

Capstone Project2

Agile-Scrum



January 5, 2025

COEPD

Scrum Project Implementation

**Question 1 – write Agile Manifesto – 8 Marks**

Agile is a lightweight methodology to drive the Software Development Life Cycle. It can be implemented where faster delivery is required. It is characterized by no or less documentation and the code itself serves the purpose of documentation. Agile runs based on the agile manifesto. It has 4 core values and 12 principles.

**4 core values of Agile are given below**

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

**12 principles of agile software development methodology are given below**.

1. Customer Satisfaction- Satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changes- Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Frequent delivery- Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Regular Communication- Business people and developers must work together daily throughout the project
5. Motivated Individuals- Build projects around motivated individuals. Give them the environment and support they need and trust them to get the job done.
6. Face to Face Communication- The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Measure Progress- Working software is the primary measure of progress.
8. Constant Pace- Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Technical Excellence- Continuous attention to technical excellence and good design enhances agility.
10. Simplicity (Small units of work)- the art of maximizing the amount of work not done--is essential.
11. Self-organization- The best architectures, requirements, and designs emerge from self-organizing teams.
12. Continuous feedback- 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 – 40 Marks**

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| **User Story: 1** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A DELIVERY BOYI WANT TO REGISTER IN SCRUM FOODSSO THAT I CAN DELIVER FOODS |
| **BV: 200** | **CP: 02** |  |
| ACCEPTANCE CRITERIARegistration screenText boxes for Username, Password, Email, Mobile Number, Address, Nationality, ID type and ID NumberOption to upload ID document (Business Rule: Max 100 mb pdf files are accepted)Click on Register ButtonSend Successful notification to the user |

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| **User Story: 2**  | **Tasks: 02** | **Priority: HIGHEST** |
| AS A RESTAURANT OWNERI WANT TO VIEW ORDERSSO THAT I CAN VIEW THE LIST OF ORDERS |
| **BV: 500** | **CP: 03** |  |
| ACCEPTANCE CRITERIAView orders, display the list of orders in the tabular form |

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| **User Story: 3** | **Tasks: 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 CRITERIAAddress page, Text boxes to enter the addressBusiness Rule: Within the radius of 15km (If address is adding after selecting the food and restaurant) |

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| **User Story: 4** | **Tasks: 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 CRITERIADisplay payment modes, radio buttons to select payment modes, payments button.Business Rule: Can select only one payment mode |

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| **User Story:5** | **Tasks: 02** | **Priority: HIGHEST** |
| AS AN ADMINI WANT TO VIEW THE RESTAURANTSSO THAT I CAN APPROVE THEIR REGISTRATION |
| **BV: 500** | **CP: 02** |  |
| ACCEPTANCE CRITERIAList of restaurants, select restaurants, verify restaurant details, approve button, reject button, notification to the restaurants. |

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| **User Story: 6** | **Tasks: 02** | **Priority: LOW** |
| AS A CUSTOMERI WANT TO VIEW THE PRICESO THAT I CAN ORDER THE FOOD |
| **BV: 50** | **CP: 01** |  |
| ACCEPTANCE CRITERIADisplay price in the list of menu items |

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| **User Story:7** | **Tasks: 02** | **Priority: LOW** |
| AS A CUSTOMERI WANT TO VIEW THE CONTACT NUMBER OF DELIVERY BOYSO THAT I CAN CONTACT DELIVERY BOY FOR THE STATUS |
| **BV: 50** | **CP: 01** |  |
| ACCEPTANCE CRITERIADisplay delivery boy name, mobile number and picture in the delivery tracking page |

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| **User Story:8** | **Tasks: 02** | **Priority: MEDIUM** |
| AS A RESTAURANT OWNERI WANT TO PROVIDE TIMESLOTSSO THAT CUSTOMERS CAN CHECK OPENING AND CLOSING HOURS |
| **BV: 100** | **CP: 05** |  |
| ACCEPTANCE CRITERIAClick on restaurant dashboardAdd from time to timeClick on submitDisplay updated successfully |

