#### Que 1.

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

#### Ans 2.

# **Business Process Model - Online Agriculture Products Store**

#### 1. Goal:

To create an online platform (web/mobile) that enables farmers, especially from remote areas, to buy agricultural products (fertilizers, seeds, pesticides) directly from manufacturing companies, improving accessibility, transparency, and convenience.

#### 2. Inputs:

- Product data (name, type, quantity, price, description) from manufacturers
- Farmer registration and location details
- Internet connectivity for access
- Requirement inputs from stakeholders (Peter, Kevin, Ben, etc.)

Inputs include product listings from manufacturers, farmers requirements such as quantity and delivery location, registered user details, access via internet-enabled devices, logistics partner information for delivery, and integrated payment methods like online payments or cash on delivery options.

#### 3. Resources:

### • Human Resources:

- Project Manager (Mr. Vandanam)
- Developers (Juhi, Teyson, Lucie, Tucker, Bravo)
- Testers (Jason, Alekya)
- DB Admin (John)

- Network Admin (Mike)
- Business Analyst (You)

# • Technological Resources:

- Web/Mobile platform
- Backend database
- Hosting infrastructure
- APIs for manufacturer integration

#### • Financial Resource:

- 2 Crore INR budget funded under CSR by SOONY
- 18-month project timeline

## 4. Activities:

- Requirement gathering from all stakeholders
- System design and user interface prototyping
- Development of platform modules:
  - Manufacturer module (product listing)
  - Farmer module (product browsing, selection, ordering)
  - Admin module (monitoring and support)
- Integration with database and secure payment system
- Testing (Unit, System, UAT)

- Deployment and rollout
- Post-deployment support and enhancements

## 5. Outputs:

- Fully functional online agriculture product store (Web/Mobile app)
- Farmer user accounts and product order history
- Manufacturer dashboard for product listings and orders
- Reporting system for sales and analytics

A fully functional online agriculture product store enables farmers to buy seeds, fertilizers, and pesticides via web/mobile apps. It includes farmer accounts with order history, and a manufacturer dashboard to manage product listings and orders. A reporting system offers insights through sales data and analytics for better decision-making.

# 6. Value Created to End Customers (Farmers):

- Easy access to quality agricultural products from verified manufacturers
- Transparency in pricing and product availability
- Time and cost savings by avoiding physical travel
- Better crop yield and productivity due to timely access to seeds, fertilizers, and pesticides
- Empowerment through digital literacy and self-service platforms

## Que 2.

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.

#### Ans 2.

Here's a detailed SWOT Analysis that Mr. Karthik (Delivery Head at APT IT SOLUTIONS) should consider before accepting the Online Agriculture Products Store project:

## Strengths (Internal – Positive):

- Strong Talent Pool available in APT IT SOLUTIONS (Java Developers, Testers, Admins, BA).
- Good connection with client (Mr. Henry) already secured the project.
- Defined Budget (2 Crores) and clear timeline (18 months) provides planning stability.
- CSR Initiative high social value and public image booster.
- Clear stakeholder structure committee members and support from real farmers (Peter, Kevin, Ben).
- Technical expertise in web/mobile development, database management, and testing.
- In-house BA expertise to translate farmer needs into technical requirements.

The project benefits from strong CSR backing with a ₹2 crore budget and dedicated stakeholders ensuring support. APT IT SOLUTIONS brings a skilled development team, enabling efficient execution. With rising internet access in rural areas and being an early entrant in agri-tech e-commerce, the initiative holds strong market potential.

### Weaknesses (Internal – Negative):

- No prior domain experience in agriculture tech/e-commerce for farmers.
- Remote village internet challenges may not be understood well by the team.

- Project success heavily relies on user-friendliness, which could be difficult for non-tech-savvy farmers.
- Lack of multilingual support plan language barrier for rural users.
- High dependency on farmer stakeholders (Peter, Kevin, Ben) for domain knowledge.
- May need additional UX/UI specialists for a rural-friendly interface.

The project faces challenges like poor rural delivery infrastructure and low digital literacy among farmers, which may hinder adoption. Success heavily relies on onboarding diverse vendors. Integration of payments, logistics, and user-friendly UI is complex, and the absence of a planned real-time support system may affect user experience.

