

CAPSTONE PROJECT 2 – SCRUM FOOD

Q1. Write Agile Manifesto – (8 Marks)

Definition:

The Agile Manifesto is a formal proclamation of four key values and twelve principles that guide agile project development.

1 Individuals and interactions over Processes and tools

The message here is that while processes and tools will be necessary on our projects, it is more important to focus on individuals and interactions involved. The projects are a result of effort by people. The problems get resolved by people. The ideas to solve problems come from people. Also the projects are defined by people, scope decided by people and finally accepted also by people. Focusing early on developing the individuals involved in the project and emphasizing productive and effective interactions help set up a project for success.

2. Working software over Comprehensive documentation

The message here is that, software without any documentation is certainly problematic, but comprehensive documentation without software is also valueless. The message is to document but documentation should be such that it is barely essential for others to understand what's there in the software.

3. Customer collaboration over Contract negotiation

The message here is that one must be flexible and accommodating rather than being uncooperative with the customer. We could build the product as originally specified but it may become worthless if customer recognizes that there needs to be a change to make it more effective. Rather than beat up the customer with a change management process that is really more of a change suppression process, we have to assume right at the start that things will change.

4. Responding to change over Following a plan

Initial plan should always be a starting point and the plan should progressively elaborate as time goes. More energy should be spent on responding to the inevitable changes on the project. However, this does not mean that one must throw the plans out of the window and be ad-hoc. We still need to plan. Just that there should be an assumption that plan will change and one must respond to [Change](#) positively.

Agile Principles

In addition to the four Agile Manifesto values, the authors of the Manifesto created twelve guiding principles. Following are the 12 principles

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable product.
2. Welcome changing requirements, even late in development. [Agile](#) processes harness change for the customer's competitive advantage.
3. Deliver working product frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a

- development team is face-to-face conversation.
7. Working product is the primary measure of progress.
 8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
 9. Continuous attention to technical excellence and good design enhances agility.
 10. Simplicity—the art of maximizing the amount of work NOT done—is essential.
 11. The best architectures, requirements, and designs emerge from self-organizing teams.
 12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Case Example:

For “Scrum Foods”, if the restaurant owner changes availability hours frequently, Agile allows adapting these changes fast without reworking entire project documentation

Question 2 – User Stories- Acceptance Criteria-BV-CP – 40 Marks

This document includes 40 user stories uniquely crafted for the Scrum Foods case study. Each story corresponds to a specific actor in the system and includes unique features, real-world acceptance criteria (AC), business value (BV) with justification, complexity points (CP) with justification, and clearly assigned priority.

User Story 1

As a Customer, I want to register and login so that I can ['User registers with OTP verification', 'Login redirects to homepage', 'Forgot password link works'].

Priority: LOW

- Acceptance Criteria:
 - User registers with OTP verification
 - Login redirects to homepage
 - Forgot password link works

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 2

As a Customer, I want to add multiple delivery addresses so that I can ['User can save, edit, delete addresses', 'Each address is validated', 'Can set default address'].

Priority: LOW

- Acceptance Criteria:
 - User can save, edit, delete addresses
 - Each address is validated
 - Can set default address

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 3

As a Customer, I want to track food delivery so that I can ['Live GPS tracking', 'Driver details visible', 'ETD updated in real-time'].

Priority: LOW

- Acceptance Criteria:
 - Live GPS tracking
 - Driver details visible
 - ETD updated in real-time

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 4

As a Customer, I want to cancel an order so that I can ['Cancel option available until confirmed', 'Refund policy displayed', 'User gets confirmation'].

Priority: LOW

- Acceptance Criteria:
 - Cancel option available until confirmed
 - Refund policy displayed
 - User gets confirmation

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 5

As a Customer, I want to rate and review order so that I can ['Rating system from 1–5 stars', 'User adds textual feedback', 'Feedback saved per order'].

Priority: LOW

- Acceptance Criteria:
 - Rating system from 1–5 stars
 - User adds textual feedback
 - Feedback saved per order

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 6

As a Customer, I want to view order history so that I can ['List of past orders', 'Download invoice', 'Reorder button functional'].

Priority: LOW

- Acceptance Criteria:
 - List of past orders
 - Download invoice
 - Reorder button functional

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 7

As a Customer, I want to contact support so that I can ['Chat support available', 'Support ticket gets created', 'User receives ticket ID'].

Priority: LOW

- Acceptance Criteria:
 - Chat support available
 - Support ticket gets created
 - User receives ticket ID

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 8

As a Delivery Boy, I want to register and verify profile so that I can ['Upload ID and bank info', 'Admin verification required', 'Receive approval message'].

