Que.1: BPM

Identify business process model for online agriculture store- (goal, input output, resources, activities, value, created to the end customer)

Ans:

Definition: BPM stands for business process modelling. A business process has a specific goal, has specific inputs, specific outputs, user resources, has a number of activities that are performed in some order which creates value of some kind for he customer, customer, may be internal or external.

The BPM for the online agriculture store is as follows:

Goals: to bridge the gap between buyers and sales (farmers).

To make a easy to understand and easy to use software for them.

To give them exact and effective products to boost their farming and make them profitable.

Inputs: farmers/ customers data, marketing knowledge experts, agriculture products manufacturing team, etc.

Resources: farmers, software developers, payment gateways, online platforms, etc.

Outputs: profit, growths, to serve a efficient software as well as user friendly website for customers, excellent customer service etc.

Activities: creating profile, login, selection of product, customer problem section, feedback, etc.

Value: wide range, customer satisfaction, offers, best deals, free home delivery at curtain level, membership.

Que.2: SWOT

Mr. Kartik is doing SWOT analysis before he accepts this project. What aspects he should consider as strength, weakness, as opportunity and as threats.

**Strength** **Weakness**

Needy farmers Supply chain distribution

Awareness about technology use

**Opportunities**  **Threats**

Demand of products Market

Competitors

Consistency

Swot analysis is of two types: 1. external analysis 2. Internal analysis

There is strength and weakness include in internal analysis and

Opportunity and threats are include in external analysis

Strength and opportunity are helpful and weakness and threats are harmful

1.Strength

strong brand names

good reputation

Exclusive access to high grade natural resources

2.Weakness

A weak brand

High level of depts

Independent supply

Lack of capital

Opportunities

Tax reduction

Increase in product demand

Less competition

Threats

Rising costs for materials

Increasing competition

Tight labour supply

Que.3 what is feasibility study? Mr. Karthik is trying to do feasibility study on doing project in technology (java), please help him with points (HW SW trained resources budget time frame) to consider in feasibility study.

Ans: A feasibility is an analysis that takes all of a project relevant factors into account including economic, technical, legal, and scheduling consideration to ascertain the likelihood of complete the project successful.

Project manager use feasibility studies to discern the pros and cons of undertaking a project before they must a lot of time a and money it.

It also provides a company management with crucial information that could prevent the company from entering blindly into risky business.

Meaning of feasibility study:

Refer to the process of examining the viability of business idea.

A perspective entrepreneur having creative and innovative idea must conduct feasibility analysis.

It may not only add volatility to the viability of the underlying business proportion but also add odd vision to the business opportunity.

Ned for feasibility study

Helps on providing guidelines for preparing business plan.

Short coming gaps if any can be detected a measure can be taken to resolve them.

Helps in understanding the viability of the concept or business ideas.

It reduces the chances of business failure.

Apprises entrepreneur about the risk involved.

Element of feasibility study

Product/service feasibility analysis

Industry analysis/ target market accessibility (primary search, secondary search)

Technical feasibility/ concept test

Commercial feasibility business concept

Que.4: Gap analysis

A comparison of current state and desired future state of an organization in order to identify differences that need to be addressed. Gap analysis is a process typically performed by business analyst and project manager for a delta or difference between the current process and future prospect in known as gap. Gap analysis resolve around where we? Where do we want to be?

Gap analysis provides a foundation for measuring investment of time, money and human resources required to achieve particular outcomes.

There is no formal method to conduct gap analysis a simple excel sheet can be used for the purpose different stages of gap analysis Review system, Develop requirements, comparison, implications, recommendation.

Gap analysis is one of the best procedures followed by any organization to improve the process and recognize the process which needs improvement.

Gap analysis for the given example is as follows:

Current state:

No any software to cure the problem

Difficulties in procuring fertilizers seeds and pesticides

Traditional method of farming

Desired state

To make an online application to solve every problem face by farmers

Make a feasible and easy to use platform

Make a profitable business for both the parties

Que. 5 Prepare risk analysis

An uncertain event or conditional which can have impact on either cost, time, scope or quality risk analysis is done to determine if the proposed project carries more risk than the organizational capacity to support.