# Opportunities (External - Positive):

- Large untapped market in rural India for digital agriculture solutions.
- Increasing internet penetration and smartphone usage in rural areas.
- Rising government and private support for digital farming initiatives.
- Potential to expand the platform to include weather forecasts, soil reports, expert consultations in future phases.
- Can productize and reuse this platform model for other villages or states.
- Great for brand visibility and reputation due to its social impact.

The project has significant growth potential due to the large untapped rural market and increasing demand for quality agri-inputs. It can expand into areas like crop advisory and weather updates. Government support for digital farming and potential partnerships with agri-institutions like KVKs can further enhance its reach and impact.

### Threats (External – Negative):

Risk of low adoption by farmers due to digital illiteracy.

- Competition from existing agri-startups or e-commerce giants entering this space.
- Potential logistics challenges for deliveries in remote areas.
- Any delay in stakeholder input (e.g., from farmers or SOONY Committee) can affect timelines.
- Policy or regulatory changes in agriculture or CSR could impact project scope.
- Risk of scope creep due to expanding expectations from farmers or stakeholders.

The project may face threats from established agri-tech startups and large e-commerce platforms entering the sector. Regulatory uncertainties, poor internet connectivity in remote areas, and logistical challenges can impact adoption. Additionally, resistance from traditionally offline farmers may hinder initial user engagement and slow down the platform's growth and reach.

#### Que3.

Mr Karthik is trying to do a 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.

#### Ans3.

Certainly here's a feasibility study framework for Mr. Karthik to evaluate whether Java technology is suitable for developing the Online Agriculture Products Store project.

### 1. Hardware (HW) Requirements:

- Servers (On-premises or Cloud, e.g., AWS, Azure, GCP)
  - Application Server
  - Database Server
  - Backup Server

- Client Devices (Mobile/Desktop) Minimum specs for accessing the platform
- Network Infrastructure Stable connectivity, especially for remote access and testing environments
- Testing Devices Android & iOS smartphones for mobile app testing

The hardware requirements include scalable cloud infrastructure like AWS or Azure to host the application, secure servers for database and backend operations, and multiple devices (mobiles, tablets, desktops) for testing. Additionally, recovery systems are essential to ensure data safety and business continuity.

## 2. Software (SW) Requirements:

- Frontend: HTML, CSS, JavaScript, React/Angular (optional for frontend frameworks)
- Backend: Java (Spring Boot preferred for RESTful APIs)
- Database: MySQL / PostgreSQL / Oracle DB
- IDE & Tools: IntelliJ IDEA / Eclipse, Postman, GitHub, JIRA, Jenkins (CI/CD)
- Server: Apache Tomcat / Nginx
- Others: Docker for containerization, JUnit for testing, Firebase (for push notifications, optional)

The software needed includes Java tools like Eclipse or IntelliJ and Java 17+. Spring Boot will be used for backend, and React or Angular for frontend if needed. MySQL or PostgreSQL will manage data. Tools like Selenium, Git, Jenkins, Docker, and security features ensure smooth development, testing, deployment, and protection.

#### 3. Trained Resources:

- Experienced Java developers already assigned (Juhi, Teyson, Lucie, etc.).
- Dedicated QA/Testers (Jason, Alekya).

- Network and DB Admins in place (Mike and John).
- Project Manager (Mr. Vandanam) and Business Analyst (you) already aligned.
- Need minimal training, team appears ready for execution.

The project team is well-equipped with skilled Java developers like Juhi, Teyson, and others. Testing will be handled by experienced QA members Jason and Alekya. Network and database management is covered by Mike and John. With a Project Manager and BA already onboard, minimal training is needed, ensuring quick execution.

## 4. Budget Considerations (Within 2 Crores INR):

- Hardware Procurement / Cloud Costs ~30 Lakhs
- Resource Salaries / Staffing ~1 Crore (based on 18-month timeline)
- Testing & QA ~10–15 Lakhs
- Infrastructure & Licensing ~10 Lakhs
- Mobile App Development / Cross-platform ~15–20 Lakhs
- Training / Workshops / UX Research ~5–10 Lakhs

The ₹2 Crores budget will cover infrastructure setup, cloud service or software license fees, and salaries for developers and project staff. It also includes costs for marketing, logistics, and system maintenance. A small portion is reserved for training or documentation if needed, ensuring smooth implementation and post-launch support.