Priority: LOW

- Acceptance Criteria:
 - Upload ID and bank info
 - Admin verification required
 - Receive approval message

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 9

As a Delivery Boy, I want to view assigned orders so that I can ['List current orders', 'Order detail page', 'Navigation link active'].

Priority: LOW

- Acceptance Criteria:
 - List current orders
 - Order detail page
 - Navigation link active

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 10

As a Delivery Boy, I want to update delivery status so that I can ['Mark as picked/delivered', 'Add notes if needed', 'Customer gets notified'].

Priority: LOW

- Acceptance Criteria:
 - Mark as picked/delivered
 - Add notes if needed
 - Customer gets notified

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 11

As a Delivery Boy, I want to view earnings report so that I can ['Weekly/monthly tabs', 'Total earnings shown', 'Downloadable CSV'].

Priority: MEDIUM

- Acceptance Criteria:
 - Weekly/monthly tabs
 - Total earnings shown
 - Downloadable CSV

Business Value (BV): 700

Reason for BV: Important for internal efficiency and reporting.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 12

As a Delivery Boy, I want to raise delivery issue so that I can ['Report form with reason', 'Attach photo option', 'Admin gets notified'].

Priority: LOW

- Acceptance Criteria:
 - Report form with reason
 - Attach photo option
 - Admin gets notified

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 13

As a Delivery Boy, I want to set availability hours so that I can ['Toggle availability per day', 'Hours editable', 'Change visible to admin'].

Priority: LOW

- Acceptance Criteria:
 - Toggle availability per day
 - Hours editable
 - Change visible to admin

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 14

As a Delivery Boy, I want to chat with restaurant so that I can ['Chat box enabled per order', 'Message history saved', 'Access expires post delivery'].

Priority: LOW

- Acceptance Criteria:
 - Chat box enabled per order
 - Message history saved
 - Access expires post delivery

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 15

As a Restaurant Owner, I want to create and manage menu so that I can ['Add/edit/delete item', 'Upload image and price', 'Menu sorted by category'].

Priority: LOW

- Acceptance Criteria:
 - Add/edit/delete item
 - Upload image and price
 - Menu sorted by category

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 4

Reason for CP: Moderate UI + backend logic.

User Story 16

As a Restaurant Owner, I want to accept/reject orders so that I can ['Accept button with timer', 'Auto-reject if timeout', 'Customer gets real-time update'].

Priority: LOW

- Acceptance Criteria:
 - Accept button with timer
 - Auto-reject if timeout
 - Customer gets real-time update

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 17

As a Restaurant Owner, I want to set delivery preparation time so that I can ['Dropdown time picker', 'Shown to customer', 'Impacts ETA calculation'].

Priority: LOW

- Acceptance Criteria:
 - Dropdown time picker
 - Shown to customer
 - Impacts ETA calculation

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 18

As a Restaurant Owner, I want to manage daily offers so that I can ['Create offers with validity', 'Apply on selected items', 'Display on app home'].

Priority: LOW

- Acceptance Criteria:
 - Create offers with validity
 - Apply on selected items
 - Display on app home

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 4

Reason for CP: Moderate UI + backend logic.

User Story 19

As a Restaurant Owner, I want to view customer feedback so that I can ['Ratings shown per item', 'Sort by date or rating', 'Response box for owner'].

Priority: LOW

- Acceptance Criteria:
 - Ratings shown per item
 - Sort by date or rating
 - Response box for owner

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 20

As a Restaurant Owner, I want to verify delivery person so that I can ['View profile and ID', 'Accept/reject option', 'Send message to admin'].

Priority: LOW

- Acceptance Criteria:
 - View profile and ID
 - Accept/reject option
 - Send message to admin

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 21

As a Restaurant Owner, I want to view order analytics so that I can ['Graph by day/week', 'Top-selling dishes', 'Export to Excel'].

Priority: MEDIUM

- Acceptance Criteria:
 - Graph by day/week
 - Top-selling dishes
 - Export to Excel

Business Value (BV): 700

Reason for BV: Important for internal efficiency and reporting.

Complexity Points (CP): 5

Reason for CP: Complex integrations and data visualizations required.

User Story 22

As a Admin, I want to approve restaurant registration so that I can ['List of pending requests', 'View KYC documents', 'Approve/reject option'].

Priority: LOW

- Acceptance Criteria:
 - List of pending requests
 - View KYC documents
 - Approve/reject option

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 23

As a Admin, I want to approve delivery boy accounts so that I can ['Filter by region', 'Verify ID proof', 'Assign to restaurant area'].

