**Capstone Project 2nd .Part 1st**

**Q.1. write Agile Manifesto**

**Answer**

**1.AGILE MANIFESTO**

➢Agile Manifesto is what are the values and Principles to be considered while working in Agile.

➢ It is nothing but a document that outlines the 4 basic Values of Agile and 12Principles of Agile.

➢ It’s not only for Scrum but also for all the frameworks that come under Agile like Scrum, XP, Kanban.

|  |
| --- |
| **AGILE MANIFESTO**  We are committed to discovering new ways to better deliver our products. In doing so, we value |
| **Individuals and Interactions  Working Products**  Over  Over  Processes and Tools  Comprehensive Documentation  **Customer Collaboration  Responding to Feedback**  Over  Over  Contract Negotiation  Following a plan  **1.**Our highest priority is to satisfy the customer through early and continuous delivery  2.welcome changing requirements, even late in development  3.Deliver Working Product frequently  4. Business-people and cross-discipline teams must work together daily  5.Build projects around motivated individuals and trust them to get the job done  6. The most effective and efficient method of conveying information is face-to-face conversation  7.Working product is primary measure of progress  8.Maintain a sustainable pace indefinitely  9. Give continuous attention to technical excellence  10.Simplicity- the art of maximizing the amount of work done is essential  11. Teams self-organize  12.Teams regularly reflect and adjust to become more effective |

**Q.2. User Stories- Acceptance Criteria-BV-CP**

**Answer**

**User Story No: 1**

* **Tasks:** 2
* **Priority:** HIGHEST
* **As a Delivery Boy, I want to register in Scrum Foods so that I can deliver orders.**
  + **BV:** 500
  + **CP:** 02
  + **Acceptance Criteria:**
    - Registration Screen
    - Text Boxes for User Name, Password, National ID, Mobile No, Email, Address, Phone Number.
    - Register Button
    - Notification sent successfully to the user

**User Story No: 2**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Customer, I want to register in Scrum Foods so that I can place orders.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Registration Screen
    - Text Boxes for User Name, Password, Mobile No, Email, Address, Phone Number.
    - Register Button
    - Notification sent successfully to the user

**User Story No: 3**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Restaurant, I want to register in Scrum Foods so that I can receive orders through the app.**
  + **BV:** 300
  + **CP:** 03
  + **Acceptance Criteria:**
    - Registration Screen
    - Text Boxes for Restaurant Name, Owner Name, Password, Email, Mobile No, Address, Registration Number.
    - Register Button
    - Notification sent successfully to the user

**User Story No: 4**

* **Tasks:** 2
* **Priority:** HIGHEST
* **As a Customer, I want to login to Scrum Foods so that I can access my account.**
  + **BV:** 400
  + **CP:** 02
  + **Acceptance Criteria:**
    - Login Screen
    - Text Boxes for User Name and Password
    - Login Button
    - Successful login redirects to the home page

**User Story No: 5**

* **Tasks:** 2
* **Priority:** HIGHEST
* **As a Delivery Boy, I want to login to Scrum Foods so that I can start my shift.**
  + **BV:** 500
  + **CP:** 02
  + **Acceptance Criteria:**
    - Login Screen
    - Text Boxes for User Name and Password
    - Login Button
    - Successful login redirects to the dashboard

**User Story No: 6**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Restaurant, I want to login to Scrum Foods so that I can manage my orders.**
  + **BV:** 300
  + **CP:** 03
  + **Acceptance Criteria:**
    - Login Screen
    - Text Boxes for Restaurant Name and Password
    - Login Button
    - Successful login redirects to the orders management page

**User Story No: 7**

* **Tasks:** 4
* **Priority:** HIGH
* **As a Customer, I want to search for restaurants on Scrum Foods so that I can view available options.**
  + **BV:** 400
  + **CP:** 04
  + **Acceptance Criteria:**
    - Search bar on the home page
    - Suggestions dropdown while typing
    - Filters for cuisine, rating, and delivery time
    - Search results display list of restaurants matching the criteria

**User Story No: 8**

* **Tasks:** 3
* **Priority:** MEDIUM
* **As a Customer, I want to view a restaurant's menu so that I can decide what to order.**
  + **BV:** 300
  + **CP:** 03
  + **Acceptance Criteria:**
    - Restaurant's menu displays food items with descriptions, prices, and images
    - Menu categories (e.g., appetizers, mains, desserts) are present
    - Option to add items to the cart from the menu

**User Story No: 9**

* **Tasks:** 4
* **Priority:** MEDIUM
* **As a Customer, I want to place an order so that I can have food delivered to my location.**
  + **BV:** 400
  + **CP:** 04
  + **Acceptance Criteria:**
    - Cart summary shows selected items, total price, and delivery charges
    - Option to enter delivery address and contact details
    - Payment options integrated (online payment and COD)
    - Confirmation screen with order details and estimated delivery time

more

Of course! Here are more user stories for Scrum Foods with their respective acceptance criteria, business value (BV), and complexity points (CP):