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| **User Story:9** | **Tasks: 04** | **Priority: HIGHEST** |
| AS A BUSINESS OWNERI WANT TO SEE RESTAURANT REVENUE REPORTSO THAT I CAN VIEW THE RESTUARANT’S REVENUE |
| **BV: 500** | **CP: 02** |  |
| ACCEPTANCE CRITERIASelect ReportsSelect Revenue ReportsSelect to and from dateSelect Region (can select all)Generate ReportDownload Report in EXCEL |

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| **User Story:10** | **Tasks: 02** | **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 CRITERIAClick on performance of restaurantsSelect from date to dateClinck on generate report which incluses restaurants id, name,RevenueClick on download report should be in excel |

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| **User Story:11** | **Tasks: 02** | **Priority: MEDIUM** |
| AS ADMINI WANT TO SEE THE REGIONAL REVENUE REPORTSSO THAT I CAN VIEW THE REGIONAL PERFORMANCE |
| **BV: 100** | **CP: 03** |  |
| ACCEPTANCE CRITERIASelect regional dropdownView performance of each rest of that region in tabular form which includesrest name, revenue, generatedDownload in excel or PDF |

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| **User Story:12** | **Tasks: 03** | **Priority: HIGH** |
| AS A CUSTOMERI WANT TO CHAT WITH REG ADMINSO THAT I CAN REQUEST FOR REFUND |
| **BV: 100** | **CP: 02** |  |
| ACCEPTANCE CRITERIA1) br-all mandatory2) text box fields3) display order id4) text box, for description5) submit button6) generate issue id7) display successful |

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| **User Story:13** | **Tasks: 02** | **Priority: HIGHEST** |
| AS A CUSTOMERI WANT TO REGISTER IN SCRUM FOODSSO THAT I CAN ORDER FOODS |
| **BV: 200** | **CP: 03** |  |
| ACCEPTANCE CRITERIARegistration screenText boxes for Username, Password, Email, Mobile Number, Address, NationalityClick on Register ButtonSend Successful notification to the user |

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| **User Story:14** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A CUSTOMERI WANT TO LOGIN IN SCRUM FOODSSO THAT I CAN ORDER FOODS |
| **BV: 300** | **CP: 03** |  |
| ACCEPTANCE CRITERIALogin screen with text boxes to enter mobile number or email and password.Select button for otp login and text box to enter otp if selected and entered mobile numberClick on login buttonShow the home page once successfully logged in |

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| **User Story:15** | **Tasks: 03** | **Priority: HIGH** |
| AS A CUSTOMERI WANT TO SEARCH THE RESTAURANTS AND DISHESSO THAT I CAN SELECT THE ONE I WANT TO EAT |
| **BV: 500** | **CP: 03** |  |
| ACCEPTANCE CRITERIASearch option on top of the restaurant display pageSelect option for dish and restaurantDisplay the restaurants or dishes based on the selectionIf dish option selected, show the dish and restaurant where that dish available so that customer can order the food from there |

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| **User Story:16** | **Tasks: 02** | **Priority: HIGHEST** |
| AS A CUSTOMERI WANT TO VIEW THE MENU OF RESTAUNRANTSSO THAT I CAN SELECT THE FOODS AND ADD TO CART |
| **BV: 500** | **CP: 03** |  |
| ACCEPTANCE CRITERIARestaurant list pageDisplay the dishes when the user selects a restaurantShow the filter option for Veg and NonvegShow the price of the item |

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| **User Story:17** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A CUSTOMERI WANT TO EDIT AND PROCESS CART SO THAT IT CAN GET DELIVERED TO MY LOCATION |
| **BV: 500** | **CP: 05** |  |
| ACCEPTANCE CRITERIAView the cart pageShow all the foods added from a restaurant (Business Rule: User can add dishes from a single restaurant for an order)Allow to edit the cart, change quantity and remove items and add items again by going to the menu of that restaurant.Show the option to proceed to payment option in the cart page |

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| **User Story:18** | **Tasks: 03** | **Priority: MEDIUM** |
| AS A CUSTOMERI WANT TO CANCEL THE ORDERSO THAT I CAN GET THE REFUND |
| **BV: 100** | **CP: 03** |  |
| ACCEPTANCE CRITERIAOrder history pageSelect the order to be cancelled on top (Business Rule: Allow the customer to cancel only the orders which are not out for delivery)Provide the option to select the reason for cancellationShow the refund amountShow the submit button to cancel  |