Priority: LOW

- Acceptance Criteria:
 - Filter by region
 - Verify ID proof
 - Assign to restaurant area

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 24

As a Admin, I want to view system-wide feedback so that I can ['Searchable feedback log', 'Filter by actor', 'Highlight negative reviews'].

Priority: LOW

- Acceptance Criteria:
 - Searchable feedback log
 - Filter by actor
 - Highlight negative reviews

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 25

As a Admin, I want to manage escalations so that I can ['View open tickets', 'Add resolution comment', 'Mark as resolved'].

Priority: LOW

- Acceptance Criteria:
 - View open tickets
 - Add resolution comment
 - Mark as resolved

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 4

Reason for CP: Moderate UI + backend logic.

User Story 26

As a Admin, I want to issue refund so that I can ['Enter order ID', 'Partial/full refund option', 'Generate refund receipt'].

Priority: LOW

- Acceptance Criteria:
 - Enter order ID
 - Partial/full refund option
 - Generate refund receipt

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 27

As a Admin, I want to send system-wide notification so that I can ['Compose message', 'Choose actor group', 'View delivery status'].

Priority: LOW

- Acceptance Criteria:
 - Compose message
 - Choose actor group
 - View delivery status

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 28

As a Admin, I want to manage promo codes so that I can ['Add/remove code', 'Set expiration', 'Track usage stats'].

Priority: LOW

- Acceptance Criteria:
 - Add/remove code
 - Set expiration
 - Track usage stats

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 4

Reason for CP: Moderate UI + backend logic.

User Story 29

As a Regional Admin, I want to view regional revenue so that I can ['Revenue per restaurant', 'Export to Excel', 'Weekly/monthly toggle'].

Priority: LOW

- Acceptance Criteria:
 - Revenue per restaurant
 - Export to Excel
 - Weekly/monthly toggle

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 30

As a Regional Admin, I want to manage local restaurant list so that I can ['Activate/deactivate restaurant', 'Update info', 'Assign delivery range'].

Priority: LOW

- Acceptance Criteria:
 - Activate/deactivate restaurant
 - Update info
 - Assign delivery range

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 4

Reason for CP: Moderate UI + backend logic.

User Story 31

As a Regional Admin, I want to track delivery boy performance so that I can ['Rating per driver', 'No. of orders delivered', 'View issues reported'].

Priority: LOW

- Acceptance Criteria:
 - Rating per driver
 - No. of orders delivered
 - View issues reported

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 32

As a Regional Admin, I want to resolve local refund requests so that I can ['View refund list', 'Chat with customer', 'Approve partial refund'].

Priority: LOW

- Acceptance Criteria:
 - View refund list
 - Chat with customer
 - Approve partial refund

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 33

As a Regional Admin, I want to generate weekly reports so that I can ['Auto-generate each Monday', 'Includes revenue and issues', 'Sent to BO email'].

Priority: MEDIUM

- Acceptance Criteria:
 - Auto-generate each Monday
 - Includes revenue and issues
 - Sent to BO email

Business Value (BV): 700

Reason for BV: Important for internal efficiency and reporting.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 34

As a Regional Admin, I want to approve time slots for restaurant so that I can ['Slot suggestion window', 'Accept/reject changes', 'Update schedule live'].

Priority: LOW

- Acceptance Criteria:
 - Slot suggestion window
 - Accept/reject changes
 - Update schedule live

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 35

As a Regional Admin, I want to block underperforming restaurant so that I can ['Flag issues', 'Add block reason', 'Notified to Admin'].

Priority: LOW

- Acceptance Criteria:
 - Flag issues
 - Add block reason
 - Notified to Admin

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 36

As a Business Owner, I want to view global business revenue so that I can ['Select region/date', 'Graph and table', 'Export as PDF/Excel'].

Priority: HIGH

- Acceptance Criteria:
 - Select region/date
 - Graph and table
 - Export as PDF/Excel

Business Value (BV): 1000

Reason for BV: High-impact feature supporting user experience or revenue.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 37

As a Business Owner, I want to broadcast app-wide announcements so that I can ['Create banner', 'Schedule publish time', 'Select user roles to show'].

Priority: LOW

- Acceptance Criteria:
 - Create banner
 - Schedule publish time
 - Select user roles to show

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 38

As a Business Owner, I want to update commission model so that I can ['Choose region', 'Update % cut', 'Notify restaurant'].

