**Nurturing Process - Capstone Project2 –Agile-Scrum**

**Question 1 – Write Agile Manifesto**

**Answer:**

**Agile Manifesto:**

* Agile Manifesto describes the values and principles that are to be considered while working on an Agile project.
* It consists of 4 Values and 12 Principles.

**Values:**

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

**Principles:**

1. Satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile process 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 to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build project 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 communication.
7. Working software is the primary measure of progress.
8. Agile process promotes 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.

**Question 2 – User Stories- Acceptance Criteria-BV-CP**

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

**Answer:**

**User Stories:**

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| **User Story No:** 01 | **Task:** 2 | **Priority:** Highest |
| AS A DELIVERY BOYI WANT TO REGISTER IN SCRUM FOODSSO THAT I CAN DELIVER ORDERS. |
| **BV:** 500 | **CP:** 02 |
| **Acceptance Criteria**Registration ScreenText Boxes for User Name, Password, Nation ID, Mobile No, Email, Address, Phone Number.Click on Registration Button.Send successful notification to the user. |

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| **User Story No:** 02 | **Task:** 2 | **Priority:** Highest |
| AS A RESTAURANT OWNERI WANT TO VIEW ORDERSSO THAT I CAN VIEW THE LIST OF ORDERS |
| **BV:** 500 | **CP:** 02 |
| **Acceptance Criteria**View Order, Display List of orders in tabular form. |

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| **User Story No:** 03 | **Task:** 02 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO ADD THE ADDRESSSO THAT I CAN GET THE ORDER TO MY ADDRESS |
| **BV:** 500 | **CP:** 02 |
| **Acceptance Criteria**Text Box to enterBusiness Rules: Within the radius of 5 km |

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| **User Story No:** 04 | **Task:** 02 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO SELECT THE PAYMENT MODESO THAT I CAN MAKE PAYMENT OF MY CHOICE |
| **BV:** 500 | **CP:** 03 |
| **Acceptance Criteria**Display Payment Modes, Radio Buttons to select Payment Modes, Payments Button.Business Rule: Can select only one payment mode. |

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| **User Story No:** 05 | **Task:** 02 | **Priority:** Highest |
| AS AN ADMINI WANT TO VIEW THE RESTURANTSSO THAT I CAN APPROVE THEIR REGISTERATION |
| **BV:** 500 | **CP:** 02 |
| **Acceptance Criteria**List of Restaurants, Select Restaurants, Verify Restaurant Details, approve button, Reject button, Notification to the Restaurant. |

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| **User Story No:** 06 | **Task:** 02 | **Priority:** LOW |
| AS A CUSTOMERI WANT TO VIEW THE PRICESO THAT I CAN ORDER THE FOOD |
| **BV:** 50 | **CP:** 01 |
| **Acceptance Criteria**Display price in the list of menu items. |

