**Q .1:**

**Write Agile manifesto.**

**Ans:**

**Agile Manifesto:**

1. Individuals and interactions over processes and tools.
2. Working software over comprehensive documentation.
3. Customer collaboration over contract negotiation.
4. Responding to change over following a plan.

**The Twelve Principles Behind the Agile Manifesto:**

1. Customer satisfaction through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference for 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 software 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 behaviour accordingly.

**Q 2:**

**Write minimum 40 User stories and their Acceptance Criteria along with their BV and CP.**

**Ans:**

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| --- | --- | --- | --- | --- |
| |  | | --- | | **User story 1: Task: 02 Priority: High** | | AS A CUSTOMER | | I WANT TO INSTALL APPLICATION | | SO THAT I CAN LOGIN AND ORDER FOOD | |
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| |  | | --- | | **Acceptance criteria:** | | Go to app store and search for app, click on install, app will be installed. | | BV: 1000 CP: 5 | |

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| **User story 2: Task: 02 Priority: High**  AS A USER  I WANT TO LOGIN TO APPLICATION  SO THAT I CAN VIEW THE HOME PAGE |
| Acceptance criteria:  Open the application and try to enter mobile number or email id, click on verify, enter verification code received over SMS or email, login to application |
| BV:1000 CP: 5 |

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| **User story 3: Task: 02 Priority: High**  AS A USER  I WANT TO SEARCH FOR THE RESTURANT  SO THAT I CAN ABLE TO ORDER FOOD. |
| Acceptance criteria:  Once you enter application we can see search icon on top right corner, click on search, enter restaurant name and select restaurant. |
| BV:1000 CP: 5 |

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| **User story 4: Task: 02 Priority: High**  AS A RESTURANT OWNER  I WANT TO REGISTER TO APPLICATION  SO THAT I CAN SELL MY FOOD |
| Acceptance criteria:  Install the application, click register new account, select restaurant owner and register |
| BV:1000 CP: 5 |

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| **User story 5: Task: 02 Priority: High**  AS A DELIVERY PARTNER  I WANT TO REGISTER TO APPLICATION  SO THAT I CAN ABLE TO DELIVER FOOD |
| Acceptance criteria:  Install the application, click register new account, select restaurant owner and register |
| BV:1000 CP: 5 |

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| **User story 6: Task: 02 Priority: High**  AS A CUSTOMER  I WANT TO FILTER FOOD  SO THAT I CAN EASILY ORDER |
| Acceptance criteria:  Open the application, click on filter or lens icon, filter the food |
| BV:500 CP: 3 |

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| **User story 7: Task: 02 Priority: low**  AS A CUSTOMER  I WANT TO ADD PREFERENCES  SO THAT I CAN ORDER ONLY VEG OR NON-VEG |
| Acceptance criteria:  Open the application, click on menu button, set your preferences |
| BV:200 CP: 2 |

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| **User story 8: Task: 02 Priority: High**  AS A CUSTOMER  I WANT MY INFORMATION TO BE SAFE  SO THAT I CAN AVOID DATA BREACH |
| Acceptance criteria:  Share an email to [scrumfoods@gmail.com](mailto:scrumfoods@gmail.com) to know more about data privacy of application |
| BV:100 CP: 2 |

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| **User story 9: Task: 02 Priority: low**  AS A CUSTOMER  I WANT CHAT OPTION WITH DELIVERY PARTNER  SO THAT I CAN ADD ANY SPECIFICATIONS TO MY LOCATION |
| Acceptance criteria:  Go to home page, you can see get help option, select that to get instant chat replies |
| BV:100 CP: 2 |

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| **User story 10: Task: 02 Priority: High**  AS A CUSTOMER  I WANT TO ADD MY ADDRESS  SO THAT I CAN ABLE TO GET MY ORDERS |
| Acceptance criteria:  Go to home page , click on my account and address so that order can be delivered |
| BV:500 CP: 3 |

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| **User story 11: Task: 02 Priority: medium**  AS A CUSTOMER  I WANT TO ADD 1 OR MORE ADDRESS  SO THAT I CAN ABLE TO ORDER FOOD FOR FAMILY OR FRIENDS |
| Acceptance criteria:  Go to my account, add address there you can edit existing address or add one more address |
| BV:500 CP: 3 |

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| **User story 12: Task: 02 Priority: medium**  AS A CUSTOMER  I WANT TO KNOW HOW MUCH TIME THE ORDER MAY TAKES  SO THAT I CAN PLAN ACCORDINGLY |
| Acceptance criteria:  Go to my accounts, click on my order, select tracking order, so that you track |
| BV:500 CP: 2 |

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| **User story 13: Task: 02 Priority: High**  AS A CUSTOMER  I WANT TO GET DELIVERY PARTNER CONTACT NUMBER  SO THAT I CAN CONNECT WITH HIM TO GUIDE ADDRESS |
| Acceptance criteria:  Select track order, click on get details, get the contact of delivery partner |
| BV:500 CP: 3 |

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| **User story 14: Task: 02 Priority: High**  AS A CUSTOMER  I WANT TO GET RESTURANT ADDRESS AND CONTACT NUMBER  SO THAT I CAN ABLE TO PROVIDE ANY COMPLAINTS OR COMPLIMENTS |
| Acceptance criteria:  Select track order, click on get details, get the contact of delivery partner |
| BV:500 CP: 3 |

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| **User story 15: Task: 02 Priority: High**  AS A CUSTOMER  I WANT TO REVIEW THE SERVICE AND FOOD  SO THAT I WILL BE USEFULL FOR OTHER USERS |
| Acceptance criteria:  Once order delivered you will get a notification to review the service |
| BV:500 CP: 3 |