Priority: LOW

- Acceptance Criteria:
 - Choose region
 - Update % cut
 - Notify restaurant

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 39

As a Business Owner, I want to analyze customer behavior so that I can ['Heatmaps of usage', 'Top order times', 'Most liked dishes'].

Priority: LOW

- Acceptance Criteria:
 - Heatmaps of usage
 - Top order times
 - Most liked dishes

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 40

As a Business Owner, I want to audit delivery efficiency so that I can ['Driver delay reports', 'Region-wise average ETA', 'Highlight exceptions'].

Priority: LOW

- Acceptance Criteria:
 - Driver delay reports
 - Region-wise average ETA
 - Highlight exceptions

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 3

Reason for CP: Basic functionality with low complexity.

User Story 41

As a Business Owner, I want to receive summarized KPI dashboard so that I can ['Auto-generated each week', 'Includes revenue, orders, issues', 'Exportable'].

Priority: LOW

- Acceptance Criteria:
 - Auto-generated each week
 - Includes revenue, orders, issues
 - Exportable

Business Value (BV): 500

Reason for BV: Operational feature with moderate impact.

Complexity Points (CP): 5

Reason for CP: Complex integrations and data visualizations required.

Q3. What is an Epic? Write 2 Epics – (5 Marks)

Definition:

An **Epic** is a large user story that can't be completed in a single sprint and must be broken down into smaller stories.

Example Epics for Scrum Foods:

1. **“Customer Order Management”**
 - Sub-stories: Add to cart, place order, track delivery, cancel order.
2. **“Restaurant Dashboard Management”**
 - Sub-stories: View orders, update menu, set availability hours, view reports.

Q4. Difference between BV and CP – (2 Marks)

Term Definition

BV Business Value – How important a feature is to stakeholders (Rs-based).

CP Complexity Points – How difficult it is to develop a feature (Story Points)

Example:

"Real-time tracking" has **high BV (500)** but **high CP (8)** due to GPS integration.

Question 5 –Explain about Sprint– 5 Marks

◆ Definition of a Sprint:

A **Sprint** is a fixed time-boxed iteration (usually 1–4 weeks, commonly 2 weeks) in Agile Scrum within which the Scrum Team develops a **potentially shippable product increment**.

Each Sprint includes:

- **Sprint Planning**
- **Daily Scrums**
- **Sprint Execution**
- **Sprint Review**
- **Sprint Retrospective**

Once a Sprint begins, its **scope is locked**, and the team focuses on delivering the committed work.

◆ Key Characteristics of a Sprint:

Characteristic	Description
Time-boxed	Typically 2 weeks
Goal-oriented	Each sprint has a Sprint Goal
Fixed duration	Cannot be extended or shortened once started
Regular cadence	Sprints follow one after another with no gaps
Continuous improvement	Ends with retrospective to improve team performance

● Case Study Example – Scrum Foods:

In the **Scrum Foods** project:

- The Sprint duration was set to **2 weeks**.
- In **Sprint 1**, the team selected **10 high-priority user stories** related to the **Minimum Viable Product (MVP)**.
- These included user stories such as:
 - Customer registration and login

- Viewing restaurants and menus
- Adding address
- Selecting payment mode
- Tracking delivery

Sprint Planning Meeting Highlights:

- Team discussed capacity and velocity.
- Stories were estimated using CP (Complexity Points).
- Tasks were broken down and distributed among 8 Scrum Developers.

Daily Scrum Meetings:

- Developers shared:
 - What they worked on
 - What they'll do next
 - Any blockers (impediments)

Sprint Review:

- Delivered working features (e.g., placing order and payment).
- Stakeholders provided feedback for future sprints.

Sprint Retrospective:

- Developers discussed what went well and what could improve.
- Example: Decided to better define acceptance criteria before Sprint Planning.

◆ **Benefits of Sprints:**

- Encourages **iterative delivery** of working software.
 - Promotes **team focus and discipline**.
 - Allows for **early feedback** from stakeholders.
 - Enables **continuous improvement** in each iteration.
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✔ **Summary:**

In Scrum Foods, each sprint is like a building block of the food delivery app. Sprint 1 helped deliver the core functions (MVP) and allowed the team to release usable software early. This early feedback cycle helped refine the product and plan better for Sprint 2.

Question 6 – Explain Product backlog and sprint back log– 5 Marks

◆ **1. Product Backlog – Definition**

The **Product Backlog** is an **ordered list of all features, enhancements, bug fixes, and technical work** required to build and improve a product. It is **owned by the Product Owner** and continuously refined (groomed) throughout the project.