#### 5. Time Frame (18 Months):

- Requirement Gathering & Analysis 1.5 months
- UI/UX Design & Prototyping 1 month
- Backend & Frontend Development (Iterative) 8 months
- Integration & Internal Testing 2 months

- UAT with Stakeholders (Farmers + Committee) 2 months
- Training, Deployment & Go-Live 1.5 months
- Support & Feedback Loop 2 months

The project timeline includes 3 months for gathering requirements and planning architecture, followed by 9 months of development, testing, and integration. The final 3–4 months focus on user acceptance testing (UAT), deployment, and incorporating feedback. A 2-month buffer is included to manage any unexpected delays or challenges.

#### Que 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

#### Ans 4.

Here's a detailed GAP Analysis Mr. Karthik can present to Mr. Henry, comparing the AS-IS (current) state with the TO-BE (future) state of the agricultural product procurement process. This will help highlight inefficiencies and demonstrate how the proposed online agriculture products store will improve the situation.

# **GAP Analysis: Online Agriculture Products Store**

Aspect	AS-IS (Existing Process)	TO-BE (Proposed Future Process)	Gap Identified / Value Addition
Product Availability	Farmers travel long distances to find fertilizers, seeds, pesticides. Limited local availability.	Online platform enables product access from multiple manufacturers, anytime, anywhere.	Overcomes geographic limitations and stock shortages.

Procurement Time	Time-consuming due to travel and manual searching.	Fast ordering and home delivery through digital interface.	Saves significant time and effort for farmers.
Information Access	No real-time updates about availability, price, or product features.	Detailed product info, real-time stock, pricing, reviews, and usage details available online.	Better decision-making and transparency.
Supplier Communication	Dependent on middlemen or physical meetings.	Direct communication between farmers and manufacturers via app.	Removes intermediaries; fosters trust and clarity.
Order & Payment Tracking	Manual receipts or no tracking at all.	Automated invoicing, payment history, and order tracking in one dashboard.	Enhanced financial management and documentation.
User Experience	Illiterate or semi-literate farmers face difficulty navigating offline market systems.	App with local language support and voice commands for ease of use.	More accessible and user-friendly, even in rural areas.
Pricing	Prices vary by vendor and location; no transparency.	Transparent, standardized pricing with multiple vendor comparisons.	Encourages fair pricing and better deals.

Reach	Limited to local area suppliers.	Nationwide network of manufacturers can be accessed.	Expands market for farmers and companies.
Feedback/Suppor t	No system for raising issues or getting support.	Built-in customer support, ratings, and feedback system.	Promotes quality control and continuous improvement.
Data Collection	No structured data on demand trends or usage.	Digital records can help with analytics, planning, and personalized offers.	Enables data-driven decisions for both parties.

### **Conclusion:**

This GAP analysis clearly shows that the proposed to-be system offers significant improvements in accessibility, efficiency, reach, and transparency for both farmers and manufacturers. It supports Mr. Henry's vision of empowering rural agriculture through technology and justifies the need for this initiative.

### Que 5

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

ANS 5.

**Business Analysis (BA) Risks** 

Risk Description

Incomplete Requirements	Farmers or stakeholders might not be able to fully express their needs due to lack of technical understanding.
Changing Requirements	Requirements may change frequently based on seasonal farming needs or regulatory changes.
Poor Stakeholder Involvement	Key users (like farmers) might not actively participate during requirement elicitation.
Ambiguous Requirements	Lack of clarity in requirements due to language barriers or lack of domain knowledge.
Inadequate Domain Knowledge	BA may not fully understand the agriculture domain, leading to gaps in understanding.
Conflict Between Stakeholders	Different expectations from multiple stakeholders can cause delays and confusion.
Improper Prioritization	Critical features may be overlooked if prioritization of requirements is not handled well.
Lack of Access to End Users	Farmers may not be reachable frequently for validations or reviews.