**User Story No: 10**

* **Tasks:** 2
* **Priority:** HIGH
* **As a Customer, I want to track my order in real-time so that I know the status of my delivery.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Access order tracking screen
    - View order status (e.g., preparing, on the way, delivered)
    - View delivery boy's location on a map
    - Receive notifications on order status updates

**User Story No: 11**

* **Tasks:** 3
* **Priority:** MEDIUM
* **As a Delivery Boy, I want to view assigned orders so that I know which deliveries to make.**
  + **BV:** 300
  + **CP:** 03
  + **Acceptance Criteria:**
    - Dashboard displays list of assigned orders with order details
    - Option to accept or decline assigned orders
    - View order pickup and delivery addresses

**User Story No: 12**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Restaurant, I want to view incoming orders so that I can prepare the food.**
  + **BV:** 300
  + **CP:** 03
  + **Acceptance Criteria:**
    - Order management screen shows list of incoming orders
    - Details of each order (e.g., items ordered, delivery address)
    - Option to update order status (e.g., preparing, ready for pickup)

**User Story No: 13**

* **Tasks:** 3
* **Priority:** MEDIUM
* **As a Customer, I want to provide feedback on my order so that I can share my experience.**
  + **BV:** 300
  + **CP:** 03
  + **Acceptance Criteria:**
    - Feedback form with rating system (e.g., stars)
    - Text box for additional comments
    - Submit button
    - Confirmation message after submission

**User Story No: 14**

* **Tasks:** 3
* **Priority:** MEDIUM
* **As an Admin, I want to manage user accounts so that I can maintain the system.**
  + **BV:** 250
  + **CP:** 03
  + **Acceptance Criteria:**
    - User management screen with list of users
    - Option to add, edit, or delete user accounts
    - Search and filter functionality for users
    - Confirmation messages for actions taken

**User Story No: 15**

* **Tasks:** 3
* **Priority:** MEDIUM
* **As a Regional Admin, I want to manage delivery boys in my region so that I can ensure efficient delivery.**
  + **BV:** 300
  + **CP:** 03
  + **Acceptance Criteria:**
    - List of delivery boys with their details (e.g., name, ID, contact info)
    - Option to add, edit, or remove delivery boys
    - Assign orders to delivery boys
    - View delivery performance metrics

**User Story No: 16**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Customer, I want to cancel my order so that I can change my mind if needed.**
  + **BV:** 300
  + **CP:** 02
  + **Acceptance Criteria:**
    - Option to cancel order before it is dispatched for delivery
    - Confirmation dialog to confirm cancellation
    - Notification sent to restaurant and delivery boy about cancellation
    - Refund process initiated (if payment was made online)

**User Story No: 17**

* **Tasks:** 2
* **Priority:** MEDIUM
* **As a Restaurant, I want to raise issues regarding orders so that I can resolve any problems.**
  + **BV:** 200
  + **CP:** 02
  + **Acceptance Criteria:**
    - Issue reporting screen with order details
    - Text box for description of the issue
    - Submit issue button
    - Confirmation message after submission

**User Story No: 18**

* **Tasks:** 3
* **Priority:** LOW
* **As a Customer, I want to view my order history so that I can keep track of my past orders.**
  + **BV:** 100
  + **CP:** 02
  + **Acceptance Criteria:**
    - Order history screen with list of past orders
    - Details of each order (e.g., items ordered, date, total amount)
    - Option to reorder from past orders
    - Option to provide feedback on past orders

**User Story No: 19**

* **Tasks:** 3
* **Priority:** MEDIUM
* **As a Delivery Boy, I want to update order status so that customers know when their order is on the way or delivered.**
  + **BV:** 300
  + **CP:** 02
  + **Acceptance Criteria:**
    - Option to update status (e.g., picked up, on the way, delivered)
    - Notifications sent to customers on status updates
    - Status updates reflected in real-time tracking

**User Story No: 20**

* **Tasks:** 3
* **Priority:** HIGH
* **As an Admin, I want to manage payment processes so that restaurants and delivery boys are paid accurately.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Payment management screen with list of transactions
    - Option to approve or reject payments
    - Generate payment reports for restaurants and delivery boys
    - Notifications sent on payment status

**User Story No: 21**

* **Tasks:** 2
* **Priority:** MEDIUM
* **As a Customer, I want to update my profile information so that my account details are accurate.**
  + **BV:** 200
  + **CP:** 02
  + **Acceptance Criteria:**
    - Profile management screen with current details
    - Option to edit and save changes
    - Confirmation message after saving changes

**User Story No: 22**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Customer, I want to make secure online payments so that I can pay for my orders conveniently.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Payment gateway integration
    - Option to save card details for future transactions
    - Confirmation screen with payment details
    - Notification sent on successful payment

**User Story No: 23**

* **Tasks:** 4
* **Priority:** MEDIUM
* **As a Customer, I want to apply discount codes so that I can receive discounts on my orders.**
  + **BV:** 250
  + **CP:** 02
  + **Acceptance Criteria:**
    - Option to enter discount code at checkout
    - Validate code and apply discount to total amount
    - Notification on successful application of discount
    - Display updated total amount after discount