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| **User Story No:** 07 | **Task:** 02 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO VIEW THE CONTACT NUMBER OF THE DELIVERY BOYSO THAT I CAN CONTACT DELIVERY BOY FOR THE STATUS |
| **BV:** 50 | **CP:** 01 |
| **Acceptance Criteria**1. Display Delivery Boy Mobile Number
2. Display Delivery Boy name in tracking Field
3. Display Delivery Boy Picture.
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| **User Story No:** 08 | **Task:** 02 | **Priority:** Medium |
| AS A RESTAURANT OWNERI WANT TO PROVIDE TIME SLOTSSO THAT CUSTOMER CAN CHECK OPENING AND CLOSING HOURS |
| **BV:** 100 | **CP:** 02 |
| **Acceptance Criteria**1. Click on Restaurant dashboard.
2. Add From Time and To Time.
3. Click on Submit.
4. Display Updated Successfully
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| **User Story No:** 09 | **Task:** 02 | **Priority:** Highest |
| AS A BUSINESS OWNERI WANT TO VIEW RESTAURANT REVENUE REPORTSO THAT I CAN VIEW THE RESTURANT’S REVENUE |
| **BV:** 200 | **CP:** 03 |
| **Acceptance Criteria**1. Select Reports
2. Select Revenue Reports
3. Select To and From Date
4. Select Region (can select All)
5. Generate Report
6. Download Report in EXCEL
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| **User Story No:** 10 | **Task:** 03 | **Priority:** Highest |
| AS A REG ADMINI WANT TO MANAGE REGIONAL RESTAURANTSSO THAT I CAN TRACK THE PERFORMANCE OF REGIONAL RESTAURANTS. |
| **BV:** 200 | **CP:** 03 |
| **Acceptance Criteria**1. Click on performance of Restaurants
2. Select From Date and To Date
3. Click on generate report which includes Restaurant’s ID, Name, Revenue.
4. Click on download report should be in EXCEL.
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| **User Story No:** 11 | **Task:** 02 | **Priority:** Medium |
| AS AN ADMINI WANT TO SEE THE REGIONAL REVENUE REPORTSSO THAT I CAN VIEW THE REGIONAL PERFORMANCE. |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria**1. Select Regional dropdown
2. View performance of each Restaurant of that region in tabular form which includes Restaurant Name, Revenue generated.
3. Download in PDF or EXCEL.
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| **User Story No:** 12 | **Task:** 02 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO CHAT WITH REG ADMINSO THAT I CAN REQUEST FOR REFUND |
| **BV:** 200 | **CP:** 02 |
| **Acceptance Criteria**1. BR-All mandatory
2. Text Box Fields
3. Display Order ID
4. Text Box for Description
5. Submit Button
6. Generate Issue ID
7. Display Successful.
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| **User Story No:** 13 | **Task:** 2 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO REGISTER IN SCRUM FOODSSO THAT I CAN ORDER FOODS FROM RESTAURANTS |
| **BV:** 500 | **CP:** 02 |
| **Acceptance Criteria**1. Registration Screen
2. Text Boxes for User Name, Password, Nation ID, Mobile No, Email, Address, Phone Number.
3. Select Option “AS CUSTOMER”.
4. Click on Registration Button.
5. Send Registration successful notification to the Customer’s Email ID.
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| **User Story No:** 14 | **Task:** 2 | **Priority:** Highest |
| AS A RESTAURANT OWNERI WANT TO REGISTER IN SCRUM FOODSSO THAT I CAN SUPPLY FOOD TO CUSTOMERS |
| **BV:** 500 | **CP:** 02 |
| **Acceptance Criteria**1. Registration Screen
2. Text Boxes for User Name, Password, Nation ID, Mobile No, Email, Address, Phone Number.
3. Select Option “AS RESTAURANT OWNER”.
4. Click on Registration Button.
5. Send successful notification to the user.
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| **User Story No:** 15 | **Task:** 2 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO BROWSE BASED ON SPECIFIC DISHESSO THAT I CAN ORDER THAT SPECIFIC DISH |
| **BV:** 500 | **CP:** 02 |
| **Acceptance Criteria**1. Display all the restaurants that sell the specified dish.
2. Display the Restaurant Rating, Distance from the Customers Location and expected delivery Time.
3. Add A Display Picture.
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| **User Story No:** 16 | **Task:** 2 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO BROWSE BASED ON SPECIFIC RESTAURANTSO THAT I CAN ORDER FOOD FROM THAT SPECIFIC RESTAURANT |
| **BV:** 500 | **CP:** 02 |
| **Acceptance Criteria**1. Display the Restaurant which was searched.
2. Display the Restaurant Rating, Type of Cuisines they sell, Distance from the Customers Location and expected delivery Time.
3. Add A Display Picture.
4. Also display the other outlets of the same restaurants and similar restaurants.
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| **User Story No:** 17 | **Task:** 2 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO VIEW THE MENU OF A SPECIFIC RESTAURANTSO THAT I CAN ORDER THAT SPECIFIC DISH |
| **BV:** 200 | **CP:** 03 |
| **Acceptance Criteria**1. Display the Restaurant menu when the user clicks on the restaurant.
2. Display all the dishes that are sold and currently available in the restaurant.
3. Provide a sample picture of the dishes along with the name, rating for the dish, contents of the dish and price.