# **Process/Project Risks**

Risk

Description

Budget Overrun	Cost might exceed ₹2 Crore if scope increases or unforeseen expenses occur.
Timeline Delays	The 18-month duration might be insufficient if project management isn't effective.
Resource Availability	Key team members might become unavailable or overloaded with other tasks.
Technological Limitations	Farmers may have limited access to smartphones or stable internet connectivity.
Integration Issues	Compatibility with various manufacturer systems and payment gateways may be complex.
Security & Data Privacy	Farmers' personal and financial data need to be protected from cyber threats.
Testing Challenges	Testing across different devices, locations, and network conditions can be tough.
User Adoption	Rural farmers may resist adopting a new digital solution due to lack of awareness or digital literacy.
Maintenance and	After deployment, regular support will be required which

might be overlooked in planning.

Support

Regulatory	The platform must comply with government rules related to
Compliance	agri-sales, e-commerce, and taxation.

#### **Conclusion:**

Identifying these risks early allows mitigation planning through strong communication, proper documentation, stakeholder engagement, buffer time, robust testing, and pilot implementations. Regular reviews and agile feedback loops will also reduce risk impact across the project lifecycle.

#### Que 6.

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

# **ANS 6.**

### **RACI Matrix (Stakeholder Roles)**

Project Activity / Decision Area	Mr. Henry <br &gt;(SOONY Owner)</br 	Mr. Pandu <br &gt;(Financia I Head)</br 	Mr. Dooku ( Project Coordinator )	Mr. Karthik (Delivery Head)	Mr. Vandanam <br &gt;(Project Manager)</br 	You (BA)	Farmer s (Peter, Kevin, Ben)	APT Dev Team (Dev, QA, Admins)
Project Funding & Approval	A	С	l	I	l	I	I	I
Requirement Gathering	I	I	1	I	С	R/A	С	I

Functional Design & Documentati on	I	I	I	I	С	R/A	С	I
Budget Planning & Allocation	С	Α	С	I	I	I	I	I
Technical Feasibility & Architecture Decisions	1	1	I	Α	С	С	I	R
Development Planning & Execution	I	I	I	С	Α	С	I	R
Testing & Quality Assurance	I	1	I	С	A	С	I	R
Stakeholder Communicati on	Α	С	С	С	R	R	С	I
Change Management	A	С	С	С	R	R	С	ı

Training & Documentati on for Users	1	ı	1	I	Α	R	С	R (for tech guides)
Go-Live Decision & Launch	A	С	С	С	R	С	1	R

# Legend:

- R = Responsible Performs the work
- A = Accountable Final decision maker, owns the outcome
- C = Consulted Provides input, feedback
- I = Informed Kept in the loop, no active role

# **Key Decision Makers:**

- Mr. Henry Strategic & Funding decisions
- Mr. Pandu Budget control & financial approvals
- Mr. Karthik Technical direction & delivery decisions
- Mr. Vandanam Execution, resource & timeline management

# **Key Influencers:**

- Mr. Dooku Project coordination and stakeholder liaison
- Peter, Kevin, Ben Represent end-user (farmer) needs

- You (BA) Influence feature scope, usability, user expectations
- APT Dev Team Influence tech feasibility, timeline, and quality

#### Que 7.

Help Mr Karthik to prepare a business case document

Ans 7.

**Business Case Document** 

Project Title: Online Agriculture Products Store

**Prepared By**: Business Analyst

Submitted To: Mr. Henry (SOONY), Mr. Pandu, Mr. Dooku

**Delivery Head**: Mr. Karthik

Implementation Partner: APT IT SOLUTIONS

Project Budget: ₹2 Crores

Timeline: 18 Months

**CSR** Initiative

## 1. Executive Summary

This business case proposes the development of an Online Agriculture Products Store under the CSR initiative by Mr. Henry, in collaboration with SOONY and APT IT SOLUTIONS. The aim is to address the difficulties faced by farmers in remote areas in procuring agricultural products like fertilizers, seeds, and pesticides. This platform will enable direct access between manufacturers and farmers, improving product availability and affordability.

