Online Agriculture Products Store

1.Identify Business process Model for online Agriculture Store (BPM)

1. **Goal :** Online Store Which can useful from the farmers to buy agriculture goods at anyplace

2. **Inputs:** Farming Products through the online Which is very useful to the farmers the products are (Fertilizers,Seeds,and Pesticides)

3.Resources: Mobile phones,Computer,Internet connectivity..

4.Activities

1. Farmers should Register with Name and Address

2.Then enter the online store with login details

3.Add products to the charts what customers want

4.Add payment method through cash or card ,UPI

5.order confirmation

6.Delivery to the customers

7. Feedback

Output

Application farmers can buy seeds and agriculture productions through the online

2.SWOT analysis (Strengths,Weakness,Opportunities and Threats)

A SWOT analysis is a strategic planning tool that helps identify and evaluate internal and external factors that can impact an organization or individual or A SWOT analysis is a technique used to identify Strengths,weakness,opportunities,and threats for your business or even a specific projects

- **Strength**

1.Agricultural products from local farmers and distributors

2.We have good budget and time for project

3. Core farmer's advice

4. Online shopping ,delivery at town with short time

5 . All products will be in one place

6. Multiple payment option with products detailed feedback

7. Payment process system

- **Opportunity**

1.There is chances of huge market access

2. We can add items and make easy to access farmers

3. The company can earn lots of revenue

4. We can expand our services to PAN India

5. We can educate farmers how to use digital media

6. Farmers will get online agriculture products in town by online

7. Agricultural companies will get a new market

- **Weakness**

1. There will be the risk of return on investment if the project does not succeed

2. There will be a problem of lack of digital awareness

3. Some times the delivery went wrong place lack of delivery order

4. It takes more to delivery and heavy of delivery chargers to long distance places

5. Lack of knowledge

- **THREATS**

1. There will be fewer chances of acceptability of digital platform

2. Delivery to remote areas

3. Recruiting delivery person who are willing to travel and deliver

4. There will be chances of similar competitor in the market

3. 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)

Feasibility study is the reality check of big projects or ideas it's a way of figure out if your plan doable realistic and worthy to putting your time and money into the project .. Feasibility study as the key roles to check the project

Mr .Karthik will use JAVA technology to build this application with the help of software development team Mr Karthik use java Technology to build online agricultural product

Budget – 2 Crore INR. **Time:** 18 months (1.6 years)

- **Technology used:**

Web Servers:- Apache Tomcat, J boss
Database Servers:- MySQL
Programming language :- Java (Backend),

CMS :- AEM (Adobe experience manager).
Total :- 15 Lakh INR

- **Hardware :-**

Web server :- Dell Power Edge – 1 lakh INR
Database server:- Dell power Edge –1 lakh INR
Load Balancer :- F5 Big IP – 1lakh INR
Storage Device :- Dell EqualLogic -50 k INR
Total :- Rs 3 Lakhs

- **Software**

Ecommerce :- AEM (Adobe Experience Manager) - 1lakh INR
Payment Gateway :- Razor pay – 1 lakh INR
Security Application :- Firewall, Anti Malware – 1 lakh INR
Total :- Rs 3 Lakh .

- **Resources:-**

Mr Karthik (Delivery Head) 16 Lakh (18 Months)

Mr Vandanam (Project Manager) 12 Lakh (18 Months)

MS Juhi (Sr Java Developer) 10 Lakh (18 Months)
Mr Teyso(Java Developer) 8 Lakh (18 Months)
Mr Tucker (Java Developer) 8 Lakh (18 Months)
Mr Bravo(Java Developer) 8 Lakh (18 Months)

Mike (Java Developer) 7 Lakh (18 Months)
John (DB Admin) 7 Lakh (18 Months)
Jason (Tester) 6 Lakh (18 Months)
Alekya(Tester) 6 Lakh (18 Months)
Mitesh Singh (BA) 4 Lakh (18 Months) Total –96,60000INR.
Total amounts expend :- 1,18,10,000INR
Remaining: - 81.90 Lakh

4. 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)

Gap Analysis: -

A Gap Analysis is a process that compares a company's current performance to its desired performance. It's also known as a needs analysis or needs assessment.