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| **User Story:19** | **Tasks: 02** | **Priority: MEDIUM** |
| AS A CUSTOMERI WANT TO REVIEW AND RATE THE ORDERSO THAT I CAN PROVIDE THE FEEDBACK TO THE RESTAURANTS |
| **BV: 200** | **CP: 03** |  |
| ACCEPTANCE CRITERIAOnce the order is delivered, show the message to rate the delivery person.When the user selects the rating, show the review option in text box with a max of 200 lettersIn the order history page, show the option to rate the food and text box to give review in max of 200 letters. |

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| **User Story:20** | **Tasks: 02** | **Priority: HIGH** |
| AS A CUSTOMERI WANT TO LOG OUT FROM THE APPLICATIONSO THAT I CAN CLOSE THE APP |
| **BV: 50** | **CP: 02** |  |
| ACCEPTANCE CRITERIAMenu option in the top right corner of the appWhen selects show the account optionWhen selects show the logout optionWhen selects the logout, logout from the application |

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| **User Story:21** | **Tasks: 02** | **Priority: HIGHEST** |
| AS A DELIVERY BOYI WANT TO LOGIN IN SCRUM FOODSSO THAT I CAN DELIVER FOODS |
| **BV: 300** | **CP: 02** |  |
| ACCEPTANCE CRITERIALogin screen with text boxes to enter mobile number or email and password.Select button for otp login and text box to enter otp if selected and entered mobile numberClick on login buttonShow the home page once successfully logged in |

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| **User Story:22** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A DELIVERY BOYI WANT TO SELECT & ACCEPT THE ORDERSSO THAT I CAN ACCEPT IT TO DELIVER |
| **BV: 500** | **CP: 05** |  |
| ACCEPTANCE CRITERIA:New orders tab in the home pageShow the order to be accepted.Allow it to accept the orderThen show this order under current orders to be delivered. |

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| **User Story:23** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A DELIVERY BOYI WANT TO VIEW ORDERSSO THAT I CAN SELECT & ACCEPT THE ORDERS |
| **BV: 500** | **CP: 03** |  |
| ACCEPTANCE CRITERIA:3 Tabs to be shown in home page as New Orders, Current orders, Completed OrdersNew requests to be shown under new order and allow to selectSelected orders will be shown under current ordersDelivered orders will be shown under completed orders |

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| **User Story:24** | **Tasks: 02** | **Priority: HIGHEST** |
| AS A DELIVERY BOYI WANT TO PICK UP AND DELIVER THE ORDERSO THAT I CAN DELIVER FOODS |
| **BV: 500** | **CP: 05** |  |
| ACCEPTANCE CRITERIAOnce the order accepted from new orders show it under current orders and show the restaurant and customer location detailsShow the map to the restaurant firstPick up the order from the restaurant after showing the order numberShow the map to the customer locationDeliver the food |

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| **User Story:25** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A DELIVERY BOYI WANT TO REGISTER IN SCRUM FOODSSO THAT I CAN DELIVER FOODS |
| **BV: 200** | **CP: 03** |  |
| ACCEPTANCE CRITERIARegistration screenText boxes for User Name, Password, Email, Mobile Number, Address, Nationality, PAN card and Aadhar CardUpload option to upload the documentsClick on Register ButtonSend Successful notification to the user |

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| **User Story:26** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A DELIVERY BOYI WANT TO ACCEPT THE CASH ON DELIVERY IF THE CUSTOMER SELECTEDSO THAT I CAN COMPLETE THE ORDER |
| **BV: 500** | **CP: 08** |  |
| ACCEPTANCE CRITERIAIn the current order page, show the payment mode selected by the customerIf it is COD, provide the option to mark the cash acceptanceOnce the cash is marked as accepted, delivery boy’s wallet will be debitedIf the wallet is not having sufficient balance, it will show in negative balance and delivery can credit the wallet.If it is not credited, no new orders will be provided to delivery boy and amount will be deducted from the monthly salaryBusiness Rule: If wallet is not credited for the negative balance in 3 days, no new orders will be provided to delivery boy |