#### 2. Problem Statement

Farmers like Peter, Kevin, and Ben are facing significant challenges in acquiring essential agricultural products due to:

- Lack of nearby suppliers
- Transportation issues
- Middlemen increasing product prices
- Lack of digital infrastructure in rural areas

## 3. Proposed Solution

Develop a user-friendly web and mobile application that:

- Lists products from registered manufacturers
- Allows farmers to browse and order directly
- Facilitates doorstep delivery
- Includes a multilingual interface for usability
- Provides product ratings, feedback, and secure payment options

### 4. Goals and Objectives

- **Primary Goal:** Enable farmers to access agricultural products digitally
- Objectives:
  - Bridge the supply chain gap between farmers and companies
  - Empower rural farmers through digital access
  - Improve efficiency and transparency in product procurement

# 5. Project Scope

# In Scope:

- Web and mobile application development
- Product listing and catalog management
- Order placement and tracking
- User authentication and registration
- Multilingual support

# Out of Scope:

- Offline retail store setup
- Logistics and transportation (can be outsourced)

# 6. Cost and Budget Estimate

- Total Budget: ₹2 Crores INR
- Allocated for:
  - Development & Testing: ₹1.2 Crores
  - o Infrastructure & Hosting: ₹20 Lakhs
  - Marketing & Awareness: ₹30 Lakhs
  - Training & Support: ₹30 Lakhs

### 7. Time Frame

- Total Duration: 18 Months
  - Requirement Gathering: 1 month

o Design and Planning: 2 months

o Development: 9 months

o Testing and UAT: 3 months

o Go-live & Support: 3 months

# 8. Benefits

- Improved access to quality agriculture inputs
- Reduced dependency on intermediaries
- Enhanced livelihood for rural farmers
- CSR value and reputation uplift for SOONY and Mr. Henry
- Opportunity to scale to other regions/countries

# 9. Risks & Mitigation

Risk	Mitigation Strategy
Low digital literacy among farmers	Design user-friendly UI, provide video/audio help
Connectivity issues	Provide offline mode with sync support
Security and data privacy	Use secure encryption, implement data policies

# 10. Key Stakeholders

• **Sponsor:** Mr. Henry

• Financial Head: Mr. Pandu

• Project Coordinator: Mr. Dooku

• **Delivery Head (APT IT):** Mr. Karthik

• **Farmers:** Peter, Kevin, Ben (requirement contributors)

• APT IT Team: PM, Developers, Testers, Network & DB Admins

#### 11. Conclusion

This project has a high potential to transform the lives of farmers by providing timely access to essential resources. With the backing of experienced stakeholders and the technical expertise of APT IT SOLUTIONS, the project is feasible and sustainable in the long run.

#### Que 8

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

#### Ans 8.

# **SDLC Overview**

The **Software Development Life Cycle (SDLC)** is a systematic process for planning, creating, testing, and deploying software. It helps ensure that the software is high quality, cost-effective, and meets customer requirements.

SDLC typically includes the following **phases**:

- 1. Requirement Gathering
- 2. Analysis
- 3. Design
- 4. Development
- 5. Testing
- 6. Deployment
- 7. Maintenance

# **Development Methodologies under SDLC**

### 1. Sequential (Waterfall Model)

- **Structure:** Linear and step-by-step.
- **Process:** Each phase must be completed before moving to the next.
- Best For: Projects with clear, well-defined requirements and low change probability.
- **Pros:** Simple, easy to manage, good documentation.
- Cons: Not flexible; difficult to go back and make changes.

Example: Government or construction-related software with rigid requirements

#### 2. Iterative

- **Structure:** The product is built in small iterations (cycles).
- **Process:** Partial implementation is done in each iteration and improved over time.
- **Best For:** Projects that evolve gradually with learning and feedback.
- **Pros:** Early feedback, flexible, risk reduction.
- Cons: Can become expensive if not controlled well.

Example: Software tools where new modules are added gradually.

# 3. Evolutionary

- **Structure:** Combines iterative development with continual refinement.
- Process: Starts with a simple version and evolves based on continuous user feedback.
- Best For: Projects where end-user needs are expected to evolve during development.
- **Pros:** Real-time user involvement, adaptable to changes.
- Cons: Hard to manage scope and timelines sometimes.

*Example:* Al-based or research-driven applications where goals evolve.

# 4. Agile

- Structure: Highly flexible and collaborative.
- **Process:** Development is done in sprints (short cycles of 2–4 weeks), and feedback is incorporated regularly.