4. Provide a button “ADD ITEM” to add the item to the cart.
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| **User Story No:** 17 | **Task:** 2 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO VIEW THE MENU OF A SPECIFIC RESTAURANTSO THAT I CAN ORDER THAT SPECIFIC DISH |
| **BV:** 200 | **CP:** 03 |
| **Acceptance Criteria**1. Display the Restaurant menu when the user clicks on the restaurant.
2. Display all the dishes that are sold and currently available in the restaurant.
3. Provide a sample picture of the dishes along with the name, rating for the dish, contents of the dish and price.
4. Provide a button “ADD ITEM” to add the item to the cart.
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| **User Story No:** 18 | **Task:** 3 | **Priority:** Low |
| AS A CUSTOMERI WANT TO VIEW THE ITEMS ADDED IN THE CARTSO THAT I CAN PLACE THE ORDER. |
| **BV:** 50 | **CP:** 01 |
| **Acceptance Criteria**1. Display the Items that were selected from the menu along with the price and quantity details.
2. Provide an option to increase or decrease the quantity of items selected.
3. Provide an option to view the menu again if the customer wants to add any ither items.
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| **User Story No:** 19 | **Task:** 4 | **Priority:** Low |
| AS A CUSTOMERI WANT TO VIEW THE AVAILABE COUPONS FOR DISCOUNTSO THAT I CAN AVAIL SOME DISCOUNT IN THE ITEMS. |
| **BV:** 50 | **CP:** 01 |
| **Acceptance Criteria**1. Display the Option “ Apply Coupon”.
2. Display all the applicable Coupons.
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| **User Story No:** 20 | **Task:** 2 | **Priority:** Medium |
| AS A CUSTOMERI WANT TO PROVIDE RATING AND REVIEWSSO THAT I CAN PROVIDE RATING AND REVIEWS ON THE FOOD AND RESTAURANT FROM WHERE I ORDERED |
| **BV:** 100 | **CP:** 02 |
| **Acceptance Criteria**1. Select the STARS from the 5 stars provided for the rating.
2. Text Box to write the reviews.
3. Submit button to submit the reviews and ratings.
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| **User Story No:** 21 | **Task:** 1 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO VIEW THE ORDER HISTORYSO THAT I CAN PROVIDE REVIEWS OR RE-ORDER THE SAME DISHES AGAIN |
| **BV:** 200 | **CP:** 02 |
| **Acceptance Criteria**1. Provide “ORDER HISTORY” Option
2. Display all the orders placed with the Restaurant Name, Dishes Ordered, Order Date and Total price.
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| **User Story No:** 22 | **Task:** 2 | **Priority:** Highest |
| AS A CUSTOMERI WANT TO TRACK THE ORDERSO THAT I CAN KNOW THE EXACT STATUS OF MY ORDER |
| **BV:** 200 | **CP:** 02 |
| **Acceptance Criteria**1. Display the exact status of the order.
2. Provide notification on each step like Order Preparation, Order Dispatch, Order Delivery.
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| **User Story No:** 23 | **Task:** 3 | **Priority:** MEDIUM |
| AS A CUSTOMERI WANT TO CANCEL THE ORDERSO THAT I CAN CANCEL THE ORDER BEFORE DISPATCH |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria**1. View the Order Status.
2. If the Order status is in “Accepted” then enable the Cancel Order Button.
3. Display the cancelation, Policy.
4. Select the mode of refund.
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| **User Story No:** 24 | **Task:** 4 | **Priority:** MEDIUM |
| AS A CUSTOMERI WANT TO RECEIVE ORDER CONFIRMATION EMAILSO THAT I CAN VIEW THE INVOICE  |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria**1. Once the Order is placed and accepted by the restaurant an Email with the Invoice should be sent to the Registered Email ID of the customer.
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| **User Story No:** 25 | **Task:** 3 | **Priority:** MEDIUM |
| AS A CUSTOMERI WANT TO CONATCT CUSTOMER SUPPORTSO THAT I CAN SUBMIT QUERIES AND ISSUES |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria**1. Display Customer Support option
2. Here the Customer can chat with the Customer care representative for any queries.
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| **User Story No:** 26 | **Task:** 2 | **Priority:** Highest |
| AS A RESTAURANT OWNERI WANT TO RECEIVE AND MANAGE ORDERS SO THAT I CAN UPDATE ORDER STATUS |
| **BV:** 200 | **CP:** 02 |
| **Acceptance Criteria**1. Manage Order Status
2. Notify Restaurants about the Order details
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| **User Story No:** 27 | **Task:** 3 | **Priority:** Highest |
| AS A RESTAURANT OWNERI WANT TO EDIT MENUSO THAT I CAN UPDATE NEW DISHES AND THE AVAILABILITY OF DISHES |
| **BV:** 200 | **CP:** 02 |
| **Acceptance Criteria**1. Select Edit Menu.
2. Add or Delete items required.
3. Should be able to edit Price
4. Display “Not Available” if no stock.
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| **User Story No:** 28 | **Task:** 2 | **Priority:** Highest |
| AS A RESTAURANT OWNERI WANT TO ACCESS CUSTOMER REVIEWSSO THAT I CAN VIEW AND RESPOND TO CUSTOMER REVIEWS |
| **BV:** 200 | **CP:** 02 |
| **Acceptance Criteria**1. Select Option Customer Feedback
2. View the reviews and can reply for each review