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| **User Story:27** | **Tasks: 02** | **Priority: MEDIUM** |
| AS A DELIVERY BOYI WANT TO VIEW THE REVIEW AND RATING PROVIDED BY CUSTOMERSO THAT I CAN ASSESS MY PERFORMANCE AND TAKE ACTIONS FOR IMPROVEMENTS |
| **BV: 200** | **CP: 02** |  |
| ACCEPTANCE CRITERIAProvide the option to view the feedback for all orders under the completed order tabGive option to view the full review if available |

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| **User Story:28** | **Tasks: 02** | **Priority: LOW** |
| AS A DELIVERY BOYI WANT TO VIEW THE REVENUE GENERATEDSO THAT I CAN GET THE VIEW OF MY INCOME |
| **BV: 100** | **CP: 05** |  |
| ACCEPTANCE CRITERIAShow the reports menu in the menu option on top right cornerShow the Revenue generated reportShow the from date and to date to select the revenue for the selected daysSubmit option to generate the reportOption to export in pdf or excel |

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| **User Story:29** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A RESTAURANT OWNERI WANT TO REGISTER IN SCRUM FOODSSO THAT I CAN USE THE APP AS RESTAURANT OWNER |
| **BV: 200** | **CP: 03** |  |
| ACCEPTANCE CRITERIARegistration screenText boxes for User Name, Password, Email, Mobile Number, Address, Nationality, License Number, PAN Card, Aadhar CardUpload option to upload the digital documents (Business Rule: Accepts only pdfs with maximum size of 100Mb only)Click on Register ButtonSend Successful notification to the user |

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| **User Story:30** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A RESTAURANT OWNERI WANT TO LOG IN SCRUM FOODSSO THAT I CAN PERFORM THE DUTIES AS RESTAURANT OWNER |
| **BV: 200** | **CP: 02** |  |
| ACCEPTANCE CRITERIALogin screen with text boxes to enter mobile number or email and password.Select button for otp login and text box to enter otp if selected and entered mobile numberClick on login buttonShow the home page once successfully logged in |

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| **User Story:31** | **Tasks: 02** | **Priority: LOW** |
| AS A RESTAURANT OWNERI WANT TO VIEW THE REVENUE GENERATEDSO THAT I CAN GET THE VIEW OF MY INCOME |
| **BV: 100** | **CP: 03** |  |
| ACCEPTANCE CRITERIAShow the reports menu in the menu option on top right cornerShow the Revenue generated reportShow the from date and to date to select the revenue for the selected daysSubmit option to generate the reportOption to export in pdf or excel |

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| **User Story: 32** | **Tasks: 03** | **Priority: HIGHEST** |
| AS A RESTAURANT OWNERI WANT TO VERIFY THE DELIVERY BOY WHEN HE COMES TO PICK UPSO THAT I CAN HAND OVER THE FOOD TO DELIVER |
| **BV: 300** | **CP: 05** |  |
| ACCEPTANCE CRITERIAShow the order number in the current orders and ask this to delivery boyCheck and verify the name and mobile number of delivery boy shown in that order Option to verify the ID card provided by the delivery boy during the registrationOnce verified and hand over the food, mark as out for delivery in the app |

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| **User Story: 33** | **Tasks: 03** | **Priority: HIGH** |
| AS A RESTAURANT OWNERI WANT TO PROVIDE THE TIME SLOTS FOR OPEN AND CLOSE HOURSSO THAT USER CAN ORDER FOOD  |
| **BV: 300** | **CP: 04** |  |
| ACCEPTANCE CRITERIAShow the Restaurant Options menu in the main menu on top right cornerShow the open and close hours marking option Show the drop-down fields to select open and close hours for each weekdays.Show the option to mark holidays, if marked holidays disable the option to enter timings. |

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| **User Story: 34** | **Tasks: 02** | **Priority: HIGHEST** |
| AS A RESTAURANT OWNERI WANT TO VIEW THE PAYMENT OPTION SELECTED BY CUSTOMER IN THE ORDERSO THAT I WILL GET THE DETAILS ABOUT THE PAYMENT |
| **BV: 300** | **CP: 02** |  |
| ACCEPTANCE CRITERIAShow the payment mode selected by the customer in the current orders tab for each order |

