs to communicate & specialize the business case vision across the organization.

Q-How to identify stakeholders?

Ans- Stakeholder can be identify through various techniques such as RACI Matrix, Brainstorming , Review documents, Stakeholders analysis technique , etc.

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**Q8 4 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:-

Let us put light on SDLC Methodologies & Models that are as follows:

* Sequential- (Waterfall)
* Iterative- (RUP\_ Rational Unified Process)
* Evolutionary- (Spiral)
* Agile- (Scrum)

**Now, let us discuss all the 4 SDLC Methodologies in Detail:**

**SEQUENTIAL- (Waterfall)**

* This is the most common models of life cycles.
* It is very simple to understand and use
* It works well for smaller projects as requirements are very well understood.
* In waterfall model, each phase must be completed entirely before the next phase begins.
* At the end of each phase, a review takes place to understand that whether the project is on right path or to discard the project.

**Iterative- (RUP)**

* The Rational Unified Process (RUP) is based on set of building blocks, or content elements, describing what is to be produced, the necessary skills required and the step by step describing how specific development goals are to be achieved
* It includes 6 Engineering disciplines i.e. “Business Modeling, Requirements, Analysis, Design, Implementation, Test, Deployment.
* It requires 3 supporting disciplines i.e. “Project Management, Change Management, Environment.
* This model is utilizing for long term project

**Evolutionary- (Spiral)**

* The Spiral Model gives light on more of risk analysis. It basically has 4 phases i.e. “Planning, Risk Analysis, Engineering, Evaluation. A software project repeatedly go through these phases in Iterations called Spiral in this model.
* It requires high cost to use and It is good to use for larger projects.
* It requires high risk in using this in a project, which requires high level expertise people to use this model in a Project.

**Agile- (Scrum)**

* It refers to the Light weight model of SDLC. It is used, where the fast and quick delivery is required.
* It requires no documentation work in itself and is quite easy and comfortable to use.
* It explains the total of 12 principles and the only software of SDLC that has 12 principles in it and is famous for the same (Scrum).

**Q9: 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**

**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 Business Analyst working into the same organization, I would suggest the idea given

by SME’S and would support them in their decision to go with V Model instead of Waterfall

Model.

There are certain Reasons:

* Debugging can be done in between the phases in V model where as in Waterfall Debugging is done after the last phase, as per the critical case study of a project, it is essential to aim for project completion on time. So debugging is crucial as we can find and resolve the errors whenever required in between the phases.
* Identification of Defects can be Identified from the beginning in V model but in Waterfall, Identification of Defects can be done in testing. But we can’t take a risk of ignoring defects as the aim is project completion with the duration. So this is also one of the Important point to be noted.
* V Model requires more customer involvement than compared to waterfall model.
* In V Model there is one more possibility to test the software during It’s development but in Waterfall, there is no possibility in testing software during development.
* Overall, every project needs a successful completion with in duration time period and If I compare the “Guarantee of Success” is high in V Model but, in Waterfall Model, its less than V-Model.
* Rather, in all aspects V-Model and Waterfall model is same. There is such difference that needs to be highlighted.

However, as a BA I would recommend the idea of SME’S for the successful project completion, V-Model would be better for this project.

**Q10: WATERFALL VS V MODEL:**

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

ANSWER:-

The difference between Waterfall Model and V model is described below:

Waterfall Model

* The waterfall Model is quite simple in use.
* There is no way to return to the earliest phase.
* Re-usability of waterfall model is limited in nature.
* Guarantee of success in waterfall model is low.
* It requires less customer involvement.
* Debugging is done in last phase of waterfall model

V-Model

* V-model is intermediate in use
* There is no such constraint in V-model.
* V-model can be reuse for some extent.
* Guarantee of success in V-model is high.
* It requires more customer involvement. ‘
* Debugging can be done in between phases.

However, Both Waterfall model & V-model both are sequential execution process.

**Q11 : JUSTIFY YOUR CHOICE**

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

ANSWER:-

As a BA I would recommend the V-model methodology for this project as:

* Before starting a project every one aims for the success of project whether the stakeholders, sponsors, or team mates who are aligned for the project, so here in VModel Guarantee of success is high
* V-model requires more customer involvement and overall, if the customer involvement would be high then, definitely it would engage more customers and the project may goon heights.
* Debugging or correction of errors can be done easily in every phase, this will result better on completion.