Current State: -

- Farmers often face difficulty in finding the right products according to their specific crop requirements
- Farmers getting difficulties in procuring fertilizers, seeds, pesticides etc.
- Farmers has to go physically to buy agriculture products
- Farmers do not have multiple products at one place.
- Farmers are not getting products on time.

Desired State

- Farmers can but products directly from the manufacturers at affordable prices.
- Make an online platform where farmers buy agricultural products.
- Application should be user friendly so that farmers can easily use.
- The application should accept products eg:- fertilizers,seeds,pesticides etc.
- Farmers can opt for their local language to book products
- Farmers could also tracker their product via mobile/web application.

5. List down different risk factors that may be involved (BA Risks and Process /Project Risk) (Risk Analysis)

Risk Analysis is a process that helps identify and assess potential risks and uncertainties that could impact a project or business. It involves evaluating risk

Internal Risk: -

- There will be technical issues and system downtime that can affect the farmer's experience
- There will be more chanced of dependencies on manufactures and vendors for product supply
- There are chances of high operating expenses due to investment in technology services marketing etc.

External Risk

- There will be chances of changes in government regulation and policies that affect the online industries
- There will be chances of less acceptability of online platform from farmers.
- Need to spend more time spreading awareness of the online portal among farmers
- Intense competitors in same field.

BA Risk

- Inadequate understanding of the agriculture industry and the specific needs of farmers in remote areas
- Due to less domain expertise Business analyst may not easily understand the farmer needs
- In village sometimes there is network issues so will their ordering the product may not delivery on correct time
- In complete requirements may take project wrong direction
- Miss communication with stakeholders may occur loss unclear statement

Project risk

- Project may occur sometimes risk because of improper internet
- There will be chances of high-cost risk if the project's time goes beyond time.
- There will be chances of operational risks like changes in company or team processes unexpected shifts in team roles,etc.

6. Perform stakeholder analysis (RACI Matrix) to find out the key stakeholder who can take Decisions and who are the influencers (Stake holder Analysis)

RACI is an acronym that stands for responsible accountable consulted and informed. it's a project management tool that helps clarify roles and responsibilities within a team.

	Name	Designation	Details
Responsible	MS Juhi Mr Teyso Mr Wese Mr Tucker Mr Bravo Mike John Jason Alekya Mitesh	Sr Java Developer Java Developer Java Developer Java Developer Java Developer Network Admin DB Admin Tester Tester Business Analyst	Email Id Mobile Number
Accountable	Mr Vandanam	Project manager	E mail Id Mobile Number
Consulted	Mr Henry	Committee Member	E mail Id Mobile Number
Informed	Pandu Dooku Henry	Financial Head Project Coordinator Committee Member	E mail Id Mobile Number

7. Help Mr. Karthik to prepare a business case document (BUSINESS CASE DOCUMENT)

A business case is a document that explains why business should invest in a project or initiative it's used to help decision –makers decide whether to move forward with a project.

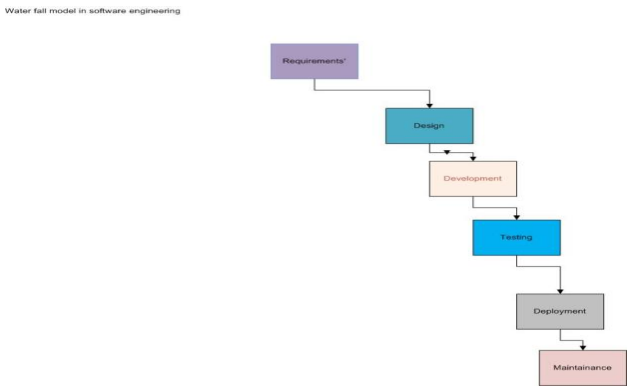
Summary :- The purpose of this business case is to propose the development an Online Agriculture products Store to facilitate remote area farmers to buy agriculture products through online it is easy to access from village people its is easy to access in web/mobile application that allows farmers to companies It as a manufacturing fertilizers, seeds, and pesticides to Communicate directly . The main goal for farmer's is purchase necessary products without facing any difficulties in procuring fertilizers,seeds,and pesticides. The project is expected to be completed within 18 months and is being undertaken as part