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| **User story 16: Task: 02 Priority: High**  AS A CUSTOMER  I WANT TO LIVE CHAT WITH APPLICATION ADMIN  SO THAT I CAN GET INSTANT HELP |
| Acceptance criteria:  Select track order, send message option, you can chat with your delivery partner |
| BV:500 CP: 3 |

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| **User story 17: Task: 02 Priority: low**  AS A DELIVERY PARTNER  I WANT TO HAVE FLEXIBLE TIME ENTRY  SO THAT I CAN HAVE SOME BREAK |
| Acceptance criteria:  Go to my accounts, select preferred time, enter your preferences |
| BV:500 CP: 3 |

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| **User story 18: Task: 02 Priority: High**  AS A CUSTOMER  I WANT TO HAVE PAYMENT METHOD  SO THAT I CAN CHOOSE HOW TO PAY |
| Acceptance criteria:  Once you confirm order you will be getting pop-up for payment method |
| BV:500 CP: 3 |

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| **User story 19: Task: 02 Priority: High**  AS A CUSTOMER  I WANT PAYMENT RECEIPT  SO THAT I CAN CLAIM IT |
| Acceptance criteria:  Once you complete your payment you will be getting pop-up whether you need receipt or not |
| BV:50 CP: 1 |

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| **User story20: Task: 02 Priority: High**  AS A CUSTOMER  I WANT TO CANCEL OPTION  SO THAT I CAN ABLE TO CANCEL FOOD |
| Acceptance criteria:  Go to my orders, select cancel food, select confirm button |
| BV:500 CP: 3 |

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| **User story 21: Task: 02 Priority: medium**  AS A CUSTOMER  I WANT MY ORDER HISTORY  SO THAT I CAN VIEW MY PREVIOUS ORDERS |
| Acceptance criteria:  Go to my orders, my past history, select time limit, view your order history |
| BV:100 CP: 1 |

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| **User story 22: Task: 02 Priority: medium**  AS A RESTURANT OWNER  I WANT TO KNOW THE HIGH SELLING REGIONALS  SO THAT I CAN ARRANGE MORE DELIVERY PARTNERS |
| Acceptance criteria:  Go to my orders received, group by region, get your preferred data |
| BV:200 CP: 2 |

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| **User story 23: Task: 02 Priority: low**  AS A RESTURANT OWNER  I WANT TO KNOW HIGH ORDERING CUSTOMERS  SO THAT I CAN SHARE PERIODIC NOTIFICATION TO USER |
| Acceptance criteria:  Go to my orders, my past history, select time limit, view your order history |
| BV:100 CP: 1 |

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| **User story 24: Task: 02 Priority: medium**  AS A CUSTOMER  I WANT TO KNOW HIGH SELLING PRODUCT  SO THAT I CAN ABLE TO BUY |
| Acceptance criteria:  Go to home page, high selling foods will be listed on tops |
| BV:100 CP: 1 |

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| **User story 26: Task: 02 Priority: medium**  AS A RESTURANT OWNER  I WANT PUBLISH ACCESS  SO THAT I CAN PUBLISH WHAT ARE THE FOOD WENT OUT OF STOCK |
| Acceptance criteria:  Go to account, list the food menu, select the food out of stocks |
| BV:200 CP: 2 |

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| **User story 27: Task: 02 Priority: medium**  AS A CUSTOMER  I WANT TO GET NOTIFICATIONS  SO THAT I CAN GET OFFERS |
| Acceptance criteria:  Go to app settings, enable notification, so that the notification will be shared regularly |
| BV:200 CP: 2 |

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| **User story 28: Task: 02 Priority: low**  AS A CUSTOMER  I WANT TO ENTER PROMO CODES  SO THAT I CAN REDDEM OFFERS |
| Acceptance criteria:  Go to app settings, enable notification, so that the promo codes will be shared regularly |
| BV:100 CP: 1 |

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| **User story 29: Task: 02 Priority: medium**  AS A RESTURANT OWNER  I WANT REVIEW CUSTOMER FEEDBACK  SO THAT THE MISTAKES CAN BE CHANGED |
| Acceptance criteria:  Once the user post any review, you will automatically get pop-up |
| BV:300 CP: 3 |

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| **User story 30: Task: 02 Priority: low**  AS A DELIVERY PARTNER  I WANT REVIEWS AND RATINGS  SO THAT I CAN GET HIKE |
| Acceptance criteria:  Once the user post any review, you will automatically get pop-up |
| BV:100 CP: 1 |

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| **User story 31: Task: 02 Priority: low**  AS A CUSTOMER  I WANT TO MAKE FAVOURITES  SO THAT I CAN GET NOTIFICATIONS EASYILY |
| Acceptance criteria:  Once the user post any review, you will automatically get pop-up |
| BV:100 CP: 1 |

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| **User story 32: Task: 02 Priority: High**  AS A RESTURANT OWNER  I WANT TO ACCESS CUTOMER LOCATION  SO THAT FOOD DELIVERED CORRECTLY |
| Acceptance criteria:  Share a pop-up to customer once order confirmed, so that you can access location |
| BV:100 CP: 1 |

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| **User story 33: Task: 02 Priority: High**  AS A DELIVERY PARTNER  I WANT TO ACCESS CUTOMER LOCATION  SO THAT FOOD DELIVERED CORRECTLY |
| Acceptance criteria:  Share a pop-up to customer once order confirmed, so that you can access location |
| BV:100 CP: 1 |

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| **User story 34: Task: 02 Priority: medium**  AS A CUSTOMER  I WANT TO TRACK MY FOOD  SO THAT I CAN VIEW LOCATION OF DELIVERY PARTNER |
| Acceptance criteria:  Go to my accounts, click on my order, select tracking order, so that you track |
| BV:100 CP: 1 |

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| **User story 35: Task: 02 Priority: medium**  AS A CUSTOMER  I WANT TO PROVIDE REVIEW FOR DELIVERY PARTNER  SO THAT IT WILL BE HELPFUL FOR THEM |
| Acceptance criteria:  Once order delivered you will get pop-up to review the service |
| BV:100 CP: 1 |