So, as per my opinion V-model would be best for this project.

**Q12: GANTT CHART**

ANSWER:-

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | Months  | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
|   | Requirement gathering  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | Requirement Analysis |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S | Design |  |  |  |  |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D | Development 1 java  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| L | Test plan and test case  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C | QA-testing  |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   | Development 2 java  |  |  |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |
| V | Test plan Test case  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M | QA-testing  |  |  |  |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |  |  |  |  |  |  |
| O | Development fi java |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |  |  |  |
| D | Test plan and test case  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |
| E | QA-testing  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |  |  |
| L | Development 4 java |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |  |  |  |  |
|   | Test Plan and Test cases |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |
|   | QA-testing  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |  |  |  |
|   | UAT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |  |  |
|   | UAT Sign off |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |  |
|   | Production Deployment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
|   | Training  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |

**Q13: FIXED BID VS BILLING**:

**Explain the difference between Fixed Bid and Billing projects**

ANSWER: In fixed bid project the requirements are frozen at the start of project. In billing project the requirements for MVP are defined at the beginning. The MVP can be broken down into user story for clarity.

In fixed billing the resources estimation for the entire project is done beforehand. In billing the resource requirements vary based on the user stories and changes introduced.

In FB the cost of developing the entire product is estimated once the requirements are frozen. In billing efforts are estimated based on the resources required to develop each user story.

In FB model change management cannot be accommodated. In billing model change management are accommodated easily and timelines are flexible.

In fb model timeline to develop entire model is predefined and contractually bound. In billing model timelines for individual iterations are defined.

**Q14 - Prepare Timesheets of a BA in various stages of SDLC**

* **Design Timesheet of a BA**
* **Development Timesheet of a BA**
* **Testing Timesheet of a BA**
* **UAT Timesheet of a BA**
* **Deployment n Implementation Timesheet of a BA**