- ## Benefits
    1. It may helpful from the farmers for their needs
    2. Farmers will be able to purchase necessary products without facing difficulties in procuring them
    3. The application will save time and money for farmers, which can be utilized infarming activities
    4. The application will promote the best products to the farmers for agriculture fields

8. Describe four SDLC Methodologies

There are 4 types of SDLC Methodologies

1. **Sequential/Waterfall: -** The waterfall model is a breakdown of development activities into linear sequential phases, meaning they are passed down on to each other, where each phase depends on the deliverables of the previous one and corresponds to a specialization of tasks.
   The Waterfall methodology – also known as the Water fall model – is a sequential development process that flows like water through all phases of a project
   In waterfall model if you find any kind of error it will be start on first phase of development each phase completely wrapping up before the next phase begins
   - Planning
   - Requirement gathering and Analysis
   - Design
   - Development
   - Testing
   - Deployment
   - Operation and Maintenance



2.Iterative Model: -

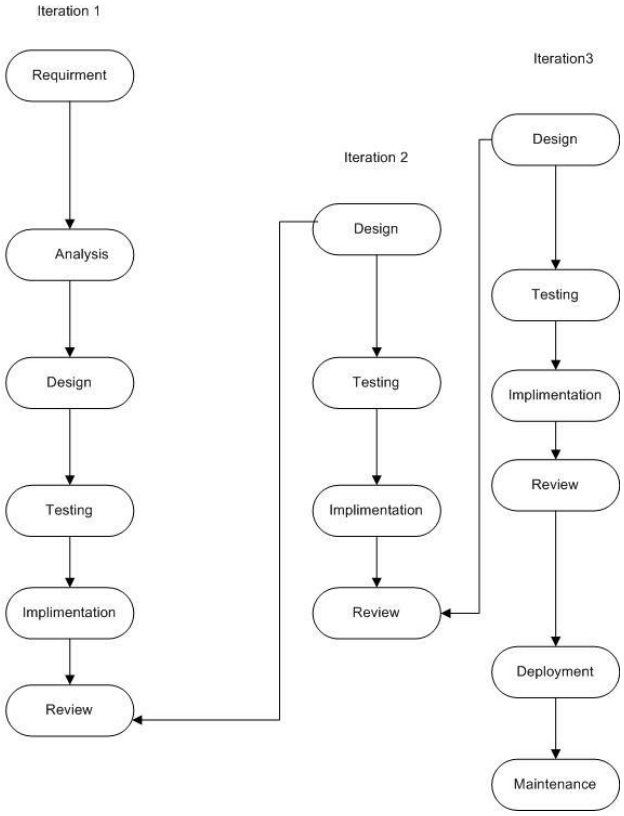
The iterative waterfall model is a software development approach that combines the sequential steps of the traditional Waterfall Model with the flexibility of iterative design. It allows for improvements and changes to be made at each stage of the development process

ITERATION MODEL

Iteration 1

Iteration 2

ITERATION MODEL



Like other SDLC models, iterative and incremental development has some specific applications in the software industry. This model is most often used in following scenarios There are some high –risk features and goals which may change in the future There is a time to the market constraint

3. Evolutionary – spiral

The evolutionary model is based on the concept of making an initial product and then evolving the software product over time with iterative and incremental approaches with proper feedback.in this model, the product will go through several iterations and come up when the final product is built through multiple iterations

Application of Evolutionary Model

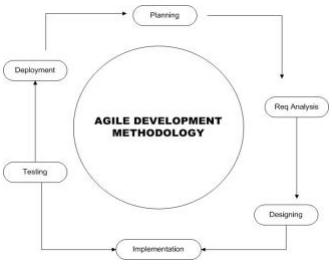
- It is used in large projects where you can easily find modules for incremental implementation.
- Evolutionary model is also used in object-oriented software development

4.Agile: -

Agile SDLC model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product. Agile Methods break the product into small incremental builds

Agile is based on the principles of :