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| **User story 36: Task: 02 Priority: medium**  AS A CUSTOMER  I WANT TO SEARCH FOR SPECIFIC FOOD  SO THAT I CAN EASILY GET ORDERED |
| Acceptance criteria:  Once order delivered you will get pop-up to review the service |
| BV:100 CP: 1 |

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| **User story 37: Task: 02 Priority: low**  AS A RESTURANT OWNER  I WANT TO PROVIDE TIME SLOT  SO THAT USERS KNOW THE OPENING AND CLOSING TIME |
| Acceptance criteria:  Open my account, select preference, select time slot |
| BV:100 CP: 1 |

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| **User story 38: Task: 02 Priority: High**  AS A DELIVERY PARTNER  I WANT TO GET NOTIFIED WHEN THE FOOD IS READY  SO THAT I CAN GO AND COLLECT IT. |
| Acceptance criteria:  Once food prepared, hotel will share the notification |
| BV:100 CP: 1 |

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| **User story 39: Task: 02 Priority: medium**  AS A DELIVERY PARTNER  I WANT TO NOTIFY TO RESTURANT OWNER AFTER DELIVERY  SO THAT THEY CAN KNOW THE TIMING OF DELIVERY |
| Acceptance criteria:  Once order delivered you can share, status of your order |
| BV:100 CP: 1 |

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| **User story 40: Task: 02 Priority: medium**  AS A USER  I WANT REFUND OPTIONS  SO THAT I CAN GET REFUND IF THE FOOD IS SPOILED |
| Acceptance criteria: specific conditions from user perspective, detail description  Select get help option, share your feedback and images of damage in food, send request, it will be processed |
| BV:100 CP: 1 |

**Q.3**

**What is epic? Write 2 epics- collection of related user story**

**ANS:**

Epic is a large user story or a collection of related user stories that represents a significant feature or functionality. Epics are high level, often spanning multiple sprints or iterations, and they provide a way to organize and prioritize work in a product backlog.

**Epic 1:**

**User Account and Profile Management:**

Allow users to create, manage, and update their accounts within the app. Provide secure login/logout, password recovery, and the ability to set preferences for a more customized experience.

User Stories Under This Epic:

1. User Registration & Login:  
   As a user, I want to be able to create an account and log in to the app using my email or social media accounts (Google, Facebook, etc.), so that I can access personalized content and order history.
2. Profile Management:  
   As a user, I want to be able to update my name, email, phone number, and delivery address so that my account remains up-to-date and I can receive food at the correct location.
3. Password Recovery:  
   As a user, I want to be able to reset my password through email or SMS if I forget it, so I can regain access to my account easily.
4. User Preferences & Notifications:  
   As a user, I want to set my dietary preferences (e.g., vegetarian, non-vegetarian, allergies) and receive personalized food recommendations or notifications about special offers based on my preferences.

**Epic 2:**

**Food Ordering and Delivery Workflow:**

Allow users to search for restaurants, browse food menus, place orders, track deliveries in real-time, and complete the transaction seamlessly.

User Stories Under This Epic:

1. Restaurant Discovery & Menu Browsing:  
   As a user, I want to search for nearby restaurants by location, cuisine, or rating, so that I can easily discover new places to order food from.
2. Order Placement:  
   As a user, I want to select items from a restaurant’s menu, customize them (e.g., add/remove ingredients), and place my order, so that I can receive exactly what I want.
3. Payment Integration:  
   As a user, I want to be able to securely pay for my order via multiple methods (credit/debit card, wallet, cash on delivery) so that I can choose my preferred way of paying.
4. Order Tracking & Delivery Updates:  
   As a user, I want to track the status of my order in real-time and receive push notifications for key milestones (order confirmation, preparation, dispatch, delivery), so that I know when to expect my food.
5. Delivery Feedback & Rating:  
   As a user, I want to rate my food and delivery experience after receiving my order, so that I can provide feedback and help improve the service for other customers.

**Q.4**

**What is the difference between BV and CP**

**Ans:**

**Business Value** and **Complexity Points** are two distinct concepts used to assess work items (like user stories or tasks) in a project. They serve different purposes and provide different perspectives on the work to be done. Here's a breakdown of each:

**1. Business Value**

* Business value is a measure of the importance or impact a particular work item (usually a user story or feature) has on the overall business goals or objectives
* Business value is used to prioritize work. Items with higher business value are given higher priority, ensuring that the team works on the most valuable features first.
* Business value is rated on a scale, like 1 to 10 or 1 to 100, with higher numbers indicating greater business value.
* Business value helps Product Owners and stakeholders prioritize work and make decisions about what should be delivered in upcoming sprints or releases.

**2. Complexity Points (or Effort Points or story points)**

* Complexity points are a measure of how difficult, complex, or time-consuming a task is to implement. They focus on the technical difficulty and effort required, rather than the business importance
* Complexity points help the team estimate the effort needed to complete a task. It allows the team to plan their capacity and manage workload distribution. It is often used for sprint planning and capacity management.
* Complexity points are often estimated using relative scales like Fibonacci (1, 2, 3, 5, 8, 13, etc.) or other numeric scales, where larger numbers represent more complex or time-consuming tasks.
* Complexity points help the development team understand how much work a particular task will take, which influences how many items they can complete in a sprint and what resources may be needed.

**Q.5**

**Explain about Sprint.**

**ANS:**

The **sprint** is a fundamental part of **Agile Scrum methodology**, a framework used to develop software in incremental and iterative cycles. A sprint is a time-boxed period usually 1 to 4 weeks in which a cross-functional team works to complete a predefined set of tasks to deliver a potentially shippable product increment.