- It represents the **entire scope** of the product.
 - Items in the backlog are typically expressed as **User Stories**.
 - Each item has an associated **Business Value (BV)** and **Complexity Points (CP)**.
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● **Case Study Example (Scrum Foods):**

For Scrum Foods, the product backlog includes items such as:

User Story	BV	CP
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User Story	BV	CP
Customer login and registration	500	3
Restaurant onboarding and approval	500	3
Add food to cart	1000	5
Real-time order tracking	1000	5
Raise refund request	200	2

The Product Owner (you) is responsible for maintaining and prioritizing this backlog throughout the Scrum Foods project lifecycle.

◆ 2. Sprint Backlog – Definition

The **Sprint Backlog** is a **subset of the product backlog**. It consists of items selected during **Sprint Planning** that the team commits to deliver during the sprint (typically 2 weeks).

- It includes **selected Product Backlog Items (PBIs)** and their breakdown into **tasks**.
- It is managed **collaboratively by the Scrum Team**.
- Sprint backlog is dynamic and updated **daily**.

● Case Study Example (Scrum Foods):

In Sprint 1 of Scrum Foods, the team selected the following 10 items as part of the **Sprint Backlog** (Minimum Viable Product):

Sprint Item	Status
Customer registration and login	Done
Restaurant list and menu viewing	In Progress
Add address for delivery	Done
Select payment method	Done
Track order with delivery boy info	To Do
Admin approval of restaurant registration	Done

These were broken down into smaller tasks and assigned to 8 Scrum Developers.

✓ Summary Table

Feature	Product Backlog	Sprint Backlog
Definition	Complete list of all requirements	Subset of PBIs selected for a specific sprint
Owner	Product Owner	Scrum Team
Scope	Project-wide	Sprint-specific (e.g., 2 weeks)
Priority	Continuously prioritized	Based on Sprint Planning
Status Tracking	Regularly refined	Updated daily in Sprint Board

Question 7 – What is impediments log? write 2 impediments – 5 Marks

Definition of Impediments Log:

An **Impediments Log** is a tracking document used by the Scrum Team to record and manage **blockers, delays, or challenges** that impact sprint progress. These issues prevent the team from achieving sprint goals and are typically addressed by the **Scrum Master**.

Purpose of Impediments Log:

- Provides visibility of team blockers
- Enables resolution tracking
- Helps Scrum Master escalate issues quickly
- Improves Sprint Review and Retrospective outcomes

● Case Study: Scrum Foods – Impediments Log Examples

Impediment No.	Description	Impact on Sprint	Resolution Status
1	Payment Gateway API failure – Payment service is down for UPI & cards.	Blocked completion of "Place Order" and "Make Payment" user stories.	Scrum Master contacted payment API team. Issue fixed in 2 days.
2	Delay in Regional Admin Approval – Admin not responding to restaurant registration requests.	Blocked restaurant onboarding, affecting testing of restaurant dashboard features.	Escalated to Product Owner, alternate admin assigned temporarily.

✓ Summary:

The **Impediments Log** plays a key role in tracking blockers like API failures or stakeholder delays, especially in **Scrum Foods**, where timely restaurant onboarding and payment flow are business critical.