**User Story No: 24**

* **Tasks:** 4
* **Priority:** LOW
* **As a Delivery Boy, I want to view my deliveries report so that I can keep track of my completed deliveries and earnings.**
  + **BV:** 200
  + **CP:** 03
  + **Acceptance Criteria:**
    - Deliveries report screen with list of completed deliveries
    - Details of each delivery (e.g., order ID, delivery date, earnings)
    - Option to filter and sort deliveries
    - Cumulative earnings displayed for selected period

**User Story No: 25**

* **Tasks:** 3
* **Priority:** MEDIUM
* **As a Regional Admin, I want to view regional revenue so that I can monitor financial performance.**
  + **BV:** 300
  + **CP:** 02
  + **Acceptance Criteria:**
    - Regional revenue screen with financial statistics
    - Option to filter and view revenue by date range
    - Generate and download regional revenue reports

**User Story No: 26**

* **Tasks:** 3
* **Priority:** HIGH
* **As an Admin, I want to resolve customer issues so that customer satisfaction is maintained.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Issue management screen with list of reported issues
    - Option to view details, assign resolution, and close issues
    - Notifications sent to customers on issue resolution status

**User Story No: 27**

* **Tasks:** 2
* **Priority:** HIGH
* **As a Customer, I want to receive order notifications so that I am informed about the status of my order.**
  + **BV:** 400
  + **CP:** 02
  + **Acceptance Criteria:**
    - Push notifications for order updates (e.g., order confirmed, dispatched, delivered)
    - In-app notifications with order status and estimated delivery time
    - Option to enable or disable push notifications

**User Story No: 28**

* **Tasks:** 3
* **Priority:** MEDIUM
* \*\*As a Restaurant, I want to view feedback so that I can improve my services based on customer reviews

**User Story No: 29**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Customer, I want to update my profile information so that my account details are accurate and up-to-date.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Profile screen with editable fields (e.g., name, email, address, phone number)
    - Save button to update information
    - Confirmation notification on successful update

**User Story No: 30**

* **Tasks:** 2
* **Priority:** MEDIUM
* **As a Delivery Boy, I want to update my profile information so that my contact and personal details are accurate.**
  + **BV:** 300
  + **CP:** 02
  + **Acceptance Criteria:**
    - Profile screen with editable fields (e.g., name, email, address, phone number)
    - Save button to update information
    - Confirmation notification on successful update

**User Story No: 31**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Customer, I want to view my order history so that I can keep track of past orders.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Order history screen with list of past orders
    - Option to view details of each order (e.g., items, date, total price)
    - Option to reorder from past orders

**User Story No: 32**

* **Tasks:** 2
* **Priority:** MEDIUM
* **As a Restaurant, I want to update my menu so that customers can see the latest item and prices.**
  + **BV:** 300
  + **CP:** 02
  + **Acceptance Criteria:**
    - Menu management screen with editable fields for each item (e.g., name, description, price)
    - Option to add or remove items
    - Save button to update menu
    - Confirmation notification on successful update

**User Story No: 33**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Customer, I want to apply discount codes to my order so that I can avail special offers and promotions.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Text box to enter discount code on the cart summary screen
    - Validation of discount code
    - Discount applied to total price if code is valid
    - Error message displayed for invalid codes

**User Story No: 34**

* **Tasks:** 2
* **Priority:** MEDIUM
* **As a Customer, I want to redeem reward points so that I can get discounts based on my loyalty.**
  + **BV:** 300
  + **CP:** 02
  + **Acceptance Criteria:**
    - Option to view and redeem reward points on the cart summary screen
    - Reward points converted to discount on the total price
    - Confirmation message displayed on successful redemption

**User Story No: 35**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Customer, I want to receive order status notifications so that I am informed about key updates.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Push notifications enabled for order statuses (e.g., order placed, order confirmed, order dispatched, order delivered)
    - Notifications displayed on the app and via email/SMS
    - Option to enable/disable notifications in settings

**User Story No: 36**

* **Tasks:** 3
* **Priority:** MEDIUM
* **As a Delivery Boy, I want to view my daily earnings so that I can keep track of my income.**
  + **BV:** 300
  + **CP:** 03
  + **Acceptance Criteria:**
    - Earnings summary screen with daily earnings displayed
    - Option to view detailed breakdown of earnings (e.g., per order, tips)
    - Option to filter earnings by date range

**User Story No: 37**

* **Tasks:** 2
* **Priority:** MEDIUM
* **As a Regional Admin, I want to view performance metrics for delivery boys in my region so that I can evaluate their efficiency.**
  + **BV:** 300
  + **CP:** 02
  + **Acceptance Criteria:**
    - Performance metrics screen with list of delivery boys
    - Metrics displayed (e.g., number of deliveries, average delivery time, customer ratings)
    - Option to filter metrics by date range