**1. Sprint Planning**

* This is the first event in the sprint. The goal is to define **what** will be worked on and **how** it will be delivered.
* Participants:
  + Product Owner: Prioritizes and defines the product and ensures the team is working on the highest priority items.
  + Scrum Master: Facilitates the planning meeting and ensures the team follows Scrum practices.
  + Development & QA Team: Commits to the work they believe they can complete in the sprint.
* **Key Activities**:
  + Define Sprint Goal: The team establishes a clear goal that will guide the work throughout the sprint. This goal should be specific, achievable, and align with business objectives.
  + Select Items from the Product Backlog: Based on priority and business value, the team selects a set of user stories or tasks from the Product Backlog (the prioritized list of work). These items become the Sprint Backlog.
  + Estimate Work: The development team estimates the effort required to complete each item, often using story points or hours. This helps the team understand their capacity and ensure the sprint backlog is achievable within the sprint duration.
  + Plan the Work: The team may break down user stories into smaller tasks and assign responsibilities. The development team decides how to accomplish the work.

**2. The Sprint Execution**

* This is the actual work phase where the team works collaboratively to deliver the items in the sprint backlog.
* The sprint usually lasts between 1 and 4 weeks. During this time, the team focuses on building and testing features, making sure to work towards the Sprint Goal.
* **Key Activities**:
  + Collaboration and Work Execution: The team works together to complete user stories, following the defined tasks and processes (coding, testing, reviewing, etc.).
  + Product Backlog Refinement: During the sprint, the team may refine the product backlog by breaking down items, adjusting priorities, or clarifying user stories for future sprints. This isn't a formal event but often happens informally throughout the sprint.

**3. Sprint Review**

* At the end of the sprint, the team demonstrates the completed work to stakeholders and gets feedback. This ensures that the product is moving in the right direction and that business objectives are being met.
* Participants:
  + Product Owner: Reviews the work with the team and ensures that it aligns with the requirements and expectations.
  + Development Team: Demonstrates the completed features, explaining what was done and how it works.
  + Stakeholders: Provide feedback, clarify any ambiguities, and may adjust the product direction if necessary.
* **Key Activities**:
  + Demo: The development team shows the functionality that was completed during the sprint. The work should be “done,” meaning it is tested, integrated, and potentially shippable.
  + Feedback: Stakeholders provide feedback, ask questions, and make suggestions. This can lead to re-prioritizing work for the next sprint.
  + Review Sprint Goal: The team assesses whether the sprint goal was achieved and reflects on the outcome.

**4. Sprint Retrospective**

* This is a meeting where the team looks back on the sprint and discusses how to improve their processes, teamwork, and performance in the next sprint.
* Participants:
  + Development Team
  + Scrum Master
* **Key Activities**:
  + What Went Well: The team discusses the successes and positive aspects of the sprint.
  + What Didn't Go Well: The team identifies challenges, roadblocks, or issues that hindered progress.
  + Actionable Improvements: The team discusses and agrees on specific actions to improve the process in the next sprint (e.g., improving communication, adjusting workflow, refining testing practices, etc.).
* Outcome: The goal is to continuously improve the team's efficiency, quality of work, and satisfaction, contributing to a better overall sprint process.

**5. Daily scrum meeting:**

The Daily Scrum, also known as the Daily Standup or Status Call, is a short, time-boxed meeting (usually 15 minutes) held every day during the sprint. Its purpose is to help the team synchronize their work, share progress, and identify any obstacles.

Key Points:

* Participants: The Scrum Team (Development Team, Scrum Master, and Product Owner, though the Product Owner is optional).
* Format: Each team member answers three questions:
  1. What did I do yesterday to help the team meet the sprint goal?
  2. What will I do today to help the team meet the sprint goal?
  3. Are there any blockers or impediments preventing me from making progress?

**Q.6**

**Explain Product backlog and sprint back log?**

**Ans:**

**1. Product Backlog**

* The Product Backlog is a list of all the work that is required to develop the product. It contains features, enhancements, bug fixes, technical work, and other tasks that need to be completed for the product.
* The Product Owner is responsible for creating, prioritizing, and maintaining the product backlog. They ensure it reflects the most current business needs and goals.
* The product backlog contains user stories, features, bug fixes, technical task.
* The backlog is continuously reordered by the Product Owner based on business value, customer needs, market changes, and stakeholder feedback. Higher-priority items are placed at the top of the backlog.
* The product backlog is evolving and is not a static document. It is updated and refined over time through backlog refinement calls, where items are added, removed, re-prioritized, or detailed further.

**2. Sprint Backlog**

* The Sprint Backlog is a subset of the Product Backlog that represents the work the team commits to completing during a specific sprint. It is the set of user stories or tasks that the team pulls from the product backlog during Sprint Planning to achieve the sprint goal.
* The Development Team is responsible for managing the Sprint Backlog. The Scrum Master may help facilitate the process, but it is the team’s job to determine how to break down the work and track progress.
* The Sprint Backlog contains the user stories or product backlog items that the team has selected for the sprint.
* The team will also break these stories down into smaller tasks to better understand the work needed to complete the stories.
* The Sprint Backlog is specific to a single sprint and is only relevant for the duration of that sprint.
* The Sprint Backlog is updated daily during the sprint, reflecting progress and any changes. If new work or unforeseen issues arise during the sprint, the team may add or adjust tasks, but they cannot add new user stories from the product backlog unless absolutely necessary.

**Q.7**

**What is impediments log? write 2 impediments**

**ANS:**

An **impediments log** (also known as a **blocker log**) is a record used in Agile project management to track obstacles or issues that prevent the team from making progress. These impediments can range from technical challenges to external factors like resource constraints or dependencies. The log helps the team, Scrum Master, or project manager keep track of these blockers and ensures they are addressed promptly to avoid delays in the development process.

**Impediment 1: API Integration Failure with Restaurant Inventory System.**

The development team is facing an issue with integrating the app’s backend with the restaurant inventory system. The API that fetches real-time data on food availability is returning incorrect or outdated information.