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| **User Story: 35** | **Tasks: 04** | **Priority: HIGHEST** |
| AS A RESTAURANT OWNERI WANT TO VIEW THE ORDERSSO THAT I WILL BE ABLE TO SELECT & ACCEPT THE ORDERS |
| **BV: 300** | **CP: 05** |  |
| ACCEPTANCE CRITERIAShow the 3 tabs as New Orders, Current Orders and Completed OrdersShow the accept options in the New Order tab for the incoming ordersThen it will move to current orders with status as order acceptedOnce the food is prepared owner will be able to select the cooked food option.Once the delivery came and verified and picked up, mark as out for deliveryOnce the delivery boy accepts the order and completed the delivery that order will move to completed order. |

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| **User Story: 36** | **Tasks: 02** | **Priority: HIGHEST** |
| AS A RESTAURANT OWNERI WANT TO LOG OUT FROM SCRUM FOODSSO THAT I CAN CLOSE THE APP |
| **BV: 50** | **CP: 02** |  |
| ACCEPTANCE CRITERIAMenu option in the top right corner of the appWhen selects show the account optionWhen selects show the logout optionWhen selects the logout, logout from the application |

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| **User Story: 37** | **Tasks: 02** | **Priority: HIGHEST** |
| AS A REG ADMINI WANT TO LOGIN SCRUM FOODSSO THAT I CAN DO THE WORKS |
| **BV: 200** | **CP: 02** |  |
| ACCEPTANCE CRITERIALogin screen with text boxes to enter mobile number or email and password.Select button for otp login and text box to enter otp if selected and entered mobile numberClick on login buttonShow the home page once successfully logged in |

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| **User Story: 38** | **Tasks: 03** | **Priority: HIGHEST** |
| AS AN ADMINI WANT TO APPROVE PRIVILEGES OF RESTAURANTSSO THAT I CAN PROVIDE THE NECESSARY ACCESS |
| **BV: 300** | **CP: 03** |  |
| ACCEPTANCE CRITERIAShow approve page in the authorize menuShow the option to select restaurants, delivery partners and other rolesOnce select an option, show the pending approvals below in the pending tabShow the approved requests in approved tabShow the from date and to date option to select the approvals in both tabsShow the option for approve or reject option against each request |

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| **User Story: 39** | **Tasks: 02** | **Priority: HIGHEST** |
| AS A BUSINESS OWNERI WANT TO VIEW THE REPORTSSO THAT I CAN VERIFY THE BUSINESS  |
| **BV: 200** | **CP: 02** |  |
| ACCEPTANCE CRITERIAReport menu option in the main menu Available reports to be shown in the report's menu once clickedShow the filters and corresponding reports when select any report |

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| **User Story: 40** | **Tasks: 02** | **Priority: HIGHEST** |
| AS A BUSINESS OWNERI WANT TO LOGIN THE SYSTEMSO THAT I CAN VIEW THE REPORTS |
| BV: 100 | CP: 02 |  |
| ACCEPTANCE CRITERIALogin screen with text boxes to enter mobile number or email and password.Select button for otp login and text box to enter otp if selected and entered mobile numberClick on login buttonShow the home page once successfully logged in |

**Question 3– What is epic? Write 2 epics – 5 Marks**

An Epic is a large user story that cannot be completed in single sprint and needs to be broken down into smaller and more manageable user stories to be developed by a developer in a sprint. It represents a significant piece of functionality or a high-level objective for the product.

**Epic 1: Customer Food Ordering and Tracking**

**Description**: Enable customers to browse restaurants, place orders, make payments, and track the status of their food deliveries in real time.

* **BV (Business Value)**: 500 (Highly valuable as it directly drives customer satisfaction and revenue.)
* **CP (Complexity Points)**: 40 (Moderately complex due to integration of multiple features like search, payment, and tracking.)