**User Story No: 38**

* **Tasks:** 2
* **Priority:** MEDIUM
* **As an Admin, I want to view overall system performance reports so that I can monitor key indicators and make improvements.**
  + **BV:** 300
  + **CP:** 02
  + **Acceptance Criteria:**
    - Reports dashboard with key performance indicators (KPIs)
    - Metrics displayed (e.g., total orders, revenue, average delivery time, customer satisfaction)
    - Option to export reports in CSV or PDF format

**User Story No: 39**

* **Tasks:** 2
* **Priority:** HIGH
* **As a Customer, I want to save my favorite restaurants so that I can easily access them later.**
  + **BV:** 400
  + **CP:** 02
  + **Acceptance Criteria:**
    - Option to mark restaurants as favorites
    - Favorites list accessible from the user profile
    - Option to remove restaurants from favorites

**User Story No: 40**

* **Tasks:** 3
* **Priority:** HIGH
* **As a Customer, I want to share my order details with friends so that they can see what I've ordered.**
  + **BV:** 400
  + **CP:** 03
  + **Acceptance Criteria:**
    - Share option on order summary screen
    - Integration with social media

**Q.3. What is epic? Write 2 epic.**

**Answer -**

**Epic Definition**

An **Epic** in Agile methodology is a large body of work that can be broken down into smaller user stories. It represents a significant piece of functionality or user requirement that is too big to be completed in a single iteration. Epics help in organizing the work and give a high-level overview of the product's features and functionalities.

**Example Epics for Scrum Foods**

**Epic 1: Customer Management**

* **Description:** Includes all functionalities required for customers to interact with the Scrum Foods application, such as registration, login, search, ordering, payment, and feedback.
* **Associated User Stories:**
  1. As a customer, I want to register so that I can begin placing orders.
  2. As a customer, I want to login so that I can access my account.
  3. As a customer, I want to search for restaurants so that I can view available options.
  4. As a customer, I want to view a restaurant's menu so that I can decide what to order.
  5. As a customer, I want to place an order so that I can have food delivered to my location.
  6. As a customer, I want to make a payment securely so that I can complete my order.
  7. As a customer, I want to track my order in real-time so that I can know its status.
  8. As a customer, I want to cancel my order so that I have the flexibility to change my mind.
  9. As a customer, I want to provide feedback and rate my experience so that I can share my opinions.

**Epic 2: Delivery Management**

* **Description:** Includes all functionalities required for delivery boys to manage and complete deliveries, such as registration, login, viewing orders, updating status, and generating reports.
* **Associated User Stories:**
  1. As a delivery boy, I want to register in Scrum Foods so that I can deliver orders.
  2. As a delivery boy, I want to login to Scrum Foods so that I can start my shift.
  3. As a delivery boy, I want to view my orders so that I can manage my deliveries efficiently.
  4. As a delivery boy, I want to update the status of orders so that customers are informed about their delivery.
  5. As a delivery boy, I want to raise issues so that I can report any problems encountered during delivery.
  6. As a delivery boy, I want to view delivery reports and revenue generated so that I can track my performance.
  7. As a delivery boy, I want to escalate issues to the regional admin so that I can get support when needed.

**Q.4. What is the difference between BV and CP**

**Answer -**

**Business Value (BV)** is a measure of the value that a user story brings to the stakeholders and the business. It quantifies the importance and impact of a feature or functionality in terms of meeting customer needs and driving business goals. In the context of Scrum Foods, BV represents the priority and significance of each user story in ensuring customer satisfaction, operational efficiency, and revenue generation.

**Complexity Points (CP)**, also known as Story Points, denote the estimated effort required to implement a user story. This estimation considers factors such as complexity, risk, and time needed to complete the task. For Scrum Foods, CP helps the development team understand and plan the workload involved in delivering each feature.

In summary, **business value** focuses on the importance and impact of a user story on the business and users, while **complexity points** assess the effort and resources needed for implementation. Both metrics are crucial for prioritizing and planning work in Agile projects.

**Q.5. Explain about Sprint**

**Answer**

In the context of software development and project management, a sprint is a time-boxed, iterative development period during which a specific set of tasks and goals are worked on by a development team. Sprint is a core concept in Agile methodologies, such as Scrum, which emphasizes flexibility, collaboration, and delivering value to the customer in shorter cycles.

Here are the key characteristics and components of a sprint:

●**Time Frame:**

A sprint typically has a fixed duration, often ranging from 1 to 4weeks. The duration is consistent across all sprints to provide a predictable cadence for development and planning.

●**Goals and Objectives:**

 At the beginning of each sprint, the development team, along with stakeholders, selects a set of user stories, features, or tasks to work on during that sprint. These items are collectively referred to as the sprint backlog.

●**Planning:**

During sprint planning, the development team breaks down the selected items from the product backlog into smaller tasks and estimates the effort required for each task. The team commits to completing these tasks within the sprint duration.

●**Daily Stand-ups:**

 Throughout the sprint, the team holds daily stand-up meetings (also known as daily scrums) to discuss progress, obstacles, and plans. Each team member shares what they've accomplished, what they're working on, and any challenges they're facing. These meetings foster communication and collaboration.