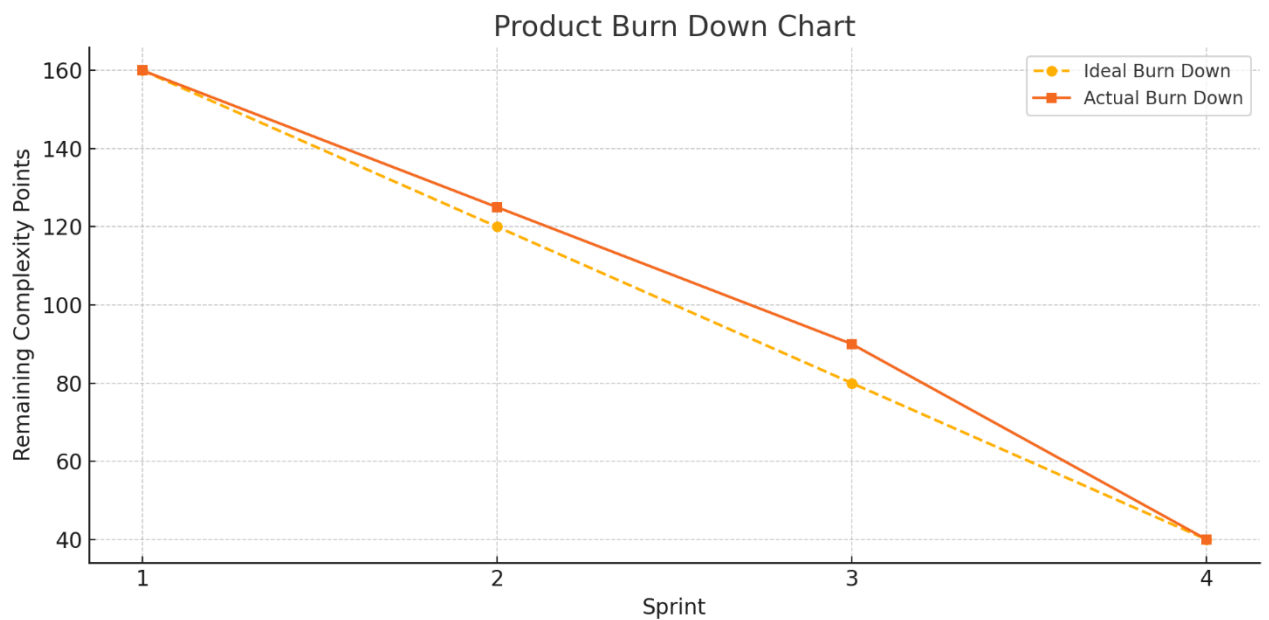
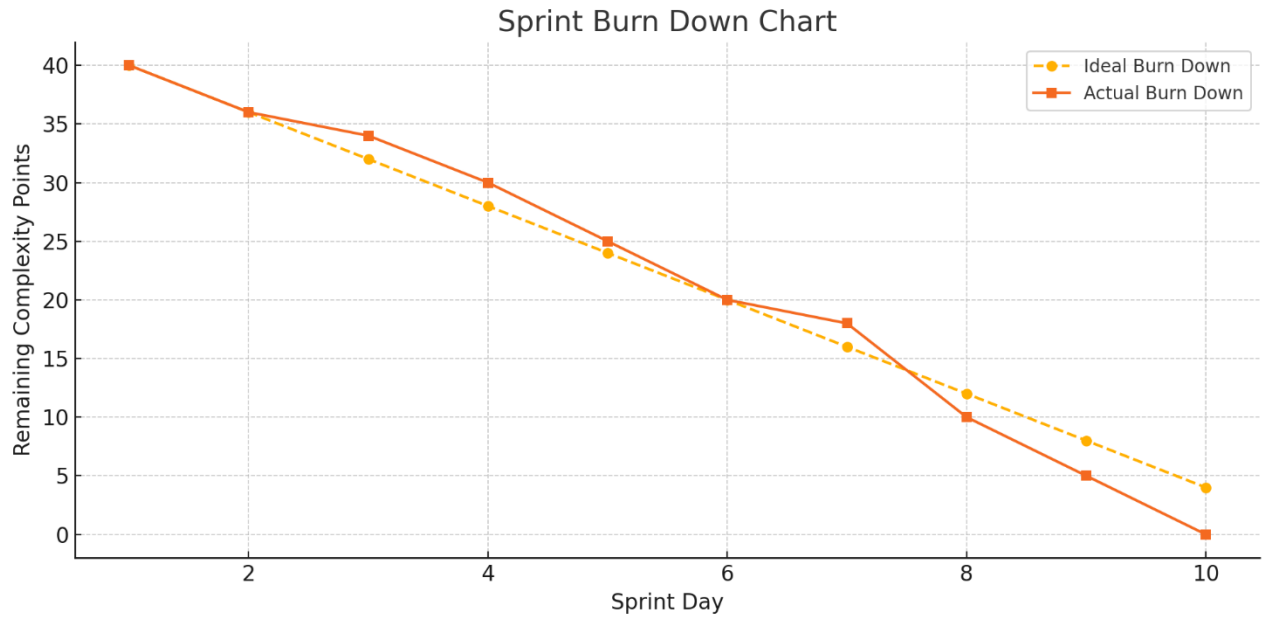
Question 8 – Explain Velocity of the Team – 1 Marks**Definition:**

Velocity is the number of CPs completed in a sprint.

Example:

Sprint 1 completed 10 user stories with total **20 CP**, so velocity = **20 CP/sprint**

Question 9 – Draw Sprint Burn Charts n Product Burn Down Charts– 3 Marks



Q10. Explain Product Grooming – (2 Marks)

Definition:

Product grooming is the **refinement** of the product backlog to ensure stories are well-defined, prioritized, and estimated before sprint planning.

Case Example:

Regular grooming helps refine stories like "chat with delivery boy" or "refund request".