**User Stories Included**:

1. Registration/Login for customers (BV: 100, CP: 5)
2. Browse restaurants and menus (BV: 500, CP: 8)
3. Place an order (BV: 500, CP: 8)
4. Payment gateway integration (BV: 500, CP: 13)
5. Real-time tracking of orders (BV: 500, CP: 10)
6. Order cancellation (BV: 500, CP: 8)
7. Feedback and ratings (BV: 500, CP: 5)

**Epic 2: Delivery Personnel Management**

**Description**: Facilitate delivery personnel in managing their orders, updating statuses, and tracking earnings efficiently.

* **BV (Business Value)**: 500 (Critical for smooth operations but secondary to the customer-facing features.)
* **CP (Complexity Points)**: 20 (Less complex compared to customer-facing functionalities.)

**User Stories Included**:

1. Registration/Login for delivery personnel (BV: 100, CP: 5)
2. View and accept delivery orders (BV: 500, CP: 8)
3. Update delivery status (BV: 500, CP: 5)
4. View earnings and deliveries report (BV: 500, CP: 8)

**Question 4 –What is the difference between BV and CP – 2 Marks**

**Business Value:**

BV measures how important is a feature (user story) to the business. This is estimated by scrum currency notes with a denomination of 500, 100, 50, 20, 10. If stakeholders suggest different values, it will be discussed in a collaborative meeting and will reach consensus on BV.

**Complexity Points:**

CP is the Story Points and is the effort required for scrum developers to develop this feature (user story). It includes time taken to solve complexity and write the code. CP is estimated by using poker cards. Poker cards with values as 1,2,3,5,8,13,20,40,100 and BIG. Developers think in the way that if the entire project development will take 200 points, how many will be required for this user story. If stakeholders suggest different values, it will be discussed in a collaborative meeting and will reach consensus on CP.

**In short BV focuses on Business Impact and CP focusses on development efforts**

**Question 5 –Explain about Sprint– 5 Marks**

A **Sprint** is a time-boxed iteration in the Agile Scrum framework where a specific set of tasks and goals from the Product Backlog are completed to deliver an increment of the product. The Sprint is the backbone of Scrum, facilitating regular and iterative progress toward project goals.

**Sprint Details**

**Sprint Duration**: Typically, **2 weeks** (standard duration in Scrum Foods project).

Each Sprint delivers a potentially shippable product increment that adds value to the overall application.

**Sprint Value**: Enables focused and measurable progress with periodic reviews to adapt and improve.

**Scrum Details**

**Scrum Duration**: Typically, **1 day** (standard in Scrum Foods project).

A Scrum, or **Daily Standup Meeting**, is a brief (15 minutes) meeting held every day within the Sprint. It ensures team members stay aligned, identify impediments, and plan their next tasks.

**Scrum Value**: Enables to identify the impediments or blockers on every day of a sprint to help the scrum team to overcome and to progress in the development.

**Key Components**

1. **PBI (Product Backlog Item)**:

Items prioritized by the Product Owner from the Product Backlog to be included in the Sprint. These items are broken down into actionable tasks.

1. **Sprint Backlog**:

A subset of the Product Backlog containing only the items to be worked on during the current Sprint. The Sprint Backlog evolves as tasks move through their stages.

1. **Task**:

The smallest unit of work that can be done by a developer, typically completed within a day during a Scrum.

1. **WIP (Work In Progress)**:

Tasks currently being worked on by the team.

An example for the components using the current project is given below

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| **PBI** | **Tasks** | **WIP** | **Done** |
| Customer Registration | Design registration screen | A black background with a black square  Description automatically generated with medium confidence | A black background with a black square  Description automatically generated with medium confidence |
|  | Develop registration logic |  | A black background with a black square  Description automatically generated with medium confidence |
|  | Test registration feature |  | A black background with a black square  Description automatically generated with medium confidence |
| Customer Search Option | Design search box in the product display page | A black background with a black square  Description automatically generated with medium confidence |  |
|  | Develop the logic to search restaurant or dishes |  | A black background with a black square  Description automatically generated with medium confidence |
|  | Test the scenarios | A black background with a black square  Description automatically generated with medium confidence | A black background with a black square  Description automatically generated with medium confidence |

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

**Product Backlog:**

The Product Backlog is a prioritized list of everything that needs to be developed or improved in the product. It acts as the single source of requirements and is continuously refined throughout the project lifecycle. 40 user stories written in this document in the beginning are product backlogs