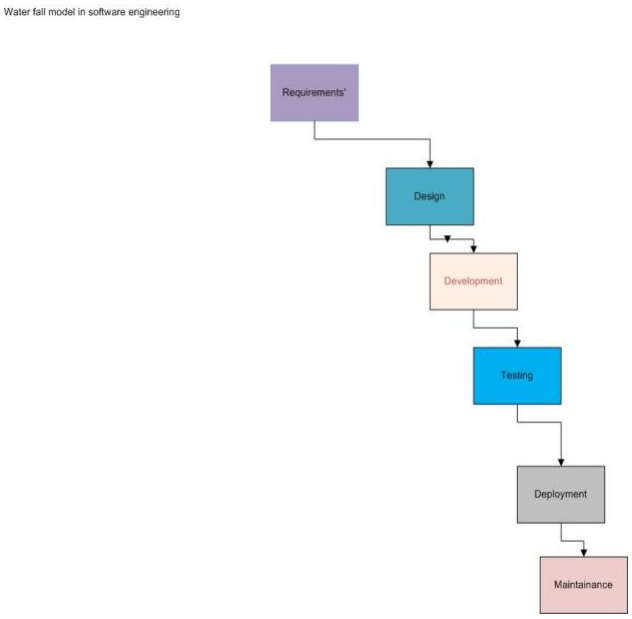
1. Quick Delivery
2. Adapting to change
3. Collaboration
4. Constant Feedback
5. Early, Continuous Improvements
6. Welcoming changing requirements
7. Delivery Value frequently
8. Breaking down project silos
9. Face to face communication
10. Customer Satisfaction



9. Waterfall RUP Spiral and Scrum Models

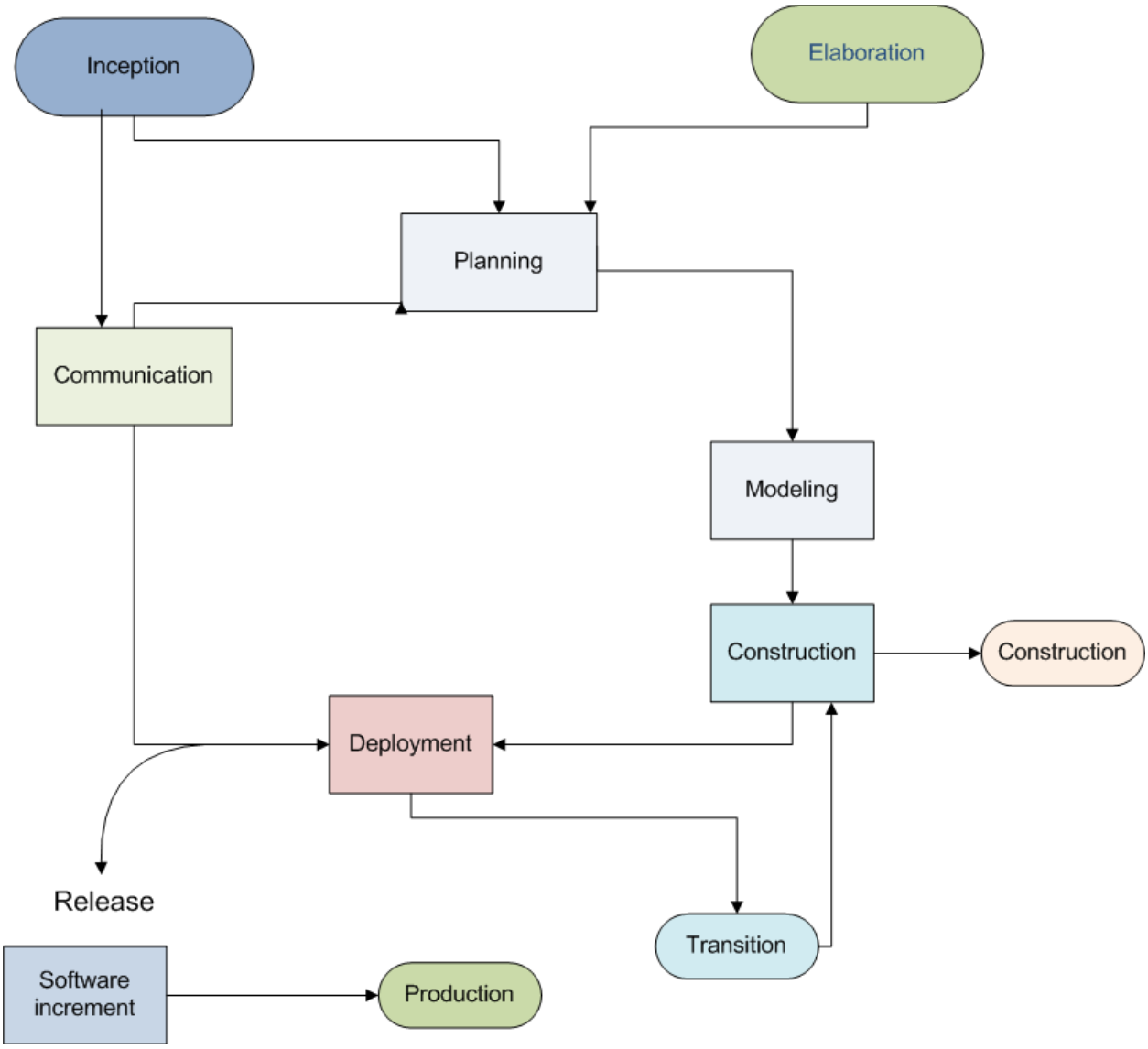
1. **Waterfall: -** The waterfall model is a linear application development model that uses rigid phases: When one phase ends, the next begins.
    - Planning