●**Development:**

 The development team works on the tasks identified in the sprint backlog. They collaborate closely, often using techniques like pair programming and frequent code reviews to ensure high-quality work.

●**Continuous Integration:**

 Developers integrate their code changes into the main codebase regularly, ensuring that the software remains functional and stable throughout the sprint.

●**Testing:**

 Testing is an integral part of a sprint. Automated tests are run to validate code changes, and manual testing may be conducted to ensure the quality of the software

.

●**Review and Demo:**

 At the end of the sprint, the development team conducts as print review and demo. They showcase the completed work to stakeholders, gathering feedback and validation. This helps ensure that the delivered features align with expectations.

●**Retrospective:**

 Following the review and demo, the team holds a sprint retrospective. They reflect on what went well during the sprint, what could be improved, and actions to take in the next sprint. The retrospective encourages continuous improvement.

●**Incremental Development:**

 Each sprint results in a potentially shippable product increment, meaning that at the end of each sprint, a new version of the software is available with additional features or improvements.

●**Adaptability:**

 Agile methodologies emphasize adaptability and the ability to respond to changing requirements. If new priorities or insights emerge, adjustments can be made in subsequent sprints.

**Q.6 – Explain Product backlog and sprint back log**

**Answer**

**Product Backlog and Sprint backlog:**

The Product Backlog is a dynamic, prioritized list of all the features, user stories, enhancements, bug fixes, and other work items that need to be addressed over the course of a project. It represents the entire scope of the product's development and is managed by the Product Owner. The Product Backlog is continually refined and updated based on feedback, changing requirements, and new insights.

The Sprint Backlog is a subset of the Product Backlog that represents the work that the development team commits to completing during a specific time period called a "Sprint." A Sprint is a fixed-duration iteration, usually lasting two to four weeks, in which the team works on a set of items from the Product Backlog. The Sprint Backlog is created during the Sprint Planning meeting, where the development team selects a set of items to work on based on their capacity and the priorities set by the Product Owner.

|  |  |  |
| --- | --- | --- |
| Sr.no | Product backlog | Sprint backlog |
|  | Anything that needed to accomplish the project vision | Anything that needed to fulfil the sprint goal |
|  | Product owner owns | Development team owns |
|  | Contains requirements and tasks defects | A subject of product backlog item defined as a priority by the product owner |
|  | Everyone contributes to the product backlog | Sprint planning meeting is to refine the sprit backlog items |
|  | Product backlog evolves and changes will be done by the po through the product life cycle | NO changes are allowed |
|  | It is to refine the product backlog | Is to refine the sprint backlog |
|  | Release burndown metric is used | Sprint burndown metric is used |
|  | Estimation is done at a entry level | Estimation is done at activity task level |
|  | Daily standup meetings dose not discuss product backlog items | Daily standup meetings discuss the sprit backlog in accordance with the sprit goal. |

**Q.7.What is impediments log? write 2 impediments**

**Answer -**

An impediment log, also known as an issue log or obstacle log, is a document or tool used in Agile software development to track and manage obstacles, bottlenecks, or any factors that impede the progress of a project or team.

2 Impediments:

● Delivery partner shortage in a specific region

● Technical issue causing intermittent order processing failure

Delivery partner shortage in a specific region

|  |  |
| --- | --- |
| Login id | 1 |
| Description | Delivery partner storage in specific region |
| impact | Delays in order deliveries and increases customer dis satisfaction |
| Priority | High Due to its impact on customer satisfaction |
| Assigned to | Operation team and HR team |
| Status | Open |
| Action taken | The operations team is actively recruiting new delivery partners in the region. The hr team is working on fast tracking the process |
| Resolution | Delivery partners recruitment is ongoing with hr team. |

|  |  |
| --- | --- |
| Login id | 2 |
| Description | Technical issue causing intermittent order processing failure |
|  |  |
| impact | Delays in order processing and potential revenue loss |
| Priority | High Due to its impact on customer satisfaction |
| Assigned to | Tech and QA team |
| Status | In progress |
| Action taken | The tech team has identified the root cause and is working on fix. The QA team is conducting expensive testing to ensure the issue is resolved. |
| Resolution | The tech team has implanted fix and conducted through testing. The issue has been resolved and orders are now processing smoothly. |

**Q.8 – Explain Velocity of the Team**

**Answer**

VELOCITY OF THE TEAM:

Velocity refers to the measure of the amount of work a development team can complete during a sprint. The calculation of velocity is performed by the development team itself, as they are responsible for estimating the effort required to complete each user story or backlog item.

**Story point estimation:**

Story point estimation is a technique used in agile software development to estimate the effort required for a specific task or user story. It's a relative measure of complexity rather than a fixed time unit. Team members assign story points based on their understanding of the work involved, considering factors like complexity, effort, and uncertainty. The actual time a story point represents can vary from team to team. For some, it might equate to hours, while for others, it might represent days. It's important to establish a consistent baseline within the team so that story point estimates can be used effectively for planning and prioritization.