Risk identification: it is the process to identify the business, financial technological and operational risk.

Risk assessment: it is the process to identify the probability of occurrence of each identified risk. BAs have been given task to arrives at a consequence for each identified risk items.

Risk response planning: this include the planning that reduce the probability of occurrence of risk. The response planning help in determining the conditions against which the required action can be

Risk: change in requirement – requirement are inherent to change always requirement are prone change taken. It help the organization to deal with risk.

This planning includes

Acceptance

Transfer

Avoidance

Mitigation

Risk avoidance: it is the process of not performing risk causing activities. Risk avoidance is defined as being idle during the occurrence of risk and doing nothing to take advantage of the new opportunity.

Risk rating: each identified risk is rated before moving it to rectification process. This process is called risk ratings. The overall ratings are calculated in term of cost, time quality of solution.

List down different risk factor that may be involved (BA risk and process /project risk)

Internal risk

Technique issue

Supply chain

Managements

External risk

Market

Lack of awareness

Uneducated farmers should use software properly

Competitors

BA risk

To complete the project within time and under budget

To serve what customer desired

Change in requirements

Project based risk

Scope risk

Stakeholders risk

Que. 6 stakeholder analysis (RACI matrix)

Perform stakeholder analysis (RACI) matrix to find out the key stakeholder who can take decision and who are the influencers.

Ans: a RACI matrix or responsibility assignment matrix, is project management tool that help define and assign roles and responsibilities for a project. It’s a chart or spreadsheet that uses the acronyms RACI to categories roles into four categories:

Responsible: the person or people who complete the task

Accountable: the person who has the final authority for the task.

Consulted: the person who provides advice or subject matter expertise.

Informed: the person who is kept up to date on the task’s progress

A RACI matrix can help ensure that a project stakeholders work together to meets deadlines, use resources efficiently, and avoid confusion. It can be project that involve multiple stakeholders and departments.

Here are some tips for using a RACI matrix:

Assign roles clearly: clearly defines the roles and responsibilities for each task, milestone, or deliverables.

Limit accountable roles: there should usually only be one accountable person for each task.

Avoid assigning too many consulted roles: too many consulted roles can leads to time delay and poor performance.

Identify informed parties: informed parties are typically stakeholders, leadership team members, or approvers who need to be kept up to date.

|  |  |  |
| --- | --- | --- |
| RACI | Names of the members | Designation |
| Responsible | Mr. Vandanam  Mr. Karthik  Ms. Juhi  Mr. Teyson  Mr. Lucie  Mr. Tucker  Mr. Bravo  Mr. Mike  Mr. John  Mr. Alekya  Mr. Jason  Ms. Payal | Project manager  Delivery head  Senior Java developer  Java developer  Java developer  Java developer  Java developer  Network admin  Database admin  Tester  Tester  Business analyst |
| Accountable | Mr. Henry | Owner |
| Consultant | Mr. Doku | Project coordinator |
| Informed | Mr. Pandu | Financial head |

Que. 7. Business case document

Ans: A business case is a document that justifies a project or investment by assessing its potential benefits, costs, and risks. It’s used to convince decision makers that the investment is worthwhile.

A business case typically includes:

Executive summary, problem statement, analysis of options, recommended solution, stakeholders, metrics.

Executive summary: a brief overview of the business case, including the problem, solution, and benefits.

Problem statement: a clear description of the business issue or opportunity the project addresses.

Analysis of options: an evaluation of potential solution, including their pros, cons, and estimated costs.

Recommended solution: the proposed course of action, along with a justification for its selection.

Stakeholders: a list of the key stakeholders associated with the project, such as the project sponsor, manager, team, and heads of teams or departments.

Metrix: how the project success will be measured.

A business case is developed during the early stages of a project. Its different from a business through the term are sometimes used interchangeably.

Help Mr. Karthik to prepare a business case document.