- Best For: Projects with dynamic requirements and where quick delivery is needed.
- Pros: Customer-centric, adaptive to changes, fast delivery.
- Cons: Needs experienced teams; not suitable for very large teams with poor coordination.

Example: Startups, mobile apps, and modern enterprise systems.

# **Recommendation for This Project**

#### Given:

- Involvement of multiple stakeholders
- Evolving requirements from farmers
- Need for a user-friendly and responsive system

# **Agile Methodology** would be the most suitable approach.

- Farmers and stakeholders can give feedback regularly.
- Functionality can be released module-by-module (e.g., Seeds, Fertilizers, then Pesticides).
- Helps avoid last-minute surprises and ensures the application truly meets farmer needs.

#### Que 9

They discussed models in SDLC like waterfall RUP Spiral and Scrum . You put forth your understanding on these models

#### Ans 9.

# **Understanding SDLC Models**

#### 1. Waterfall Model

- **Type**: Sequential
- Process: Follows a linear, phase-by-phase approach (e.g., Requirement → Design → Development → Testing → Deployment).
- Best When: Requirements are fixed and clearly defined at the beginning.
- Pros:
  - Easy to manage.
  - Well-documented.

#### Cons:

- Inflexible to changes.
- Late testing and feedback.

**Use Case**: Government or compliance-heavy systems where every step must be documented and signed off.

The Waterfall Model is a linear, step-by-step approach to software development. Each phase requirement, design, development, testing, deployment, and maintenance must be completed before the next begins. It's best for short-term projects with stable, well-defined requirements but lacks flexibility for changes and delivers the final product late.

## 2. RUP (Rational Unified Process)

• Type: Iterative and Incremental

#### Process:

 Divides the project into 4 phases: Inception, Elaboration, Construction, Transition.

- Allows iterative development with continuous integration and testing.
- **Best When**: Large enterprise projects with complex requirements and need for risk management.

### • Pros:

- o Risk management at each phase.
- Clear documentation and roles.

#### Cons:

- May become heavyweight if not customized.
- Steep learning curve.

**Use Case**: Banking, insurance, or government software where multiple stakeholders and compliance are involved.

RUP (Rational Unified Process) is an iterative, risk-driven development model with four phases: Inception, Elaboration, Construction, and Transition. It emphasizes architecture, documentation, and early validation through prototyping. Suitable for complex, large-scale projects, it requires skilled teams and can be costly due to its structured process and documentation overhead.

# 3. Spiral Model

- Type: Risk-Driven & Iterative
- Process: Project passes through repeated cycles (spirals) of planning, risk analysis, engineering, and evaluation.
- Best When: Projects with high risk or unclear requirements.

#### • Pros:

Excellent risk management.

High flexibility and adaptability.

#### • Cons:

- Costly and time-consuming.
- o Requires expertise in risk assessment.

**Use Case**: Mission-critical software (e.g., defense, aerospace) where risks must be continuously evaluated.

The Spiral Model is an iterative approach focused on risk assessment at every phase Planning, Risk Analysis, Engineering, and Evaluation. It allows gradual refinement of requirements and early risk mitigation. Ideal for large, high-risk projects, but not cost-effective or practical for smaller or straightforward applications due to its complexity.

## 4. Scrum (Agile Framework)

• **Type**: Agile, Iterative

#### Process:

- Work is divided into Sprints (2–4 weeks).
- Includes roles like Product Owner, Scrum Master, Development Team.
- Focus on delivering a working product at the end of each Sprint.
- **Best When**: Requirements evolve, and the product needs quick delivery with regular feedback.

### • Pros:

- Very flexible.
- High collaboration.
- Continuous delivery.

# • Cons:

- o Needs disciplined and experienced team.
- o Scope creep risk if not managed well.

**Use Case**: Startups, mobile apps, modern SaaS platforms where speed and feedback matter.

# **Summary Table**

Model	Flexibilit y	Risk Management	Customer Involvement	Delivery Style	Best For
Waterfal I	Low	Low	Minimal	Single release	Simple, fixed-scope projects
RUP	Medium	High	Moderate	Incremental	Large enterprise systems
Spiral	High	Very High	Moderate	Iterative	High-risk, complex projects
Scrum	Very High	Medium	High	Incremental, fast	Dynamic, user-focused systems