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| **User Story No:** 29 | **Task:** 2 | **Priority:** Highest |
| AS A RESTAURANT OWNERI WANT TO KNOW THE DETAILS OF THE DELIVERY BOY SO THAT I CAN VERIFY AND HANDOVER THE ORDER |
| **BV:** 200 | **CP:** 02 |
| **Acceptance Criteria**1. Provide all the details of the Delivery Boy such as Name, Phone Number, Address, Photo.
2. Text box to enter the OTP From the Delivery boy.
3. Enter the OTP shared by the Delivery boy and on “OTP Verified” message handover the order to the Delivery Boy.
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| **User Story No: 30** | **Task:** 7 | **Priority:** Highest |
| AS A DELIVERY BOYI WANT TO VIEW THE ORDERS SO THAT I CAN ACCEPT THE ORDERS |
| **BV:** 200 | **CP:** 04 |
| **Acceptance Criteria**1. Order Notification
2. Order Pick Up and Drop location
3. Order Details
4. Restaurant Details
5. Customer Details
6. Order Completion and confirmation
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| **User Story No:** 31 | **Task:** 2 | **Priority:** Medium |
| AS A DELIVERY BOYI WANT TO VIEW THE CUSTOMER CONTACT DETAILSSO THAT I CAN CONTACT THE CUSTOMER FOR DELIVERING THE ORDER |
| **BV:** 100 | **CP:** 02 |
| **Acceptance Criteria**1. Select the Order
2. View the Customer details for Name, Address, Contact number
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| **User Story No:** 32 | **Task:** 5 | **Priority:** Medium |
| AS A DELIVERY BOY I WANT TO VIEW THE FEEDBACKSO THAT I CAN KNOW THE CUSTOMER FEEDBACK |
| **BV:** 200 | **CP:** 04 |
| **Acceptance Criteria**1. Select Order
2. View Feedback Provided by the customer
3. Text box to provide reply
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| **User Story No:** 33 | **Task:** 4 | **Priority:** Highest |
| AS A REGIONAL ADMINI WANT TO TRACK THE DELIVERYSO THAT I CAN KNOW THE STATUS OF THE DELIVERY |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria**1. Order Tracking ID
2. Display the Delivery Boys details.
3. Order Pick Up Time
4. Current Location of the Delivery Boy
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| **User Story No:** 34 | **Task:** 4 | **Priority:** Highest |
| AS A ADMINI WANT TO VIEW CANCELED ORDERSSO THAT I CAN KNOW THE EXACT REASON FOR THE ORDER CANCELATION AND REFUND PROCEDURES |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria**1. List of cancelled Orders
2. Reason for Cancellation
3. If valid initiate the refund process.
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| **User Story No:** 35 | **Task:** 4 | **Priority:** Highest |
| AS A ADMINI WANT TO VIEW CANCELED ORDERSSO THAT I CAN KNOW THE EXACT REASON FOR THE ORDER CANCELATION AND REFUND PROCEDURES |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria**1. List of cancelled Orders
2. Reason for Cancellation
3. If valid initiate the refund process.
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| **User Story No:** 35 | **Task:** 2 | **Priority:** Medium |
| AS A RESTAURANT OWNERI WANT TO PROVIDE TIME SLOTS SO THAT CUSTOMER CAN CHECK THE OPENING AND CLOSING HOURS |
| **BV:** 100 | **CP:** 02 |
| **Acceptance Criteria**1. Click on the profile
2. Update the timings
3. Click on Save button
4. Display saved successfully.
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| **User Story No:** 36 | **Task:** 2 | **Priority:** Medium |
| AS A CUSTOMERI WANT TO PROVIDE FEEDBACK SO THAT I CAN PROVIDE FEEDBACK FOR THE DELIVERY BOY |
| **BV:** 200 | **CP:** 04 |
| **Acceptance Criteria**1. Select the Order
2. Under Delivery Boy Feedback text box type the feedback
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| **User Story No:** 37 | **Task:** 2 | **Priority:** Low |
| AS A CUSTOMERI WANT TO ADD TIPSSO THAT I CAN PROVIDE TIPS FOR THE DELIVERY BOY |
| **BV:** 50 | **CP:** 01 |
| **Acceptance Criteria**1. After the order is delivered send notification to customer to provide Tips for the delivery Boy if interested.
2. Select the amount in tips and click “PAY”.
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| **User Story No:** 38 | **Task:** 4 | **Priority:** Highest |
| AS A REGIONAL ADMINI WANT TO VIEW CANCELED ORDERSSO THAT I CAN KNOW THE EXACT REASON FOR THE ORDER CANCELATION AND REFUND PROCEDURES |
| **BV:** 100 | **CP:** 03 |
| **Acceptance Criteria**1. List of cancelled Orders
2. Reason for Cancellation
3. If valid initiate the refund process.
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| **User Story No:** 39 | **Task:** 5 | **Priority:** MEDIUM |
| AS A ADMINI WANT TO ACCESS CUSTOMER REVIEWSSO THAT I CAN VIEW AND RESPOND TO CUSTOMER REVIEWS |
| **BV:** 200 | **CP:** 02 |
| **Acceptance Criteria**1. Select Option Customer Feedback
2. View the reviews and can reply for each review
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| **User Story No:** 40 | **Task:** 7 | **Priority:** MEDIUM |
| AS A CUSTOMERI WANT TO TRACK THE LOCATIONSO THAT I CAN VIEW THE EXACT LOCATION OF THE DELIVERY BOY IN THE MAP |
| **BV:** 200 | **CP:** 02 |
| **Acceptance Criteria**1. The current location will be updated continuously in the tracking maps.
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**Question 3– What is epic? Write 2 epics**