Impact:  
The app is displaying unavailable dishes to users, leading to confusion and a poor user experience. This issue prevents the implementation of the "real-time availability" feature within the sprint's scope, delaying the planned release.

Resolution Plan:  
The team is working with the restaurant’s IT team to debug the API, with a plan to test alternate API endpoints or adjust data handling on the app's end to ensure accurate information.

**Impediment 2: Delayed Delivery of UI Design for Order Tracking Feature**

The UI/UX team has not yet delivered the final design for the order tracking feature, which is critical for the app's real-time tracking of deliveries. The delay is caused by revisions in the design based on initial user feedback.

Impact:  
Without the finalized design, the frontend development team cannot proceed with building the order tracking interface as planned. This is holding up progress on one of the main features slated for this sprint.

Resolution Plan:  
The project manager has escalated the issue to prioritize the design delivery. The team is in discussions to finalize the design quickly, and the development team is preparing for parallel work on other parts of the app to minimize the impact.

**Q.8**

**Explain Velocity of the Team**

**ANS:**

**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.

**Formula:**

**Velocity = (Total Story Points Completed​) / (Number of completed sprints)**

**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.

**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.

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

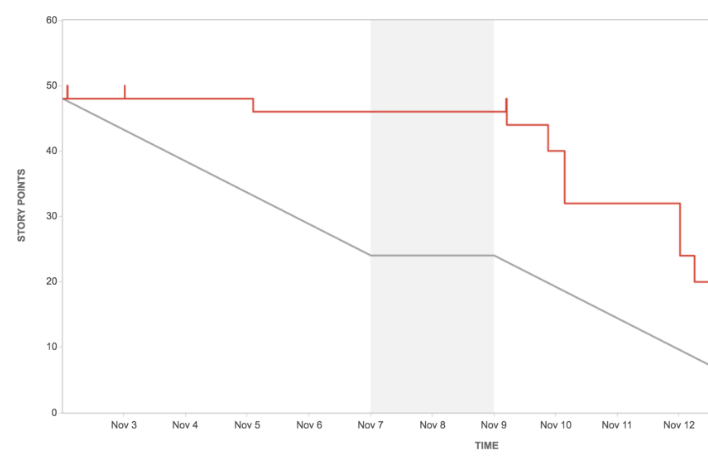
**Q9.**

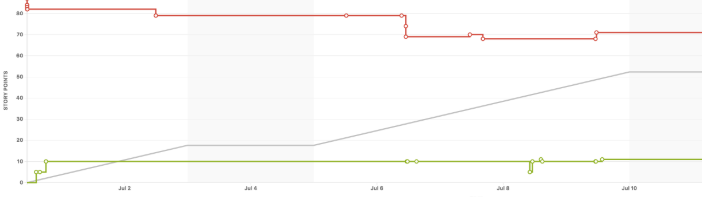
**Draw Sprint Burn up and down charts Chart (use jira tool) n Product Burn Down Charts**

**ANS:**

Sprint Burn down & Burn up Chart:

|  |  |
| --- | --- |
| Days | Work remaining (story points) |
| 1 | 50 |
| 2 | 48 |
| 3 | 45 |
| 4 | 40 |
| 5 | 35 |
| 6 | 30 |
| 7 | 23 |
| 8 | 20 |





**Q.10:**

**Explain about Product Grooming**

**Ans:**

Product Grooming, also known as Backlog Grooming or Backlog Refinement, is a process in Agile project management where the product backlog is reviewed, refined, and prioritized to ensure that it remains relevant, clear, and actionable for the development team.

Aspects of Product grooming:

**Clarifying User Stories**: During grooming, the product owner (PO) and the development team work together to clarify the details of user stories. This includes:

* Ensuring that user stories are well-defined and have clear acceptance criteria.
* Adding any necessary details to ensure the team understands the requirements.
* Breaking down large or complex stories (epics) into smaller, more manageable user stories.

**Prioritizing the Backlog**: The product owner ensures that the backlog is prioritized according to business needs, customer value, and technical dependencies. Items that are high priority for the upcoming sprints are moved to the top of the backlog.

**Estimating Work**: During grooming sessions, the team may also estimate the effort required for user stories. This could involve:

* **Story Points**: Assigning points to each user story to estimate its complexity and effort (often using relative sizing like Fibonacci sequence).
* **Time-based estimation**: If applicable, team members may estimate how long each task will take.

**Removing or Archiving Irrelevant Items**: Items in the backlog that are no longer relevant, have become obsolete, or are no longer a priority should be removed or archived. This helps keep the backlog clean and focused on the most important work.

**Refining Acceptance Criteria**: The development team and product owner refine the **acceptance criteria** for user stories. This ensures that everyone understands the expected outcome of each feature and reduces ambiguity, which helps with testing and validation.

**Identifying Dependencies**: During grooming, the team identifies dependencies between tasks or features. This helps in planning and ensures that the work is completed in the right sequence.

**Preparing for the Sprint**: By the end of the grooming process, the backlog should be in good shape for the upcoming sprint. User stories that are likely to be selected for the next sprint should be clear, well-prioritized, and estimated, so the team can start work without confusion or delays.

**Q.11**

**Explain the roles of Scrum Master and Product Owner**

**ANS:**

**1. Scrum Master**

The Scrum Master is a leader and facilitator who helps the Scrum Team follow Scrum practices, removes obstacles, and ensures continuous improvement. The Scrum Master’s role is more about supporting the team and enabling its success rather than directly managing people.