Backlog Refinement is when the [product owner](#) and some, or all, of the rest of the team refine the backlog on a regular basis to ensure the backlog contains the appropriate items, that they are prioritized, and that the items at the top of the backlog are ready for delivery.

They are the same. The word Grooming is replaced by the word Refinement since Grooming has negative meaning in some parts of the world.

Question 11 – Explain the roles of Scrum Master and Product Owner – 3 Marks

SCRUM MASTER-

- Holds daily 15 minute team meeting (Daily scrum)

- Removes obstacles

- Maintain the sprint burn down chart

- Conduct sprint retrospective at the end of a sprint

- Is a facilitator not a manager

PRODUCT OWNER

- Accountable for product success

- Defines all product features

- Responsible for prioritizing product feature

- Maintain the product backlog

- Ensures team working on highest valued features

SCRUM TEAM

- Team is cross functional and consist of 5-9 people

- There are no set project role within the team

- Team defines tasks and assignment

Team is self organizing and self managing

Maintain the sprint backlog

Conduct the sprint review

In case study:

I am the **Product Owner** managing user story creation and priority.

Question 12 – Explain all Meetings Conducted in Scrum Project – 8 Marks

1. Sprint planning

- **Purpose** – Initiate the sprint by laying out the work to be performed for the sprint. This involves preparing a sprint goal, forecasting items to be done this sprint and a plan to go with it
- **Inputs** –
 - 1.Product backlog
 - 2. increment
 - 3 velocity (Past performance)
 - 4 capacity available
 - 5 improvement identified in the retrospective
 - 6 defination of done
- **Output**
 - 1 Sprint backlog
- Sprint goal
- Product backlog items selected for this sprint
- Plan for executing the items

2 Daily Scrum

Purpose- Inspect progress towards the sprint goa, plan next 24 to 48 hours which involves adapting the sprint backlog if necessary

Input

Sprint goal
Sprint backlog
Work done over the last 24 hours
Earlier identified impediments and solution to those
Burn up / burn downs/ scrum boards

Output

Updated sprint backlog
Newly identified impediments

3 Sprint review

Purpose- Inspect the increment and adopt the product backlog

Input-

Increment

Progress towards product goal

Market place condition

Output

Updated product backlog

Updated release plan

4- Sprint retrospective

Purpose- plan ways to increase quality and effectiveness the scrum team inspects how the last sprint went with regards to individual, interaction, processes, tools and their definition of done

Inputs

- **Individual and their interaction**
- **Processes and tool**
- **What went well what did not go well**

Output

- **Improvement identified**
- **Adopted DOD to meet new quality requirement**

5 Product backlog refinement

Product Backlog Refinement is not for PBIs selected for the current Sprint; it is for items in future Sprints. A good practice is to have at least two Sprints worth of work ready to go in the Product Backlog. Sprint Planning becomes relatively simple because the Product Owner and Scrum Team start the planning with a clear, well analyzed and estimated set of stories. If refining the Backlog is not being done (or not being done well) Sprint Planning will involve a significant amount of questions,

discovery and or confusion. Following are some of the activities done during Product Backlog Refinement

- Clarifying Product Backlog Items (PBIs)
- Splitting larger Product Backlog Items into smaller ones
- Reordering of the Product Backlog Items
- Adding Acceptance Criteria to the PBIs
- Identifying dependencies
- Estimations

Question 13 – Explain Sprint Size and Scrum Size– 2 Marks

- **Sprint Size:** 2 weeks (as per case study)
- **Scrum Size:** 1 day (daily meeting)

Question 14 – Explain DOR and DOD – 2 Marks

Term	Description
DOR (Definition of Ready)	A user story is well-defined, estimated, and prioritized.
DOD (Definition of Done)	Story is developed, tested, reviewed, and accepted.

Question 15 – Explain Prioritization Techniques and MVP – 3 Marks

1. MoSCoW Technique

Definition:

MoSCoW is a prioritization method that categorizes user stories/features into four groups:

- **M – Must Have:** Critical features without which the product cannot function.
- **S – Should Have:** Important but not vital features; can be postponed if needed.
- **C – Could Have:** Nice-to-have features that enhance UX but are not necessary.
- **W – Won't Have (Now):** Features that are out of scope for current MVP but may be included in future releases.

● Case Study Example (Scrum Foods):

Priority Feature

Must	Customer login, restaurant search, order placement, payment gateway
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Priority Feature

Should Real-time order tracking, delivery boy profile, restaurant availability

Could Wishlist for favorite dishes, promo codes, night mode theme

Won't Multi-language support, food blog integration

2. Kano Model

Definition:

The Kano Model helps to classify features based on customer satisfaction:

- Basic Needs: Expected by users; if not present, causes dissatisfaction.
- Performance Needs: More = better; users compare performance.
- Delighters/Exciters: Unexpected features that create high user delight.