**Answer:**

**Epic:**

An Epic is a large user story or a collection of related User Stories that can be broken down into smaller User stories and worked upon. Epics are usually delivered over a set of sprints. The scope od an Epic is flexible based on customer requirement. This helps us in organizing and prioritising work in product backlog.

**Epic 1: Order Creation**

**User Stories:**

1. As a Customer, I want to look into the menu of each restaurant along with the price of each dish, So that I can know the availability of dishes.
2. As a Customer, I want to add items to the cart, So That I can add more items if needed.
3. As a Customer, I want to delete items from the cart, So I can unselect items.
4. As a Customer, I want to see the full bill with split-up, so that I can check for total price before payment.

**Acceptance Criteria:**

1. Users can view the menu of each restaurant when selecting a particular restaurant.
2. Users can add or delete any items selected in the cart before placing order.
3. Users can see the entire bill with split-ups and total amount for crosschecking.

**Epic 2: Payment Modes**

**User Stories:**

1. As a Customer, I want to select the mode of payment, so that I can pay in the mode I wish.
2. As a Customer, I want to redirected directly to the payment gateway selected, so I can make payment.
3. As a Customer, I want to have an option for COD, so that I can pay in cash.
4. Aa A Customer, I want to get a confirmation message for payment, so that I can check the amount detected from bank account.

**Acceptance Criteria:**

1. User can select the desired mode of payment.
2. User will receive a payment confirmation notification in the application.

**Question 4 –What is the difference between BV and CP**

**Answer:**

**Business Value:**

1. Business Value refers to the quantifiable amount of benefit a particular requirement will bring to the project.
2. It is determined based on the factors such as revenue generation, cost savings, customer satisfactions, strategic ailments and other business-related criteria.
3. Business Value helps prioritize tasks or features based on their importance to the overall project goals and objectives.
4. This is attended by the Clients who decide on the importance of each User story.

Techniques Used: MOSCOW technique, Currency note technique.

**MOSCOW Technique:** It stands for Must Have, Should Have, Could Have, Won’t Have. This technique helps in prioritising tasks or requirements based on the importance or urgency of the requirement.

**Currency Note Technique:** It is a simplified non-quantitative method where we metaphorically assign different denominations of currency notes to various features of a project. For each feature a currency note is allocated which denotes the importance of that particular feature in the project. The currency note with the highest denomination is given to a feature with high importance and the currency with least denomination is given to the feature with least importance.

 **Complexity Points:**

1. It is the measure of relative complexity or effort required to complete a task or requirement.
2. They are used to estimate the effort, time and resources needed to implement a specific item.
3. Complexity points are often assigned based on factors such as technical difficulty, development effort, integration challenges, and other technical or development related criteria.
4. This is done by the developers who can assess the development the time taken to complete a requirements and resources required.

Techniques Used: Planning Poker

Planning Poker: Planning poker (also called Scrum poker) helps teams estimate the time and effort needed to complete each task or requirement. In this technique Physical cards are used to provide points to each requirement. The product owner will read out each requirement and a discussion happen on the requirement. Once all the doubts are cleared all the developers start rating the requirements. The total points are calculated for each user story and this point represents the coding effort required for that particular user story.

**Question 5 –Explain about Sprint**

**Answer**

**Sprint:**

A Sprint is a short and fixed time frame during which a specific set of tasks are to be performed. An Agile project will be broken down into a certain number of sprints, each sprint last for a specific amount of time. Each sprint runs for 2 to 4 weeks. A Sprint planning meeting occurs before the start of every sprint. This meeting defines what set of items could be developed and delivered in the upcoming sprint.

The Key components of Scrum are as follows:

**Time Duration:** A Sprint has a fixed duration which could be between 2 to 4 weeks. This duration is kept consistent through out the project for all the sprints to provide a predictable cadence for development and planning.

**Goals of a Sprint:**  A Sprint goal is a brief explanation of what the team plans to achieve during the course of an Agile Sprint. In the beginning of each Sprint the Product Owner along with the development team and the stakeholders selects a set of User Stories or tasks that are to be developed during a particular Sprint. These items are collectively referred to as the Sprint Backlog.

**Sprint Planning:** Sprint planning is an event in Scrum that kicks off the Sprint. The purpose of Sprint Planning is to define what can be delivered in the sprint and how that work can be achieved. Sprint Planning is done with the collaboration of the entire team.

**Daily Stand-Up Meetings:** The Daily Stand-Up meeting is a daily meeting to discuss the progress and blockers. This is attended by all the team members before the day starts. In this meeting each team members puts forth what work was completed yesterday. What work will be done today and also any blockers faced.

**Development and Testing:** It is a simultaneous process of building features and verifying their functionality through testing occurring within the same Sprint. The developers actively integrate testing into their workflow to ensure quality throughout the sprint rather than waiting till the end to test everything at once.

**Incremental Delivery:** It means delivering a product in small usable increments throughout the sprint. This allows teams to focus on what’s important, reduce risk and adapt to change.

**Sprint Review:** Sprint Review is a meeting that occurs at the end of each sprint. In this meeting the team meets to showcase the work done and get it reviewed. This is usually attended by the Product Owner, Scrum Master, Developers and Stakeholders. Here the developers demonstrate the completed product to the stakeholders and get the feedbacks and reviews. This helps in ensuring the developed features align with the client expectations.

**Sprint Retrospective:** Sprint Retrospective meeting happens after the Sprint Review meeting. It is the last meeting in a sprint. In this meeting the Scrum team discusses on what went well in the Sprint, what could be improved and what actions to be taken in the next Sprint. This encourages continuous improvement.

**Backlog Refinement:** Backlog refinement is a process in scrum that involves reviewing, prioritizing and updating a product backlog. Its an ongoing activity that helps ensure the backlog is ready for the next sprint.

**Question 6 – Explain Product backlog and sprint back log**

**Answer**

**Product Backlog:**

A product backlog is a list of the new features, changes to existing features, bug fixes, infrastructure changes, or other activities that a team may deliver in order to achieve a specific outcome. It is managed by a Project Owner.