Key Responsibilities:

* Facilitate Scrum Events: The Scrum Master ensures that all Scrum events (Sprint Planning, Daily Scrum, Sprint Review, and Sprint Retrospective) are organized, run smoothly, and stay within their timeboxes. They may also help facilitate important discussions and decision-making during these events.
* Remove blockers: The Scrum Master works to identify and remove any obstacles that are preventing the Development Team from being productive. These could be technical blockers, organizational issues, or external dependencies that slow down progress.
* Support the Product Owner: The Scrum Master helps the Product Owner manage the Product Backlog by ensuring that the backlog items are well understood by the Development Team. They may also assist the Product Owner in refining backlog items or preparing for Sprint Planning.
* The Scrum Master coaches the team on Scrum practices, helping team members understand Scrum principles and ensuring that the team follows Agile practices, such as continuous improvement, collaboration, and self-organization.
* Shield the Team: The Scrum Master protects the Development Team from distractions and interruptions, ensuring they can focus on their work during the sprint.
* Provide a Collaborative Environment: The Scrum Master encourages open communication and teamwork among all Scrum roles, as well as with stakeholders outside the Scrum Team.
* Promote Agile Best Practices: The Scrum Master advocates for Agile principles and helps the organization adopt and improve Agile practices. They might also work with other Scrum Masters to share best practices and ensure the organization is aligned in its use of Scrum.

**2. Product Owner**

The Product Owner is responsible for maximizing the value of the product by managing the Product Backlog and ensuring that the development team works on the most valuable items. The Product Owner acts as the voice of the customer and stakeholders, ensuring the product being built aligns with business objectives and user needs.

Key Responsibilities:

* Manage the Product Backlog: The Product Owner is responsible for creating, maintaining, and prioritizing the Product Backlog. This backlog contains user stories, features, bug fixes, technical tasks, and any other work required for the product. The Product Owner ensures that the backlog is clearly defined, prioritized, and reflects the business goals.
* Prioritize Work: The Product Owner prioritizes backlog items based on business value, customer needs, and strategic goals. They make sure the team is working on the highest-priority tasks that deliver the most value. This ensures that the team can focus on delivering the most important features first.
* Define and Clarify Requirements: The Product Owner writes and clarifies user stories or product backlog items in a way that is clear and understandable to the team. They provide the necessary details and context about the desired functionality, user needs, and acceptance criteria.
* Act as the Stakeholder: The Product Owner represents the interests of the stakeholders (customers, users, business, and other departments). They communicate with these groups to gather feedback, answer questions, and ensure the product is aligned with the market needs.
* Ensure the Sprint Goal is Clear: The Product Owner helps define the Sprint Goal and ensures that it aligns with the overall product vision. During Sprint Planning, the Product Owner clarifies the goals and priorities to guide the team’s work.
* Definition of Done: The Product Owner is responsible for accepting or rejecting completed work during the Sprint Review based on whether it meets the agreed-upon acceptance criteria and the Definition of Done.
* Continuous Engagement with the Team: The Product Owner regularly communicates with the Development Team to provide clarification, feedback, and updates. They also attend the Daily Scrum occasionally to stay informed and ensure that the team is aligned with the product vision.

**Q.12**

**Explain all Meetings Conducted in Scrum Project**

**ANS:**

**1. Sprint Planning**

* Purpose: Sprint Planning is the meeting where the Scrum Team comes together to plan the work for the upcoming sprint. The goal is to decide what will be done during the sprint and how it will be achieved.
* A Sprint Backlog is created, which is a list of tasks and user stories the team will work on during the sprint, along with a Sprint Goal.
* It is held at the start of each sprint with 2-4 hours for a 2-week sprint.
* Participants: Product Owner, Scrum Master, and Development Team.
* Key Activities:
  + Sprint Goal: The Product Owner presents the Product Backlog items that are most valuable and relevant to the sprint. The team collaborates to define a clear Sprint Goal, a concise statement of what the team aims to achieve during the sprint.
  + Select Items from the Product Backlog: The team selects a set of user stories or Product Backlog Items that they will work on in the sprint. The Product Owner ensures that these items are prioritized and well-defined.
  + Estimation: The team estimates the work involved (usually in story points or hours), ensuring they can complete the work within the sprint timeframe.
  + Task Breakdown: The selected backlog items are broken down into smaller tasks, and the team discusses how they will complete the work.

**2. Daily Scrum (Daily Standup)**

* Purpose: The Daily Scrum is a short, daily meeting where the Development Team synchronizes their work and plans for the next 24 hours. The goal is to assess progress toward the Sprint Goal and identify any obstacles or challenges.
* It happens every day of the sprint for 15 – 20 minutes.
* Participants: Development Team (Scrum Master and Product Owner may attend, but they don't actively participate).
* The team has a clear understanding of each other’s progress and any issues that need to be addressed. It ensures transparency and keeps the team focused on their goal.
* Key Activities:
  + Each team member answers the following three questions:
    1. What did I do yesterday to help the team meet the Sprint Goal?
    2. What will I do today to help the team meet the Sprint Goal?
    3. Are there any blockers or impediments preventing me from making progress?
  + The goal is to share updates, identify blockers, and adjust plans as needed.

**3. Sprint Review**

* Purpose: The Sprint Review is held at the end of the sprint to inspect the work that has been completed and to adapt the Product Backlog based on feedback from stakeholders. The team demonstrates the increment (the new, working product features) and discusses what was achieved during the sprint.
* Held At the end of each sprint for 1-4 hours for a 2-week sprint.
* Participants: Product Owner, Scrum Master, Development Team, and stakeholders (e.g., customers, business owners).
* The team gains feedback, and the Product Backlog is updated. The Product Owner may adjust priorities and clarify the direction for the next sprint.
* Key Activities:
  + Demonstration: The team showcases the work that is complete and meets the Definition of Done. This could be a demo of new features or functionality.
  + Review of Sprint Goal: The team discusses whether the Sprint Goal was achieved and if any items were not completed.
  + Stakeholder Feedback: Stakeholders provide feedback and suggest adjustments or new features. This feedback can influence the Product Backlog.
  + Product Backlog Refinement: The Product Owner may update or adjust the Product Backlog based on feedback from the Sprint Review, ensuring it reflects current priorities and new insights.