- Requirement gathering and Analysis
- Design
- Development
- Testing
- Deployment
- Operations and Maintainces



2. RUP: - Rational unified process (RUP) is an agile software development methodology. RUP splits the project life cycle into four phases (Inception, Elaboration,Construction,Transition). During each of the phases, all six core development disciplines take place: business modelling, requirements analysis and design, implementation, testing, and deployment.

There is a total of five phases of the life cycle of Rup



3. Spiral: -

The spiral Model is one of the most important Software Development Life Cycle models. The Spiral Model is a combination of the waterfall model and the iterative model. It provides support for Risk Handling The Spiral Model Was first proposed by Barry Boehm

Phases of Spiral Model:-

1. Objectives Defined

2. Risk Analysis
3. Engineering
4. Evaluation
5. Planning

- The Spiral Model is often used for complex and large software development projects, as it allows for a more flexible and adaptable approach to software development. It is also well – suited to projects with significant uncertainty or high levels of risk.

  Phases of Spiral Model: -

  1. Objective Defined
  2. Risk Analysis
  3. Engineering
  4. Evaluation
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4. **Scrum: - Scrum** is an agile project management framework that helps teams' structure and manage their work through a set of values, principles, and practices and also scrum is a process framework used to manage product development and other knowledge work

- Teams following scrum are expected to learn and explore the following values :
- Commitment
- Team members personally commit to achieving teams goals
- Courage
- Focus
- Openness
- Respect
- Team members respect each other to be capable and independent

Principal of scrum

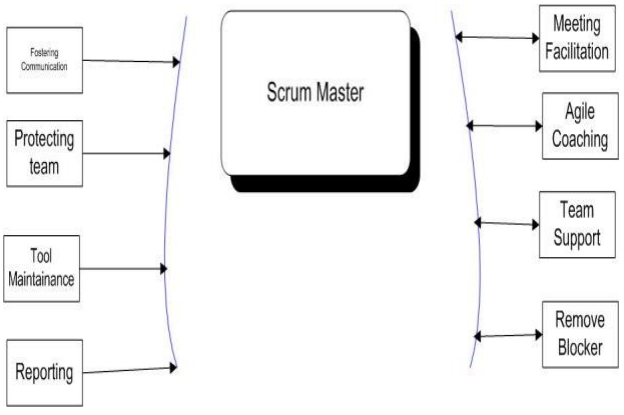
1. Transparency
2. Inspection
3. Adaption