**ANSWERS: TIMESHEETS OF BA:**

|  |
| --- |
| **Requirement gathering** |
| **Sno** | **Tasks**  | **Actionable items** | **Start Time** | **End Time** | **Duration** |
| 1 | Identify the stakeholder Meeting | List down the stakeholders | 10:00 AM | 12:00 PM | 2 hours |
| 2 | Requirement Gathering | Collecting all the requirements | 12:00 PM | 1:00 PM | 1 hour |
| 3 | Break | Lunch | 13:00 | 14:30 | 1.5 hours |
| 4 | Stake holder analysis | Analysis and understanding the stakeholders | 14:30 | 16:00 | 1.5 hours |
| 5 | Featuring the inputs for BRD documents | Ask for BRD from client and SME Discussion | 16:00 | 18:00 | 2 hours |
| 6 | Brainstorming to be done | Working on the template | 18:00 | 19:00 | 1 hour |
| 7 | MOSCOW prioritize requirements | Working on must should could would requirements | 19:00 | 20:00 | 1 hour |
|  |  |  |  |  |  |
| **Requirement Analysis** |
| **Sno** | **Tasks**  | **Actionable items** | **Start Time** | **End Time** | **Duration** |
| 1 | Meeting | Discussion on the previous requirements | 10:00 AM | 12:00 PM | 2 hours |
| 2 | UML Diagram | Working on UML Diagrams | 12:00 PM | 1:00 PM | 1 hour |
| 3 | Break | Lunch | 1:00 PM | 2:30 PM | 1.5 hours |
| 4 | Functional Requirements | Preparing all the functional requirements | 2:30 PM | 4:00 PM | 1.5 hours |
| 5 | SRS discussion | SRS wil have both functional and technical requirements | 4:00 PM | 6:00 PM | 2 hours |
| 6 | Prepare SRS before design | Preparing of SRS before design | 6:00 PM | 7:00 PM | 1 hour |
| 7 | Trace Requirements | Tracing all the requirements | 7:00 PM | 8:00 PM | 1 hour |
|  |  |  |  |  |  |
| **Design** |
| **Sno** | **Tasks**  | **Actionable items** | **Start Time** | **End Time** | **Duration** |
| 1 | Meeting | Discussion of til now work | 10:00 AM | 12:00 PM | 2 hours |
| 2 | Test case preparation | Working on test cases | 12:00 PM | 1:00 PM | 1 hour |
| 3 | Break | Lunch | 1:00 PM | 2:30 PM | 1.5 hours |
| 4 | Communicate with client for design | Expalaininh design to the client | 2:30 PM | 4:00 PM | 1.5 hours |
| 5 | Update RTM | Working on RTM | 4:00 PM | 18:00 | 2 hours |
| 6 | Use case suggested solution | Working on use case solution | 6:00 PM | 7:00 PM | 1 hour |
| 7 | Show design | Showing of design D1 D2 D3 D4 | 7:00 PM | 8:00 PM | 1 hour |
|  |  |  |  |  |  |
| **Development** |
| **Sno** | **Tasks**  | **Actionable items** | **Start Time** | **End Time** | **Duration** |
| 1 | Meeting  | Discussion of til now work | 10:00 AM | 12:00 PM | 2 hours |
| 2 | JAD sessions  | Organizes JAD sessions | 12:00 PM | 1:00 PM | 1 hour |
| 3 | Break  | Lunch | 13:00 | 2:30 PM | 1.5 hours |
| 4 | Update RTM | Working on RTM | 2:30 PM | 4:00 PM | 1.5 hours |
| 5 | IT client meetimg |  Conductiing meeting with IT client | 4:00 PM | 6:00 PM | 2 hours |
| 6 | UAT participation | Turns client for participation for UAT | 6:00 PM | 7:00 PM | 1 hour |
| 7 | UAT preparation result  | Check result for UAT preparation | 7:00 PM | 8:00 PM | 1 hour |
|  |  |  |  |  |  |
| **Testing** |
| **Sno** | **Tasks**  | **Actionable items** | **Start Time** | **End Time** | **Duration** |
| 1 | Meeting | Discussion of til now work | 10:00 AM | 12:00 PM | 2 hours |
| 2 | Test case preparation | Preoare test case for use case | 12:00 PM | 1:00 PM | 1 hour |
| 3 | Break | Lunch | 1:00 PM | 2:30 PM | 1.5 hours |
| 4 | Preaparing high level testing | Working on high level testing | 2:30 PM | 4:00 PM | 1.5 hours |
| 5 | Uodate RTM | Working on RTM | 4:00 PM | 6:00 PM | 2 hours |
| 6 | Test to client  | Show test to client | 6:00 PM | 7:00 PM | 1 hour |
| 7 | End user manual | Update end user manual | 7:00 PM | 8:00 PM | 1 hour |
|  |  |  |  |  |  |
| **UAT** |
| **Sno** | **Tasks**  | **Actionable items** | **Start Time** | **End Time** | **Duration** |
| 1 | Meeting | Discussion of til now work | 10:00 PM | 12:00 PM | 2 hours |
| 2 | UAT design | Working on UAT design  | 12:00 PM | 1:00 PM | 1 hour |
| 3 | Break |  Lunch | 1:00 PM | 2:30 PM | 1.5 hours |
| 4 | Test case outcome | UAT test case outcome | 2:30 PM | 4:00 PM | 1.5 hours |
| 5 | RTM | Check and update RTM | 4:00 PM | 6:00 PM | 2 hours |
| 6 | Test to client  | Show test to client | 6:00 PM | 7:00 PM | 1 hour |
| 7 | Test  | T1 T2 T3 T4 | 7:00 PM | 8:00 PM | 1 hour |
|  |  |  |  |  |  |
| **Deployment And Implementation** |
| **Sno** | **Tasks**  | **Actionable items** | **Start Time** | **End Time** | **Duration** |
| 1 | Meeting | Discussion of til now work | 10:00 PM | 12:00 PM | 2 hours |
| 2 | RTM to client / PM | Forward RTM to client/PM | 12:00 PM | 1:00 PM | 1 hour |
| 3 | Break | Lunch | 1:00 PM | 2:30 PM | 1.5 hours |
| 4 | Co-ordinate with end user | Connecting with end users | 2:30 PM | 4:00 PM | 1.5 hours |
| 5 | Training session | Plan and work on training sessions | 4:00 PM | 6:00 PM | 2 hours |
| 6 | Organize session | Organize and conducting training session | 6:00 PM | 7:00 PM | 1 hour |
| 7 | Lessons learned from project | Prepare Lessons learned from project | 7:00 PM | 8:00 PM | 1 hour |
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|  |  |  |  |  |  |  |  |  | Requirement gathering  |
|  |  |  |  |  |  |  |  |  |  |