**Tracking completed work:**

Tracking completed work in Agile development typically involves calculating the total story points completed by the team over a specific time frame, usually a sprint or iteration. Here's how you can calculate completed work:

●**Identify Completed Stories**

: At the end of the sprint or iteration, review the user stories or tasks that were completed and accepted as done.

●**Sum Story Points**

: Add up the story points assigned to all the completed user stories. Exclude any story points that were not fully finished or accepted during the sprint.

●**Calculate Total Completed Work**

: The sum of story points completed represents the total completed work for that sprint. This completed work can be used to calculate the team's velocity for that specific sprint, as mentioned in the previous response. It provides insights into the team's capacity and helps with future sprint planning and estimation.

**Summing story points:**

Summing story points involves adding up the numerical values assigned to individual user stories or tasks during the estimation process in Agile development. Story points are used to represent the effort, complexity, and size of a piece of work relative to other items on the backlog. Here's how you can sum story points:

●**List Completed User Stories**

: Gather a list of user stories or tasks that have been completed during a specific sprint or iteration.

●**Identify Story Point Values**

: Each user story or task should have a story point value assigned to it during the estimation process. These values are usually relative, such as 1, 2, 3, 5, 8, 13, etc., representing increasing levels of complexity or effort.

●**Add Up Story Point Values**

: Sum up the story point values for all the completed user stories or tasks. For example, if you completed user stories with story point values of 3, 5, and 8, the sum would be 16. The sum of story points provides a quantitative measure of the work completed by the team during a sprint. This sum is often used to calculate the team's velocity, which helps in future sprint planning and estimation.

**Average velocity:**

Average velocity in Agile development refers to the average amount of work, measured in story points, that a team completes during a series of sprints or iterations. It's a key metric used for planning and estimating future work. Here's how to calculate average velocity:

●**Select a Time Frame**

: Choose a specific number of past sprints or iterations for which you want to calculate the average velocity. For example, you might choose the last 5 sprints.

●**Sum Completed Story Points**

: Add up the total story points completed by the team in each of the selected sprints. This will give you the total completed work for the chosen time frame.

●**Calculate Average**

: Divide the total completed story points by the number of sprints or iterations you selected. This will give you the average velocity for that period. Formula: Average Velocity = Total Completed Story Points / Number of Sprints

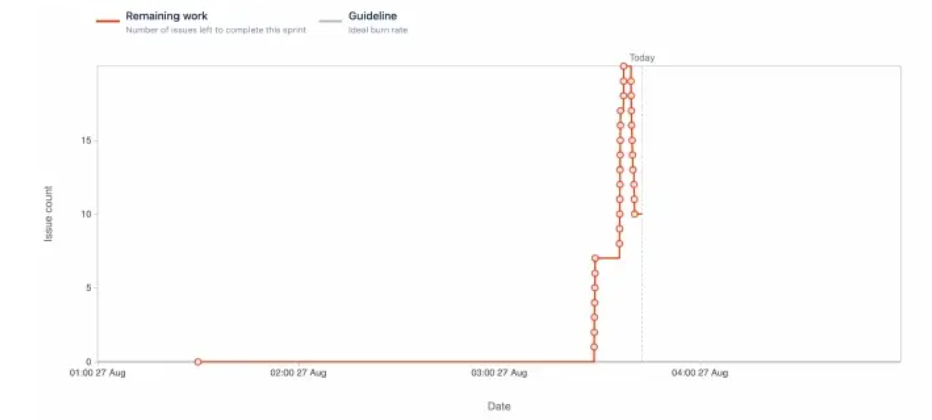
**Use for Planning**

: The average velocity can serve as a guideline for future sprint planning. It helps the team estimate how much work they can commit to in upcoming iterations based on their historical performance. Keep in mind that average velocity is a rough estimate and can fluctuate based on various factors. It's important to consider the team's capacity, any changes in team composition, and improvements in estimation accuracy over time.

**Q.9 – Draw Sprint Burn Charts and Product Burn Down Charts**

**Answer**

**Product burndown charts**



A screen shot of a graph

Description automatically generated

**Product burndown charts**

A graph on a white background

Description automatically generated

A graph on a white background

Description automatically generated

**Q.10 – Explain about Product Grooming**

**Answer**

Product grooming, also known as backlog grooming or refinement, is a crucial activity in Agile development that involves preparing and refining items in the product backlog to ensure they are well-understood, prioritized, and ready for development. Let's breakdown the process step by step:

●**Setting the Context**

: At the beginning of the backlog grooming process, the team and relevant stakeholders come together to understand the overall goals and objectives of the project. This helps set the context for the work to be done and aligns everyone's understanding.

●**Backlog Review**

: The product owner and the development team review the items in the product backlog. This involves assessing the user stories, tasks, and other items to ensure they are accurate, up-to-date, and still relevant to the project's goals.

●**Prioritization**

: During backlog grooming, the team collaboratively prioritizes the backlog items based on their value to the product and the needs of the users or customers. This helps ensure that the most important and valuable work is addressed first.

* **Refinement and Estimation**

In this step, the backlog items are refined to provide clear and detailed descriptions. The team breaks down user stories into smaller tasks and discusses the technical requirements. Estimation involves assigning story points or other sizing metrics to each item, indicating the relative effort needed for implementation.