**4. Sprint Retrospective**

* Purpose: The Sprint Retrospective is a meeting for the Scrum Team to reflect on the sprint process and identify areas for improvement. The team looks back at how the sprint went and discusses what went well, what didn’t, and how to improve in the future.
* Held after the Sprint Review, but before the next Sprint Planning 45 -60 mins for a 2-week sprint.
* Participants: Scrum Master, Product Owner, and Development Team.
* The team identifies specific improvements they can make for the next sprint. This leads to increased efficiency and effectiveness over time.
* Key Activities:
  + What Went Well: The team discusses what aspects of the sprint worked well, including processes, communication, and collaboration.
  + What Didn’t Go Well: The team reflects on what didn’t work or areas where challenges arose.
  + Actionable Improvements: The team agrees on concrete, actionable improvements that can be implemented in the next sprint to enhance team efficiency, quality, or collaboration.
  + Continuous Improvement: The team is encouraged to experiment and continuously improve their Scrum practices and ways of working.

**5. Backlog Refinement**

* Purpose: While not an official Scrum event, Backlog Refinement (also called Backlog Grooming) is an ongoing process in which the Product Backlog is continuously reviewed, prioritized, and refined. It helps ensure that the Product Backlog is well-prepared for the next Sprint Planning.
* Held once or twice per sprint, but can be done at 1-2 hours per session.
* Participants: Product Owner, Scrum Master, and the Development Team (optional, but highly recommended).
* A well-defined, prioritized Product Backlog that is ready for the next Sprint Planning.
* Key Activities:
  + Clarify Backlog Items: The Product Owner ensures that backlog items are clear, understood, and contain enough detail for the team to estimate and implement.
  + Estimate Items: The Development Team may estimate the size or effort required for backlog items using techniques like story points or T-shirt sizing.
  + Prioritize: The Product Owner adjusts priorities based on business needs, customer feedback, and any new developments.
  + Add/Remove Items: New items can be added to the backlog, and outdated or irrelevant items can be removed.

**Q.13:**

**Explain Sprint Size and Scrum Size**

**ANS:**

**1. Sprint Size**

Sprint Size refers to the duration of a sprint and the amount of work that can be completed in a sprint, typically described in terms of time. The size of a sprint is critical because it defines the amount of time the team has to achieve the Sprint Goal and complete the backlog items they've committed to.

Sprint Duration (Timebox)

* Standard Sprint Duration: In Scrum, a sprint is time-boxed, meaning it has a fixed length. The duration of a sprint typically ranges from 1 to 4 weeks. The most common sprint length is 2 weeks.
* Recommended Sprint Duration: The Scrum Guide suggests that a sprint duration should not exceed 4 weeks, and the recommended range is typically 1 to 2 weeks. Shorter sprints allow for quicker feedback and more frequent iterations.

**2. Scrum Size**

Scrum Team Size refers to the number of people who make up the Scrum Team. The Scrum Team consists of three roles: the Product Owner, Scrum Master, and Development Team.

Recommended Team Size (Development Team):

* Development Team: The ideal size for the Development Team is typically 3 to 9 people. This size ensures a balance between productivity and the ability to remain flexible and communicative.
* Small Teams (3-5 members): Smaller teams can be more flexible and can often make decisions faster. However, smaller teams may face limitations in terms of expertise and coverage across all required skills (development, testing, design, etc.).
* Larger Teams (6-9 members): Larger teams may have a wider range of expertise, but they can also encounter challenges with communication and coordination. Larger teams tend to be more complex to manage, and it can be harder to maintain the same level of agility.

**Q.14**

**Explain DOR & DOD?**

**ANS:**

**1. Definition of Ready (DOR)**

The Definition of Ready (DOR) is a set of criteria that must be met before a product backlog item can be pulled into a sprint for development. It ensures that the work is well understood and has enough details for the team to start working on it without confusion or ambiguity. DOR is an agreement between the Product Owner, Scrum Master, and the Development Team about what constitutes an item that is sufficiently prepared for the sprint.

* Clear Acceptance Criteria: The user story or backlog item must have clearly defined acceptance criteria, which describe the conditions that must be met for the item to be considered complete.
* Sufficient Detail: The backlog item must have enough information for the team to understand what needs to be done. If the item is too vague or unclear, it cannot be worked on during the sprint.
* Dependencies Identified: Any dependencies (technical, resource-based, or related to external teams) should be identified and either resolved or clearly acknowledged before the item is considered ready for the sprint.
* Estimation: The item should be estimated by the team, ensuring that the team understands the effort involved and can complete it within the sprint.
* No Blockers: There should be no unresolved issues or blockers that could prevent the team from starting or completing the work.
* Prioritized in the Backlog: The Product Owner ensures that the backlog item is prioritized and ready to be worked on in the sprint.

**2. Definition of Done (DOD)**

The Definition of Done (DOD) is a shared understanding within the Scrum Team of the criteria that must be met for a product backlog item (PBI) or increment to be considered complete. DOD ensures quality and consistency, and it serves as a standard to assess whether the work is truly finished and meets the agreed-upon standards before it is released to stakeholders or customers.

DOD is typically agreed upon by the Development Team, Product Owner, and Scrum Master at the beginning of the project.

* Complete Work: All tasks associated with the PBI must be finished, meaning there should be no incomplete work or loose ends.
* Testing: The item must be fully tested (unit tests, integration tests, regression tests, etc.), and any defects or issues should be resolved before it is considered done.
* Code Quality: The code should adhere to agreed-upon coding standards, be properly reviewed, and should be refactored if necessary to improve maintainability.
* Acceptance Criteria Met: The work must meet the acceptance criteria specified for the backlog item. This is verified by the Product Owner and the Development Team.
* Integration: The item should be integrated into the overall system, and it must not break any existing functionality (i.e., it should pass regression testing).
* Deployment: The work should be deployable, meaning it is ready for release or deployment into a production environment if necessary.