**Sprint Backlog:**

A sprint backlog is a list of work items a team plans to complete during a project sprint. These items are usually pulled from the product backlog during the sprint planning session. A clear sprint backlog prevents scope creep by clarifying exactly what the team will be doing—and not doing—during each sprint.

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| **Product Backlog** | **Sprint Backlog** |
| A Product Backlog is a long-term list of tasks for a project. | A Sprint Backlog is a short-term list of tasks for a sprint. It is a subset of a product backlog. |
| Owned by Product Owner | Owned by Development Team. |
| It’s a high-level roadmap that covers the entire product lifecycle | It’s a short-term plan to achieve the sprint objectives. |
| Includes all the features, enhancements, and fixes needed for the product. | Includes specific items from the Product Backlog that the team will work on during the sprint. |
| A Flexible document that changes over time based on customer vision. | Once set in the planning meeting, It doesn’t change.  |
| Remains until the project ends and requires maintenance. | Ends with the Sprint. |
| Product Backlog meeting is conducted for the refinement of the Product Backlog. | Sprint Planning meeting is conducted to refine the sprint backlog items. |
| Estimation is done at User story level | Estimation is done at task or activity level |
| Product backlog items are not discussed at Daily stand-up meetings. | Sprint Backlogs are discussed at Daily Stand-Up meeting |
| Release Burndown metric is used | Sprint Burndown metric is used. |

**Question 7 – What is impediments log? write 2 impediments**

**Answer:**

An Impediment Log is used to record, track and resolve a list of obstacles, challenges that delay the team’s performance. The Scrum Master is responsible for tracking, monitoring and ensuring the impediments are removed. All team members are responsible for listing out the impediments at any point of time.

|  |  |
| --- | --- |
| **Login ID** | 1 |
| **Description** | Technical issue causing the customer not to select online mode of payment |
| **Impact** | Does not allow the customer to make online payment |
| **Priority** | High( as it affects revenue and customer satisfaction) |
| **Assigned To** | Technical team and QA team |
| **Status** | In Progress |
| **Action Taken** | The technical team has identified the root cause for the defect and fixing it. QA team will test the issue once the fix is done. |
| **Resolution** |  The Technical team has identified the issue and will fix the issue and do a complete round of testing to ensure the feature will work as required. |

|  |  |
| --- | --- |
| **Login ID** | 2 |
| **Description** | Delivery vehicle shortage in specific region |
| **Impact** | Delays order delivery and causes customer dissatisfaction |
| **Priority** | High( as it affects customer satisfaction) |
| **Assigned To** | HR and Logistics Team |
| **Status** | In Progress |
| **Action Taken** | The Logistics team is working on arranging more vehicles for the delivery people in the regions where there are shortage for vehicles. |
| **Resolution** |  The HR and Logistics team is working on getting more vehicles and providing constant updates regarding the progress. |

**Question 8 – Explain Velocity of the Team**

**Answer:**

Velocity is the measure of work a team can tackle during a single sprint and is the key metric of scrum. Velocity is calculated at the end of each Sprint by totalling the points for all fully completed user stories. The calculation of Velocity is done by the development team as they are responsible for estimating the efforts required to complete each user story or backlog item.

**Story Points Estimation:**

Story points are units of measure for expressing an estimate of the overall effort required to fully implement a product backlog item or any other piece of work. Teams assign story points relative to work complexity, the amount of work, and risk or uncertainty. The actual time a story points represents can vary from team to team. For some it might equate to hours, for some it might equate to days. Hence it is important to establish a consistent baseline within the teams so that story points estimates can be used effectively for planning and prioritization.

**Tracking Completed Work:**

It means calculating the total story points completed by the team over a specific time frame, usually a sprint.

* **Identify Completed Stories:** At the end of each sprint 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.

**Summing Story Points:**

Summing story points means adding up the numerical values assigned to individual user stores or task 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.

* **List Completed User Stories:** Gather a lust of User Stories or tasks that have been completed during a specific sprint.
* **Identify Story Points 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 Points Values:** Sum up the story points values for all the completed User Stories.

The sum of story points provides a quantitative measure of the work completed by the team during a sprint. The 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 sprint. It’s a key metric used for planning and estimating future work.

* **Select a time frame:** Select a specific number of past sprints for which the average velocity needs to be calculated.
* **Sum Completed Story Points:** Add up the total story points completed in each of the selected sprint. This will give the total completed work for the chosen time frame.
* **Calculate Average:** Divide the total completed story points by the number of sprints selected. This will give the average velocity for that period.

**Average Velocity = Total Completed Story Points / Number of Sprints.**

**Question 9 – Draw Sprint Burn Charts n Product Burn Down Charts**

**Answer:**

**Sprint Burndown Chart:**

A sprint burndown chart is a visual tool that shows how much work is left in a sprint and how much has been completed. It's a useful tool for tracking progress and predicting if a team will meet their goals.



**Product Burndown Chart:**

Product burndown charts provide a visual representation of the overall progress of the project, showcasing the number of product or project goals accomplished by the team and the remaining work within the project.