**Ownership**: Managed by the **Product Owner**.

**Contents**: Contains high-level features, enhancements, bug fixes, and technical improvements.

**Prioritization**: Items are prioritized based on business value and customer needs.

**Evolution**: Continuously updated and refined (a process called backlog grooming).

Example for Product backlog is given below for this project

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PBI ID** | **Description** | **Priority** | **Effort (Story Points)** | **Status** |
| 1 | User Registration Module | High | 8 | To Do |

**Sprint Backlog:**

The **Sprint Backlog** is a subset of the Product Backlog containing the items that the Scrum Team commits to completing during a specific Sprint. It is a detailed plan that includes tasks to be executed by developers.

**Ownership**: Managed collaboratively by the **Scrum Team**.

**Contents**: Selected PBIs broken into smaller, actionable **tasks**.

**Time Frame**: Valid only for the duration of the Sprint (e.g., 2 weeks).

**Status Updates**: Regularly updated during Daily Scrums.

Example for the sprint backlog based on the product backlog is given below

|  |  |  |
| --- | --- | --- |
| **PBI** | **Tasks** | **Status** |
| User Registration | Design registration screen | In Progress |
|  | Develop registration logic | To Do |
|  | Test registration feature | To Do |

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

An Impediments Log is a documented list of obstacles or issues that hinder the progress of the Scrum Team during a Sprint. It ensures transparency and provides a structured way to track and address challenges in a timely manner.

**Ownership:** The Scrum Master is responsible for maintaining and resolving items in the log.

**Purpose:** To ensure the team’s productivity remains uninterrupted by identifying and resolving impediments.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Impediment ID** | **Description** | **Priority** | **Assigned To** | **Status** | **Resolution Due Date** |
| IMP001 | Payment Gateway integration failure during testing | High | Payment Integration team | In Progress | 27/01/2025 |
| IMP002 | Developer environment setup delays. | Medium | DevOps Engineer | Resolved | 27/01/2025 |

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

Velocity is a metric in Agile that measures the amount of work a Scrum Team can complete during a Sprint. It is calculated based on the sum of completed **story points** for all Product Backlog Items completed in a Sprint. Velocity is an essential metric for planning and forecasting in Agile projects. Let me know if you’d like to explore this further.

Velocity = Total Story Points of Completed PBIs in a Sprint. Velocity report of a sprint-1 which I created in Jira software is shown below. 9 SPs are completed in the first sprint

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

**Sprint Burndown Chart:**

Sprint burndown chart represents the work pending to be completed in a sprint. It visualizes the progress of the sprint. It is plotted for Complexity points allotted for a sprint against the sprint time. When the time progress, CP will be reduced when the scrum team completes the work. It will provide the pending CP to be completed in the sprint at any point during the sprint.

Below is a sprint burn down chart for sprint-2 of this project. I have created the issues in Jira software in 2 sprints. 9 Story points are completed in first sprint which are customer specific and 19 are moved to sprint-2. This is the burn down chart from Jira.



**Product Burndown Chart:**

Product burn down chart is a higher version of Sprint burn down chart. Here also, plot will give the works pending to be completed but in a product level. It visualizes the progress of the product development. It is plotted for the total complexity points of a product against the time, time is the number of sprints to complete the project.

A sample product burndown chart is shown below for a product. Assume that there are 450 CPs required to complete this project in 8 sprints. Line to be followed represents the ideal line to be followed when development progress through sprints. Works to be completed at least this pace. Actual line may vary depends up on the completion of work.



**Question 10 – Explain about Product Grooming– 2 Marks**

Product Grooming, also known as Backlog Refinement, is the process of reviewing and updating the Product Backlog to ensure it is well-organized, prioritized, and contains clear and actionable items. This activity is ongoing throughout the project and involves collaboration between the Product Owner, Scrum Team, and other stakeholders. Finding insights about product results in improvement and used for product grooming.

Key activities of Product grooming involve clarification, prioritization, estimation and splitting of large stories into smaller ones etc. Depends on the organization and scrum team, backlog refinement session will conduct weekly or biweekly basis.

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

Scrum master and Product Owner are members of a scrum team and both have distinct roles and responsibilities in an SDLC process.