**Q15:**

**Explain Prioritization Techniques and MVP**

**ANS:**

Prioritization is a critical aspect of Agile development because it helps teams decide which tasks, features, or user stories to work on first. Since resources are always limited, effective prioritization ensures that the most valuable work gets done in a timely manner.

**1. MoSCoW Method**

The MoSCoW method is a popular technique that divides features or tasks into four categories based on priority:

* Must Have: These are critical requirements that must be completed for the project or product to be successful. Without these features, the product would not function as expected.
* Should Have: Important but not absolutely essential features. These items are necessary for the product's success, but the product can still work without them in the short term.
* Could Have: Features that are nice to have but not critical. These are low-priority items that can be included if time and resources allow.
* Won't Have: Features that will not be included in the current cycle. These can be deferred for future releases or discarded entirely.

2.**Weighted Shortest Job First (WSJF)**

WSJF is a prioritization technique used in SAFe (Scaled Agile Framework) to help teams determine the best items to focus on by comparing their relative value in terms of cost of delay and duration of the job.

The formula for WSJF is:

WSJF = (cost of delay) / (job duration)

Where:

* Cost of Delay is a measure of the impact on the business if the feature or task is delayed. This can be calculated based on factors like revenue, customer satisfaction, or risk reduction.
* Job Duration refers to how long it will take to complete the task.

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

4**. 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.

**5. Relative Prioritization:** Teams compare items pairwise to determine which is more important. This helps create a relative ranking of items.

**MVP (Minimum Viable Product):**

MVP (Minimum Viable Product) is a concept used in Agile development, particularly in Lean methodology, to define the smallest version of a product that can be released to the market to gather feedback. The MVP contains only the core features that are necessary to address the primary problem the product aims to solve for its users. It allows teams to release the product to the market quickly, with minimal resources, and start collecting user feedback to improve the product iteratively.

**Characteristics of an MVP:**

* Minimal: Contains only the essential features needed to solve the user's primary problem. It’s not a fully polished or feature-complete product, but it’s good enough to be used and provide value.
* Viable: The MVP must be functional enough to provide value to early adopters and demonstrate the core concept or value proposition.
* Iterative: Once released, the MVP is used to gather data and feedback from real users. This feedback is then used to make decisions about further features, enhancements, or pivoting the product.
* Risk Reduction: MVP helps minimize the risk of building a product that no one wants by testing assumptions early in the product development cycle.

**Q.16**

**– Difference between Business Analyst n Product Owner**

**ANS:**

|  |  |
| --- | --- |
| **Business Analyst** | **Product Owner** |
| Business Analyst typically focuses on gathering, analysing, and documenting the business requirements. | A Product Owner is a key role in Agile frameworks like Scrum, with a focus on maximizing the value of the product. The PO represents the customer’s voice and business stakeholders to the development team and is responsible for defining and prioritizing product features and requirements. |
| Responsibilities are:  Requirements Gathering  Business Process Analysis  Documentation  Data analysis  Stakeholder communication | Responsibilities are:  Product Vision and Strategy  Backlog Management  Defining Features  Stakeholder Liaison  Decision-Making  Acceptance Criteria and Testing |
| The Business Analyst often works across multiple teams and departments, engaging with stakeholders, understanding their needs, and providing the necessary information and documentation to the development team | The Product Owner is involved in Sprint Planning, Sprint Review, and Backlog Refinement activities. They ensure that the development team has the right context, goals, and priorities to build the right product increment. The PO is empowered to make decisions about the product based on user needs, market trends, and stakeholder input |
| Acts as a bridge between business and technical teams; may assist with defining functional specs. | Owns the product backlog and provides detailed context for user stories; works closely with the Scrum team during sprints. |
| Typically doesn’t have decision-making authority about product features; focuses on requirements and feasibility. | Has the final say on product features, priorities, and scope; makes trade-off decisions. |

**Q.17**

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

**ANS:**

**PRATHIBA S**

**Product owner**

**Work experience:**

**Hcl technologies:**

* Work directly with end users to capture and analyze challenges to their workflow.
* Provide key performance metrics to the Head of IT on the deliveries and benefits realization of change implementations.
* Prioritizes work within an agile team and maintain a backlog of future work for consideration/prioritization.
* Take responsibility for the development of on-going enhancements, create and prioritize user stores with the agile teams
* Own and drive backlog grooming and management, prioritize user stories, create acceptance criteria and drive testing and delivery.
* Work with Program Management and Battelle leadership to support new business.
* Maximizing the work of the development team

**Ignitho technologies:**

* Work directly with other product owners, system engineers, program managers, developers, testers, and customers to define features and technical user stories
* Support an Agile Software Development process, working in conjunction with end users / stakeholders and technical delivery team
* Work closely with counterparts in Product Management to align on the vision, program backlog, and roadmap
* Acting as stakeholder of specific product backlog items, work closely with development teams to ensure the output to be aligned with expectations
* Being the voice of the customer and providing a business perspective on value during day-to-day development
* Work with a diverse set of contractor and government personnel to track, manage, and resolve technical issues

Technical skills:

* Analytical thinking
* Documentation
* Requirement gathering
* Business Development
* Business and Gap analysis
* Workflow Analysis
* Stakeholder Management
* Problem-Solving
* Relationship Building
* SQL
* Manual Testing
* MS Office
* MS Visio
* Power BI
* Azure Devops
* Axure RP, Balsamiq

Certification:

* IIBA-COEPD Institute (Pursuing)
* Power BI (Skill Nation)
* Agile Scrum certification (Udemy)
* SaFe 6 Scrum certificate