1. Why is the project initiated?

To solve the problem which are faced by farmer in procuring seeds, fertilizers and pesticides.

1. What is current problem?

There is a gap between farmer and technology to solve their problem

1. With this project how many problems could be solved?

Farmers can buy easily seeds, fertilizers and pesticides for their crops according to their needs.

They can customised their products according to their needs and problem faced by them in farming

They do not need to go to physically shopping.

They can make a home delivery which can save their time.

They can buy a product as well as sell the products, goods from their door step.

1. What are resources required?

Farmers, software team agriculture-based companies delivery boys, payment apps online delivery platforms etc.

1. How much organizational change is required to adopt this technology?

BPM should change

1. What is the time frame to recover ROI?

Time frame for the project is 18 months

1. How to identify stakeholders?

There are multiple ways to identify stakeholders such as:

RACI matrix, brainstorming organizational diagrams,

Stakeholder analysis, interest of people in the project.

Que. 8 write about SDLC methodologies?

Definition: methodologies are nothing but a way of doing something based on particular principle and methods.

SDLC methodologies as follows:

Sequential – waterfall

Interactive – RUP

Evolutionary – spiral

Agile – scrum

The full form of SDLC is software development life cycle. The software development life cycle is important so that we meet the specific requirement of client within the specific constraints limit boundary. SDLC is made up of 6 phases

1. Planning
2. Definition/ analysis
3. Designing
4. Coding/ implementation
5. Testing
6. Deploy/ maintenance

Sequential waterfall: this is most common and classical of life cycle models, also referred to as a linear sequential life cycle model. It is very simple to understand and use. In a waterfall model each phase must be complemented in its entirely before the next phase can begin. At the end of each phase a review takes place to determine if a project is on the right path weather or not to continue or discard the project.

Following are the stages of waterfall model

1. Feasibility study
2. Requirement analysis and specification
3. Design coding and unit testing
4. System testing and integration
5. Maintenance

**Iterative – RUP (rational unified process)**

The rational unified process is an iterative software development process framework created by rational software corporation which was a acquired by IBM in February 2003.

RUP s based on set of building blocks, or content elements, describing what is to be produced the necessary skills required and the step-by-step explanation describing how specific development goals are to be achieved the main blocks or content elements, are the following:

Roles (who) a role defines set of related skills, competencies, and responsibilities.

Work product(what) a work product represents something resulting from a task including all the document and model produced while working through the process.

Task (how) a task describes a unit of work assigned to a meaningful result. Within each iteration the task is categorised into nine disciplines in which six are “engineering discipline” and three ate “supporting discipline”

There are four project life cycle phases as following

1. Inception
2. Elaboration
3. Construction
4. Transition

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**Evolutionary spiral:** The spiral model gives more emphasis placed on risk analysis. The spiral model has four phases: planning, risk analysis, engineering, and evolution. A software project repeatedly passes through these phases in iteration called spiral in this model the baseline spiral starting in the planning phase, requirements are gathered and risk is assessed. Each subsequent spirals builds on the baseline spiral. Requirement are gathered during the planning phase. In the risk analysis phase, a process is undertaken to identify risk and alternate solution.

Advantages:

A high amount of risk analysis

Good for large and mission critical project

Software is produced early in the software life cycle

Disadvantages:

Can be costly model to use

Risk analysis required highly specific expertise.

Project success is highly dependent on the risk analysis phase

Does not work well for smaller project

**Agile- scrum**

Agile light weight

Can be implemented where faster delivery is required

No documentation

Customer retention since there is no documentation

The code in itself forms as documentation

Not support scalability and extendibility

Four main values

Individual and interaction over process and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiable

Responding to change over following a plan

Twelve principles of agile software:

1. Satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements even late in development. Agile process harness

Change for customer competitive advantages.