**Question 10 – Explain about Product Grooming**

**Answer:**

Product Grooming is also known as Backlog Grooming. It is the regular updation of the Product Backlog. The key goal is to update the backlog with current details and prepare the backlog for future sprints. The product manager, product owner, and the team prioritize, review, and discuss backlog items, ensuring the workload for upcoming sprints is always correctly prioritized.

* **Setting the Context:** In the beginning of the grooming session the entire team and the relevant stakeholders meet to understand the overall goals and objectives of the project. This helps set context for the work to be done and aligns everyone’s understandings.
* **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 goals.
* **Prioritization**: During the product grooming meeting the team prioritizes the backlog items based on their values to the products and the needs of the users or customers. This ensures the most important and valuable work is addressed first.
* **Refinement and Estimation:** The backlog items are refined to provide clear and detailed descriptions. The team breaks down the user stories into smaller tasks and discusses the technical requirements. Estimations involves assigning story points or other sizing metrics to each item, including 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 mapping potential bottlenecks.
* **Acceptance Criteria:** Well defined acceptance criteria’s 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 shares understanding of what is expected.
* **Backlog Grooming Meeting:** These are recurring meetings where the Product Owner and the development team come together to perform the activities mentioned above. These meeting usually occur before sprint planning sessions to ensure that the upcoming sprint backlog is well prepared.

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

**Answer:**

|  |  |
| --- | --- |
| **Product Owner** | **Scrum Master** |
| Collaborates with all the stakeholders and brings vision of a product into product backlog | Acts as a team coach and is responsible for maintaining the quality of the product. |
| Responsible for completing the project on time. Acts as an mediator between the development team and customers. | Ensures that scrum framework is followed and helps development team create a quality product. |
| Responsible for project backlog and the timely completion of the product and for providing updates to the client and stakeholders. | Accountable for the quality of the entire project and for giving updates to management about the completion of the product. |
| Reports to top management and clients. | Reports to top management about the efficiency of the team and the quality of the product. |
| Communication, Leadership skills, creativity, critical thinking and sharp mind are key skills for a product owner. | Thorough knowledge of scrum theory and practices. Being able to lead team but without the sense of authority |
| Helps set priority for each sprint. | Helps divide requirements into sprints. |
| Plays Vital role in the marketing of the products. | Plays vital role in the implementation of the products. |
| The work done by a product owner is reviewed by a Scrum Master. | The work done by a Scrum master is not reviewed by a Product Owner. |

**Question 12 – Explain all Meetings Conducted in Scrum Project**

**Answer:**

1. **Sprint Planning Meeting:** Sprint planning is an event in scrum that kicks off the sprint. The purpose of sprint planning is to define what can be delivered in the sprint and how that work will be achieved. Sprint planning is done in collaboration with the whole scrum team. The Product Owner share the product backlog and in collaboration with the development team will decide the work that will be completed over a sprint.
2. **Daily Standup Meeting:** This is a standup meeting which happens on daily basis before starting the days meeting for 15 min. This meeting is attended by all the developers, Product Owners and Scrum Masters. Here they discuss on the work that was completed the previous day, The work to be done today, and impediments or blockers they are facing to complete the task.
3. **Sprint Review Meeting:** This meeting happens at the end of each Sprint. It is attended by the developers, Product Owner, Scrum Master and all the Stakeholders. Here the development team projects all the work or the features that were developed in this particular sprint to the entire team. The Stakeholders reviews the features and gives feedback on the products developed. The main purpose of this meeting is to assess progress, gather inputs, and determine potential adjustments to the product backlog.
4. **Sprint Retrospective Meeting:** A Sprint Review meeting happens after a Sprint review meeting was conducted. Here the team goes through what went well in the Sprint, What to improve in the next Sprint and what challenges were faced in the current sprint and how can that be handled in the next sprint.

**Optional Meetings:**

1. **Backlog Grooming Meeting:** This meeting involves the product owner and development team. They focus on reviewing, refining, and estimating backlog items for upcoming sprints. It ensures that the backlog is well prepared and ready for implementation.
2. **Release Planning:** This meeting occurs at the start of a 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 to release.
3. **Ad hoc Meeting:** These meetings may be scheduled as needed to address a specific topics or issues, such as resolving impediments, discussing technical Challenges, or conducting additional planning or collaboration sessions.

**Question 13 – Explain Sprint Size and Scrum Size**

**Answer:**

**Sprint Size:**

In Scrum a “Sprint” is a time-boxed iteration during which the development team works to drive a potentially shippable product increment. The length of a sprint is referred to as the “Sprint Duration” and is usually fixed throughout the project. Common Sprint duration are 1 to 4 weeks. The choice of sprint duration depends upon 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. Scrum recommends that the development team size be kept small, between 3 to 9 members to facilitate effective communication, collaboration and decision making.

**Question 14 – Explain DOR and DOD**

**Answer:**

**DOR:** "DoR" stands for "Definition of Ready," which is a set of criteria used to determine whether a user story or task is sufficiently prepared and understood to be pulled into a sprint and actively worked on by a development team within an Agile project management framework; essentially, it acts as a checklist to ensure all necessary information and details are available before starting work on a task, minimizing confusion and delays.