●**Dependency Analysis**

: The team examines potential dependencies between backlog items. Identifying and understanding dependencies helps in planning the order of implementation and managing potential bottlenecks.

●**Acceptance Criteria**

: Well-defined acceptance criteria are established for each backlog item. These criteria outline the conditions that must be met for the item to be considered complete and ready for delivery. Clear acceptance criteria help prevent misunderstandings and ensure a shared understanding of what is expected.

●**Backlog Grooming Meetings**

These are recurring meetings where the product owner and the development team come together to perform the activities mentioned above. These meetings often occur before sprint planning sessions to ensure that the upcoming sprint backlog is well-prepared.

Backlog grooming is an iterative process that helps maintain a healthy and well-organized product backlog. It ensures that the development team always has a prioritized list of well-defined, estimated, and ready-to-develop items. This, in turn, supports the efficient planning and execution of sprints and helps the team deliver value to customers in a more predictable and effective manner

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

**Answer**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Product owner** | **Scrum master** |
| **Nature of work** | Collaborates with all the stakeholders and brings the vision of a product into the product backlog | Acts as a team coach and is responsible for maintaining the quality of the product |
| **Responsibilities** | Responsible for completing the project on time. Acts as an intermediary between development team and the customers | Ensures the scrum framework is followed and helps the development team create a quality product |
| **Accountability** | Responsible for project backlog and the timely completion of the product and for providing updates to the clients and stakeholders | Accountable for the quality of the entire project and for giving updates to the management about the completion of the product |
| **Reporting** | Reports to top management and clients | Reports to top management about the efficiency of the team and the quality of the product |
| **Qualities** | Communication and the leadership skills, creativity, critical thinking and a sharp mind are key assets for any product owner | Thorough knowledge of scrum theory and practices. Being able to lead the team but without the sense of authority |

**Q.12 – Explain all Meetings Conducted in Scrum Project**

**Answer**

 This meeting kicks off each sprint, which is a time-boxed iteration of work, usually spanning 2-4 weeks. During this meeting, the Scrum team, including the Product Owner, Scrum Master, and Development Team, collaborates to determine which backlog items (user stories, features, etc.) will be worked on in the upcoming sprint. The team also breaks down these items into tasks and estimates the effort required.

**Daily Stand-up (Daily Scrum):**

 Held daily during the sprint, this short meeting aims to facilitate quick and focused communication among team members. Each team member answers three key questions: What did I accomplish since the last stand-up? What will I work on until the next stand-up? Are there any obstacles or impediments in my way? This meeting helps keep everyone aligned and informed about the progress and challenges.

**Sprint Review**:

At the end of each sprint, the team holds a review meeting to showcase the work completed during the sprint to stakeholders, customers, and the Product Owner. The team demonstrates the potentially shippable product increment and gathers feedback. Based on this feedback, the Product Owner can update the backlog.

**Sprint Retrospective:**

 Also held at the end of each sprint, the retrospective is a dedicated time for the team to reflect on their processes and practices. The team discusses what went well, what could be improved, and any potential changes they'd like to make in the next sprint to enhance their efficiency and effectiveness.

**Backlog Refinement (Grooming)**

While not officially part of the Scrum events, backlog refinement is an important ongoing activity. During these sessions, the team and the Product Owner review and refine backlog items, adding details, clarifications, and estimates to make them ready for inclusion in future sprints.

**Product Backlog Refinement**

This meeting focuses on refining the product backlog items. The team and the Product Owner discuss and clarify requirements, priorities, and any changes needed in the backlog items. This ensures that the backlog is well-prepared for upcoming sprints.

**Release planning:**

This meeting occurs at the start of the project or major release and involves the product owner, development team, and stakeholders. It aims to discuss and plan the high-level scope, timeline, and goals for the project.

**Ad hoc meetings:**

These meetings may be schedules as needed to address specific topics or issues, such as resolving impediments, discuss technical challenges, or conducting additional planning or collaboration sessions

**Q.13 – Explain Sprint Size and Scrum Size**

**Answer -**

In Scrum, a "sprint" is a time-boxed iteration during which the development team works to deliver a potentially shippable product increment. The length of a sprints referred to as the "sprint duration" and is usually fixed throughout the project. Common sprint durations are 1 to 4 weeks. The choice of sprint duration depends on factors such as team velocity, project complexity, and business needs. A shorter sprint encourages more frequent opportunities for feedback and adaptation, while a longer sprint provides more time for development.

Scrum Team Size:

The Scrum team size refers to the number of individuals who collectively contribute to the development of the product. A Scrum team consists of three key roles: the Product Owner, the Scrum Master, and the Development Team. The Development Team, in particular, is responsible for creating the product increment. Scrum recommends that the Development Team size be kept small, typically between 3 to 9 members, to facilitate effective communication, collaboration, and decision-making.