Scrum practices

1. Sprint
2. Sprint Planning
3. Daily Scrum
4. Sprint review
5. Sprint Retrospective

Artifacts

1. Product Backlog
2. Sprint Backlog
3. Increment
4. DOD
5. DOR



10. Waterfall vs V- model

<u>Water fall MODEL :-</u>

- It is a linear and sequential its development proceeds step by step with phase requirement, design, implementation, testing deployment completed before the next begins
- Testing is performed after the entire system is built leading to delays in identifying and fixing errors
- Changes are difficult and costly to implement after the development phase
- The cost of waterfall model is low
- Re – usability of waterfall model is limited
- Waterfall model is a continuous process
- Waterfall model's steps move in a linear way
- Waterfall model is less used now – a-days in software engineering

V – Model

- V –Model is a software development life cycle model that emphasizes verification and validation
- It's an extension of the waterfall model where each development phase has a corresponding testing phase
- It visualized as a "V" Shape.
- It's work as left side as development phase and right side as testing phase
- It is expensive compare to waterfall model and it is advanced then waterfall model
- It is also a sequential execution process
- V- model steps don't move in linear way
- V- model can be Re-use for some extent
- In V- model testing activities start with the first stage

11.Justify your choice

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

As a BA I choose V-model for this project.

The V-model is an advanced extension of the Waterfall model which provides better Security and reliability . It emphasizes both development and testing phases in parallel ensuring that any errors are detected early if an issue arises it can be tracked back to the

corresponding development phase immediately without disturbing the overall process. this makes the project more structured,secure,and error-free compared to the waterfall model

12. Prepare Gantt Chart: -

A Gantt chart is a project management tool that helps visualization project's schedule and progress over time the gnat chart that shows the start and end dates of tasks , as well as their duration

Gantt chart

ID	Task Name	Start	Finish	Duration
1	Requirement Gathering (RG)	01-08-2025	06-08-2025	4d
2	Requirement Analysis (RA)	07-08-2025	13-08-2025	5d
3	Design(D1)-High level Design)	14-08-2025	20-08-2025	5d
4	Design (D2-Low level Design)	21-08-2025	25-08-2025	3d
5	Module Development (D3)	26-08-2025	29-08-2025	4d
6	Unit Testing	01-09-2025	02-09-2025	2d
7	Integration Testing	03-09-2025	05-09-2025	3d
8	System Testing	08-09-2025	10-09-2025	3d
9	Database Testing (T4)	11-09-2025	15-09-2025	3d
10	UAT User Acceptance testing	16-09-2025	22-09-2025	5d
11	Deployment	23-09-2025	25-09-2025	3d
12	closure	26-09-2025	29-09-2025	2d

13. Fixed Bid Vs Billing

Fixed Project	Billing Project
A fixed project is billed using a flat amount It works as a number of working hours	Billing project is used to work number of hours at hourly daily monthly fixed billing rates for that project
Fixed bid billing is good for small project	Billing project is good for big projects
The risk of cost overruns is typically borne by the vendor	Involves billing based on the total hours worked and the cost of material used
Can provide stability for both client and company regarding costs	Can include different billing models like fixed price (fixed bill) time and materials
A fixed bid project is specific type of billing project	Billing project simply refers to any project where client will be invoiced for the work completed

14. Prepare time sheet of BA in Various stages in SDLC

1. Requirement Gathering

S.NO	Task	Actionable items	Start Time	End Time	Duration

1	Identify the stakeholders	Meeting to list down the stake holders	11:00AM	12:00PM	1 HOUR
2	Client interaction	A zoom call to update the client on the	2:00PM	3:00PM	1 HOUR
3	Fine-tuning the inputs for BRD	SME discussion-in person call	3:30PM	4:30PM	1 HOUR
4	Requirement Sorting	Working on the template	5:00PM	6:00 PM	1 HOUR
5	Team Meeting	Discussion on day inputs	6:30PM	9:00PM	2.5 HOUR
6		Total			7.5 Hours