1. Deliver working software frequently from a couple of week to a couple of months with a preference to the shorter timescale.
2. Business people and developer must work together daily throughout the project.
3. Build project around motivated individual. Give them the environment and support they need and trust them to get the job done.
4. The most efficient and effective method individual. Give them the environment and support they need and trust them to get a job done.
5. Working software is the primary measure of progress.
6. Agile process promoted sustainable development. The sponsors, developers, and user should too able to maintain a constant pace indefinitely.
7. Continuous attention to technical excellence and good design enhance agility.
8. Simplicity the art if maximizing the amount of work not done is essential.
9. The best architecture, requirement and design emerge from self-organizing team.
10. At regular interval, the team reflect on how to become effective then tunes and adjusts its behaviour accordingly.

Que. 9 waterfall RUP spiral and scrum model

**Sequential waterfall:** this is most common and classical of life cycle models, also referred to as a linear sequential life cycle model. It is very simple to understand and use. In a waterfall model each phase must be complemented in its entirely before the next phase can begin. At the end of each phase a review takes place to determine if a project is on the right path weather or not to continue or discard the project.

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Que. 10 What is difference between waterfall model and v model

|  |  |
| --- | --- |
| Waterfall model | V model |
| The cost of waterfall model is low. | V model is expensive. |
| Simplicity of waterfall model is simple. | Simplicity of waterfall model is intermediate. |
| Flexibility of waterfall model is rigid. | Flexibility of v model is little flexible. |
| Waterfall model is sequential execution process. | It is also a sequential execution process. |
| Waterfall model steps move in a linear way. | V model steps don’t move in linear way. |
| Re- usability of waterfall model is limited. | V model can be re used in some extend |
| User involvement in waterfall model is only in beginning. | Use involvement in waterfall model is also in beginning. |
| In waterfall model testing activities start after the development activities are over. | In v model testing activities start with the first stage. |
| Gurantee of success through waterfall model is low. | Gurantee of success through v model is high. |
| Waterfall model is continuous process. | V model is simultaneous process. |
| Software made using waterfall model the number of defects are less in comparison of software made using v model. | Software made using v model the number of defects are greater in comparison of software made using waterfall model. |
| Requirement specification in waterfall model necessary in beginning. | Requirement specification in v model is also necessary in beginning. |
| Waterfall model is less used now a days in software engineering. | V model is widely used in software engineering. |

Que. 11 justify your choice.

Ans: Agile model is best model according to me.

Agile is considered to be the most effective model of contemporary project management because of its flexibility, implementable cooperative approach, and client oriented approach. Agile is a methodology that focuses on the flexibility of change and iterative construction. Hence it prepares teams for any changing requirements and conditions. Through fostering timely and regular feedback as well as enhancing cross- team communication, agile guarantees products development based on user needs and demands. This characteristics not only improves efficiency and productivity but also creativity, which is why agile is widely used for rapidly developing industries.

Basically the agile model is form of project management developed especially for software development that is more flexible in regard to linear route map and much more focused in customer feedback. As for the advantage of agile it has to be mentioned that the process is divided into small segments known as sprints or iteration, where one succeeds the other to provides gradual improvement where none can be made or the requirement are constantly shifting. This approach facilitates closer cooperation between the stakeholders and developers and result in product that is closer to consumer needs and market requirements well as higher effectiveness and adaptability.

Given are 10 reasons why agile model is best model

1. Flexibility to change: scatter able helps new information to be incorporate into the process without affecting the whole project hence making it flexible to be change of requirements.
2. Customer centric: agile highly values the client input and engagement system so that the development process closely reflects the consumers demands and requirements.
3. Incremental delivery: agile allows accomplishing the work in iterative cycles so that feedback can be received and change can be incorporated more often, resulting in more effective and relevant results.
4. Improved collaboration: agile mandates constant communication between and within various functional terms, hence enhancing the integration of organization function teams and operations.
5. Enhanced risk management: one is that through constant evaluation and the establishment of an agile model of development, which entails the constant addressing of problems that may arise until the project is finished the possibility of project failure is minimized.
6. Higher quality product: another advantage of performed in agile is that testing is performed continuously and in parallel with feedback loops, and therefore fewer defects are delivered to the customer.
7. Faster time to market: as agile works iteratively, customer value component are worked on at a much faster pace, which helps the product quickly enters the market and gain a competitive edges.
8. Greater transparency: agile ensure openness through feedback and review whereby the stakeholder are frequently involved in the project.
9. Empowered teams: due to decision making and self organization, team are more motivated in an agile context and latter has strong performance.
10. Focus on value: agile puts a lot of important on releasing first the highest value items this gives assurance that significant component of the project are delivered efficiently.