* Clear definition and Acceptance Criteria: The 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 efforts required.
* Testable: It’s possible to determine whether the item has been successfully Implemented through testing.
* Minimal ambiguity: All the details should be clear and any uncertainties are resolved.

**DOD:** "DoD" stands for "Definition of Done," which is a set of clearly defined criteria that specify when a work item, like a feature or user story, is considered complete and ready for delivery, ensuring transparency and consistency within a team, particularly in Agile methodologies; essentially, it acts as a checklist to verify that all necessary steps have been taken before marking a task as "done."

* Code Complete: All development work is finished including coding, testing and integration.
* Peer-Review: The code has been reviewed by the other team members for quality and adherence to coding standards.
* Automated Tests Passed: Automated tests(unit test, integration test)etc has been passed successfully.
* Functional Requirements Met: The project should have met all the acceptance criteria and Functional requirements.
* Document Updation: All the required documents, user guides, technical documents, testing documents are updated up to date.

**Question 15 – Explain Prioritization Techniques and MVP**

**Answer:**

**Prioritization Technique:**

Prioritization techniques are methods used to determine the order in which features or items should be addressed in a project. This techniques helps teams allocate resources effectively and focus on delivering the most valuable work first.

**MOSCOW Technique:**

MoSCoW prioritization is a technique used by product managers to build a hierarchy of priorities while prioritizing feature requests or backlogs. MoSCoW prioritization is a popular requirement management prioritization technique. MoSCoW stands for four types of initiatives: must-have, should-have, could-have, and won't-have, or won't have right now.

**Mo:** It stands for Must Have. This category, as the name implies, includes initiatives that are "musts" for the team. They represent non-negotiable requirements for the project, product, or release at hand.

**S:** It stands for Should Have. Should-have initiatives are one step below must-have initiatives. They are necessary for the product, project, or release, but not critical. If omitted, the product or project continues to function. The initiatives, on the other hand, may add significant value.

**Co:** It stands for Could Have. Should-have initiatives are one step below must-have initiatives. They are necessary for the product, project, or release, but not critical. If omitted, the product or project continues to function. The initiatives, on the other hand, may add significant value. As a result, initiatives in the "could-have" category are frequently the first to be deprioritized if a project in the "should-have" or "must-have" category proves to be larger than anticipated.

**W:** It stands for Will not have this time. One advantage of the MoSCoW method is that it assigns several initiatives to the "will-not-have" category. The category can be used to manage expectations about what the team will and will not include in a specific release. One method for preventing scope creep is to place initiatives in the "will-not-have" category. If an initiative falls into this category, the team understands that it is not a priority for this time period. Some initiatives in the "will-not-have" category will be prioritized in the future, while others are unlikely to be implemented.

**Minimum Viable Product (MVP):**

Minimum Viable Product (MVP) techniques are a set of strategies used to create and test a product with just enough features to attract early adopters. The goal is to validate the product idea and gather feedback from users to improve future iterations.

**Core Functionality:** MVP focuses on delivering the core functionalities that address the primary needs or pain points of the primary users.

**Minimal Features:** The MVP omits non-essential features to avoid unnecessary complexity and expedite development.

**Testing Hypotheses:** The MVP test assumptions and hypothesis 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.

**Question 16 – Difference between Business Analyst n Product Owner**

|  |  |  |
| --- | --- | --- |
| **Aspect** | **Business Analyst** | **Product Owner** |
| **Role Focus** | Understands Business needs, processes and requirements. | Define, prioritize and convey requirements for the product. |
| **Requirements 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 mediator between stakeholders and development team | Collaborates between the stakeholders, customers and development team. |
| **Documentation** | Creates documentation of business rules, workflows and requirements. | Manages the product backlog and maintains clear user stories. |
| **Scope Definition** | Helps defines the scope of projects based on business needs. | Defines the scope of product features and enhancements. |
| **Vision and Strategy** | Focus on specific projects or process improvements. | Has a holistic vision for the product and its strategic direction. |
| **Backlog Management** | Not typically responsible for backlog management. | Manages and prioritizes the Product Backlog. |
| **Prioritization** | Does not have a primary role in prioritizing features. | Prioritizes features based on business value, user needs, and market trends. |
| **Decision Making** | Provides inputs but not responsible for final product decisions. | Makes final decisions on product features, enhancements and priorities. |
| **Iterative development** | May or may not be involved in iterative development cycles.  | Actively participate in sprint planning, reviews and retrospectives. |
| **Collaboration** | Collaborates with business stakeholders and development team. | Collaborates with stakeholders, customers and development team. |
| **Acceptance** | Ensures business requirements are met. | Ensures user stories meet acceptance criteria and align with product vision. |
| **Leadership and strategy** | Focuses on tactical solutions and improvements. | Focuses on strategic leadership and product direction. |
| **Continuous improvement** | Contributes to process improvements and business efficiency. | Incorporates user feedback for ongoing product enhancement. |

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

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