**Q.14 – Explain DOR and DOD.**

**Answer**

**Definition of Ready (DOR):**

The Definition of Ready outlines the criteria that a product backlog item (user story, feature, task, etc.) should meet before it is considered ready to be taken into a sprint for development. The DOR ensures that the item is well-defined, understood, and prepared for efficient development. The specific criteria in the DOR can vary from team to team, but commonly include elements such as:

● Clear description and acceptance criteria: The item's requirements are clearly stated, and the conditions for its successful completion are well-defined.

● Dependencies identified: Any dependencies on external factors, teams, or resources are identified and addressed.

● Estimable: The team has enough information to provide a reasonable estimate of the effort required.

● Testable: It's possible to determine whether the item has been successfully implemented through testing.

● Minimal ambiguity: The item's details are clear, and any uncertainties are resolved.

Definition of Done (DOD):

The Definition of Done outlines the criteria that must be met for a product increment or backlog item to be considered complete and potentially shippable. The DOD ensures that the team maintains a consistent level of quality and completeness in their work. The specific criteria in the DOD can vary based on the team's standards, the nature of the project, and the industry, but commonly include elements such as:

● Code complete: All development work is finished, including coding, testing, and integration.

● Peer-reviewed: Code has been reviewed by other team members for quality and adherence to coding standards.

● Automated tests passed: Automated tests (unit tests, integration tests, etc) have been successfully executed and passed.

● Functional requirements met: The item meets all specified acceptance criteria and functional requirements.

● Documentation updated: Any necessary documentation, user guides, or technical documentation has been updated.

**Q.15 – Explain Prioritization Techniques and MVP**

**Answer**

Prioritization techniques are methods used to determine the order in which tasks, features, or items should be addressed in a project. These techniques help teams allocate resources effectively and focus on delivering the most valuable work first. Some common prioritization techniques include:

MoSCoW:

 This technique categorizes items into Must have, should have, could have, and won’t have categories. It helps clarify essential features from those that are optional or lower priority.

Weighted Shortest Job First (WSJF):

 WSJF assigns a priority score to each item based on factors like business value, time sensitivity, and risk. Items with higher scores are considered more important to work on.

Kano Model:

 This model categorizes features into Basic Needs, Performance Needs, and Delighters. It helps prioritize based on how features impact user satisfaction.

Value vs. Effort Matrix:

 Items are plotted on a matrix based on their potential value and effort required. This helps identify quick wins and high-value tasks.

Relative Prioritization:

 Teams compare items pairwise to determine which is more important. This helps create a relative ranking of items.

Buy a Feature:

 Stakeholders are given a budget to 'buy' features, which helps prioritize features based on how much value they see in them

**Minimum Viable Product (MVP):**

 An MVP is the smallest version of a product that includes just enough features to provide value to early adopters and gather feedback. The MVP approach helps validate assumptions, learn from users, and iteratively build upon a product's foundation. It involves:

●**Core Functionality:**

 An MVP focuses on delivering the core functionalities that address the primary needs or pain points of the target users.

●**Minimal Features:**

 The MVP omits non-essential features to avoid unnecessary complexity and expedite development.

●**Testing Hypotheses:**

 The MVP tests assumptions and hypotheses about user behaviour, market demand, and product viability.

●**Iterative Development:**

 Based on user feedback, the product is refined and expanded in subsequent iterations, gradually adding more features.

●**Early Value:**

 The MVP allows the product to be released faster, gaining valuable insights and attracting early adopters

**Q.16 – Difference between Business Analyst n Product Owner**

**Answer**

|  |  |  |
| --- | --- | --- |
| Aspect | BA | Product owner |
| Role focus | Understand business needs, processes, and requirements | Define, prioritize, and convey requirements for the product. |
| Requirement gathering | Gathers and documents detailed business requirements. | Creates user stories and defines product features. |
| Problem solving | Identifies problems, inefficiencies, and suggests improvements | Drives the product vision, strategy, and value proposition |
| communication | Acts as a liaison between business stakeholders and development teams. | Collaborates with stakeholders, customers, and the development team |
| Documentation | Creates documentation of business rules, workflows, and requirements | Manages the product backlog and maintains clear user stories |
| Scope definition | Helps define the scope of projects based on business needs. | Defines the scope of product features and enhancements. |
| Vision and strategy | Focuses on specific projector process improvements. | Has a holistic vision for the product and its strategic direction |
| Backlog management | Not typically responsible for managing a product backlog | Manages and prioritizes the product backlog items. |
| Prioritization | Does not have a primary role in prioritizing features. | Prioritizes features based on business value, user needs, and market trends. |
| Decision making | Provides input but not responsible for final product decisions. | Makes final decisions on product features, enhancements, and priorities. |
| Interactive development | May or may not be involved in iterative development cycles. | Actively participates in sprint planning, reviews, and retrospectives. |
| collaboration | Collaborates with business stakeholders and development teams | Collaborates closely with stakeholders, customers, and the development team |
| Acceptance | Ensures business requirements are met. | Ensures user stories meet acceptance criteria and align with product vision. |

**Q.17 – Prepare a sample Resume of 3yrs exp Product Owner**