2. Requirement Analysis Phase

S.NO	TASKS	Actionable items	Start time	End time	Duration
1	Identify key stakeholder End User	Meeting to List down stake holders	10:00Am	11:00AM	1 HOUR
2	Capture requiremen ts	One on one interview with stakeholders	11:00AM	1:00PM	2HOUR
3	Categories requirements	Meeting with SME to group There requirements	2PM	3PM	1HOUR
4	Interprétatio n &recording	Meeting with stakeholders to resolve	3:30PM	4:30PM	1 HOUR

	of requirements	conflits in any			
5	Sign off	In Person meeting with stake holders to get sign off	4:30PM	7:00PM	2.5 HOUR
		Total			**7.5 Hour**

3 . Design phase

S.NO	Tasks	Actionable items	Start time	End time	Duration
1	Identify stake holders	To develop project plan with stake holders	9:00 AM	10:00AM	1 HOUR
2	Planning of stake holder engagements	Stakeholder engagement selection project plan	11:00AM	1:00 PM	2 HOUR
3	Defining project outcome	Monitoring success of project	3PM	4PM	1HOUR
4	Planning project timeline and cost	Calculate the budget and costing of project	5PM	6PM	1HOUR
5	Planning risk management of project\informing stake holder of project plan	Discussion on the day inputs and informing respective stakeholders	6:30PM	9PM	2.5 HOURS
6		TOTAL			7.5 HOURS

4. Development phase

S.NO	Tasks	Actionable items	Start time	End time	Duration
1	Develop a project charter	Goals, roles, responsibilities of all stakeholders outline project constraints involved budget the expected timeline etc.	10:00Am	11:00AM	1 HOUR
2	Project planning	Creating plan to allocate task from the team members	12:00pm	2PM	2HOUR
3	Execution of project plan	Meeting with project manager and check their requirements and changes	2PM	3PM	1 HOUR
4	Controlling /quality assurance	Meeting with project development team	4:30 PM	5:30 PM	1 HOUR
5	Controlling /quality assurance	Feedback collecting from stake holders	5:30PM	8 PM	2.5 HOUR
6		Total			7.5 HOURS

Testing Phase

S.NO	TASK	Actionable items	Start time	End time	Duration
1	Requirement Analysis	Meeting with testers to check on possible outcome	9:00AM	10:00AM	1HOUR
2	Test Planning	Zoom call with testers and review with test scenarios	11:00AM	1PM	2HOUR
3	Test case development	In person discussion with Q/Aon discussion on the details and such as	2PM	3PM	1 HOUR

		automation and code Who run's the test and writing test cases			
4	Test environment setup	Meeting with Q/A team and identify where test runs	3:30 PM	4:30 PM	1 HOUR
5	Test execution	Meeting Q/A testers OR Stakeholders to check applications	4:30 PM	7:30 PM	2.5 HOURS
6	Test report	After done all the process we make sure test report and done	8PM	9PM	1HOUR
		TOTAL			8.5 HOURS

6.UAT time sheet

S.no	Tasks	Actionable items	Start time	End time	Duration
1	UAT planning and preparation	Review test objectives and identify test scenarios	10AM	11AM	1HOUR
2	UAT Test script development	Create UAT test script	11AM	12:30PM	1.5 HOUR
3	UAT Test execution	Execute test scripts, record the results and defects	1:30PM	4:00PM	2.5HOUR
4	Defect Management	Document record and Uat defects	4:30PM	5:30PM	1HOUR
5	UAT Test closure	Evaluate the result and prepare UAT closure report	5:30PM	6:30PM	1HOUR
6		Total			7HOUR

7.Deployment and implementation BA Time sheet

S.NO	Task	Actionable items	Start time	End time	Duration
1	Solution Design	Collaborate with Development team	10:00AM	12:00PM	2
2	Functional Specifications	Document detailed function specification	1:00PM	4:00PM	3
3	User interface design	Work with UI/UX design	4:30PM	6:30PM	2
4	Data Mapping	Analyze data requirement and map data elements	10:00AM	12:00PM	2
5	Test Planning	Collaborate with the Testingent team	12:00PM	1:00PM	1
6	UAT	Coordinate UAT with stakeholders	2:00PM	6:PM	4
7	Training and documentation	Prepare training materials and user guides	10:00AM	1:00PM	3
8	Deployment	Collaborate with IT Team for system	2:00PM	4:00PM	2