|  |  |
| --- | --- |
| notation |  |
| RG |  |
| RA |  |
| Design |  |
| Coding |  |
| testing |  |

Que 12. Gantt chart

Ans: A gantt chart is virtual tool that helps plan and track a project progress by displaying a project tasks timelines and dependencies. Gantt chart is abasically work break down structure or a progress report of a project.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Week1 | Week10 | Week20 | Week29 | Week38 | Week46 | Week55 | Week65 | Week73 | Week78 |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Resource | Week1 | Week10 | Week20 | Week29 | Week38 | Week46 | Week55 | Week65 | Week73 | Week 78 |
| Project manager |  |  |  |  | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Business analyst |  |  |  |  |  | 2 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Java developer |  |  |  |  |  | 3 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Tester |  |  |  |  |  | 4 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Database admin |  |  |  |  |  | 5 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Network admin |  |  |  |  |  | 6 |  |  |  |  |

Que. 13. fixed bid vs billing project

Explain the difference between fixed bid and billing projects

|  |  |
| --- | --- |
| Fixed bid | Billing project |
| When your requirements are clear and defined in detail. | When your requirements are not clear. |
| When the projects are spread over a few days to a months. | When the projects are spread over several months to several years. |
| When you want little or no feasibility on the project requirements. | When you require high degree of feasibility |
| When you want to determine then exact budget in advance | When you want the project process to the tailored to the requirement |
| When you don’t want to have a direct control on resource | When you want to controlled resource directly |

Que. 14. Prepare a timesheet of BA in various stages of SDLC.

1. design timesheet of BA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No. | Task | Start time | End time | Duration |
| 1. | Designing UI/UX prototypes | 10.00 AM | 12.00 PM | 2 hour |
| 2. | explain how work reflects the business goals | 12.00 PM | 1.00 PM | 1 hour |
| 3. | Update and check in with everyone until the project is ready | 1.00 PM | 3.00 PM | 2 hour |
| 4. | Testing and feedback | 3.00 PM | 4.00 PM | 1 hour |
| 5. | All loose ends are tied up between suppliers and designers and project resources | 4.00 PM | 6.00 PM | 2 Hour |
|  |  |  |  | 8 hours |

1. Development timesheet of BA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No. | Task | Start time | End time | Duration |
|  | Analyze business requirements | 10.00 AM | 1.00 PM | 3 hours |
|  | Enhancing organizational decision making | 1.00 PM | 2.00 PM | 1 hour |
|  | Improving process | 2.00 PM | 4.00 PM | 2 hours |
|  |  |  |  | * 1. ours |

1. Testing timesheet of BA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No. | Task | Start time | End time | Duration |
|  | Verifying specified requirements | 10.00 AM | 12.00 PM | 2 hours |
|  | Verifying specific needs | 12.00 PM | 2.00 PM | 2 hours |
|  |  |  |  | 4.00 hours |

4 UAT timesheet of BA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No. | Task | Start time | End time | Duration |
|  | Validate and verify that the product is error free | 10.00 AM | 1.00 PM | 3 hours |
|  | Meeting the business needs | 1.00 PM | 3.00 PM | 2 hours |
|  |  |  |  | 5 hours |

5.deployment and implementation timesheet

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No | Task | Start time | End time | Duration |
|  | Building the network and hardware infrastructure. | 10.00 AM | 1.00 PM | 3 hours |
|  | Installing and configuring software according to an installation plan. | 1.00 PM | 3.00 PM | 2 hours |
|  | Migrating data from existing application to the current solution. | 3.00 PM | 5.00 PM | 2 hours |
|  |  |  |  | 7 hours |