● Case Study Example (Scrum Foods):

Kano Category Feature

Basic Needs Secure login, menu display, add to cart, payment options

Performance Fast delivery, order tracking, refund system

Delighters Gamified loyalty points, instant customer support chat, delivery tips

3. Business Value Matrix

Definition:

This matrix is a 2D grid used to prioritize based on:

- Business Value (High/Low)
- Implementation Effort (High/Low)

Four quadrants:

1. High Value / Low Effort – DO FIRST (Quick Wins)
2. High Value / High Effort – Plan strategically (Major Features)
3. Low Value / Low Effort – Do if time permits
4. Low Value / High Effort – Avoid or postpone

● Case Study Example (Scrum Foods):

Quadrant	Feature
High Value / Low Effort	View restaurant list, customer address entry
High Value / High Effort	Real-time GPS tracking, refund processing
Low Value / Low Effort	Customer testimonials on homepage
Low Value / High Effort	Live video cooking stream from restaurant

✓ MVP – Minimum Viable Product

Definition:

MVP is the smallest functional version of a product that delivers core value to users and allows for early feedback and validation.

Why MVP is important:

- Reduces time-to-market
- Saves development cost
- Helps identify market needs early
- Enables continuous improvement based on real user feedback

● Case Study MVP Features (Scrum Foods):

MVP Feature	Justification
Customer Registration/Login	Basic access to platform
View Restaurants/Menu	Core browsing feature to check food options
Place Order	Main revenue generation function
Payment Integration	Enables transaction completion
Order Confirmation	Final validation for successful order

MVP Feature

Justification

Q16. Difference between Business Analyst and Product Owner – (3 Marks)

Aspect	Business Analyst (BA)	Product Owner (PO)
1. Primary Role	Acts as a bridge between business stakeholders and technical team	Owns the product backlog and ensures delivery of product value
2. Focus Area	Gathers, analyzes, and documents requirements	Prioritizes features and defines the product vision
3. Decision Authority	Provides recommendations, but decisions rest with business	Has decision-making authority on product features and priorities
4. Involvement in Agile	Supports the PO and scrum team in refining backlog	Core member of the scrum team responsible for backlog grooming
5. Stakeholder Interaction	Communicates with multiple departments to gather needs	Acts as the main voice of the customer in the Scrum team

● Case Study Example (Scrum Foods):

- Business Analyst: May interact with restaurants and customers to understand pain points in the ordering process and document workflow improvements.
- Product Owner: Will prioritize features like "live tracking" and "refund request" based on business value and stakeholder inputs, and ensure they're delivered in upcoming sprints.

Question 17 – Prepare a sample Resume of 3yrs exp Product Owner – 3 Marks

Sample Resume – Product Owner (3 Years Experience)

Prashant Gavhane

Email: prashant.gavhane@example.com

Phone: +91-XXXXXXXXXX

LinkedIn: linkedin.com/in/prashantgavhane

Location: Pune, Maharashtra, India

Professional Summary

Certified Product Owner with 3 years of experience in Agile-Scrum environments. Proven ability to lead cross-functional teams, prioritize backlogs, and deliver high-value products. Strong background in business analysis, user story writing, sprint planning, and stakeholder engagement.

Core Skills

- Product Backlog Management
- User Stories & Acceptance Criteria
- Sprint Planning & Reviews
- Agile & Scrum Frameworks
- Stakeholder Communication
- JIRA, Confluence, Trello
- Wireframing & Prototyping
- Business Value & Prioritization
- MVP Definition & Product Roadmap

Certifications

- Certified Scrum Product Owner (CSPO)
- Certified Scrum Master (CSM)
- CFP (Certified Financial Planner – FPSB India)

Professional Experience

Product Owner – Scrum Foods (Client: COEPD IT Solutions)

Jan 2022 – Present | Pune, India

- Owned the product backlog for an online food delivery app targeting multi-stakeholder users.

- Created 40+ user stories with detailed AC, BV, CP, and managed sprint deliverables.
- Conducted sprint planning, daily stand-ups, reviews, and retrospectives with the Scrum team.
- Collaborated with business owner, developers, restaurants, and regional admins for feedback.
- Prioritized features based on MoSCoW and Kano models to define MVP and roadmap.

Education

MBA – Finance

Pune University, India | 2018 – 2020