**Product Owner:**

PO is responsible for

Product vision

Requirement questions

Considers stakeholder interests

Decides whether to accept, reject product increment, continue or discontinue the development and whether to ship the product or not

**Scrum Master:**

SM will facilitate the scrum process by

Resolving issues

Creating an environment for team self-organization

Capturing empirical data to adjust forecast

Scrum master won't have any management authority over scrum team.

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

**Sprint Planning Meeting:**

This happens at the beginning of each sprint and team decides on what they will be delivering in the sprint. All scrum team will gather and discuss about the product backlogs to be selected in the current sprint. Developers will be assigned with the backlogs, and it will be sprint backlog from then onwards.

**Daily Scrum Meeting:**

This happens each day where team will just answer 3 questions to assess the progress of the sprint

1) What did u do today?

2) what will u do tomorrow?

3) Are there any impediments that is slowing or stopping u?

Scrum master will help to solve the impediments by connecting with the respective spoke or by guiding the team towards solution.

**Sprint Review Meeting:**

This happens at the end of the sprint where team will demo the completed stories to product owner and get it cleared. Team will discuss on the uncompleted stories as well to find the reason for not completing it, to gather feedback for the completed parts and plan for the completion on upcoming sprints.

**Sprint Retrospective Meeting:**

This happens at the end of the sprint where team will answer these 3 questions.

1) What went well in the sprint?

2) What did not go well?

3) What are the required areas of improvements in next sprint?

The output of this meeting will be applied in the upcoming sprints to improve the process.

**Product Grooming or Backlog refinement Meeting:**

The purpose of this meeting is to refine the stories created, prioritize, structure it properly by discussing with the team and will be added in the product backlog.

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

**Sprint Size**

Sprint size refers to the duration of a sprint in Scrum, typically ranging between 1 to 4 weeks. The ideal size depends on the project's complexity and team capabilities. Shorter sprints (1-2 weeks) are often preferred for rapid feedback, while longer sprints (3-4 weeks) may suit complex tasks requiring more development time. Sprint size of this project is 2 weeks

**Scrum Size**

Scrum size refers to the team size in Scrum, which is typically 5 to 11 members, including the Product Owner, Scrum Master, and Scrum Developers. A smaller size ensures effective collaboration, while a larger size may require breaking into multiple teams for better scalability. Scrum size of this project is 10.

**Question 14 – Explain DOR and DOD– 2 Marks**

**Definition of Ready (DOR)**

The Definition of Ready specifies the criteria a user story or task must meet before the Scrum team can work on it. It ensures clarity and preparedness before development starts.

Example Criteria for DOR:

* User story should follow the attributes- INVEST (Independent, negotiable, Valuable, Estimable, Small and Testable)
* User story is well-defined and understood by the team.
* Acceptance criteria are documented properly.
* Dependencies are identified and resolved.

**Definition of Done (DOD)**

The Definition of Done specifies the criteria a user story or task must meet to be considered complete. It ensures the delivered product meets quality standards and is ready for release.

Example Criteria for DoD:

* Code is written, reviewed, and tested.
* Documentation is updated.
* Product increment is integrated and deployable.

Both DOR and DOD ensure clarity, quality, and alignment in Agile workflows.

**Question 15 – Explain Prioritization Techniques and MVP– 3 Marks**

Prioritization a technique for queuing the requirements for the development process. There are different techniques used to prioritize the requirements. MoSCoW is a popular technique among them. Other techniques are 100 Dollars Test, Top 10 requirements, Ranking or Numerical Assignment etc.

**MoSCoW Method:**

It classifies the features or tasks into 4 categories based on their importance.

M - Must have this requirement to meet the business needs, mandatory for the first release

S - Should have this requirement, if possible, but project success does not rely on it.

C - Could have this requirement if it does not affect anything else in the project.

W - Would like to have this requirement later, but it won't be delivered this time.

**MVP (Minimum Viable Product):**

An MVP refers to a version of a product with the minimum set of features required to solve a specific problem and provide value to users. It is developed quickly to test the core functionality, gather feedback, and validate the product idea with minimal effort and investment. The MVP focuses only on **Must-Have** features to ensure a functional product while allowing for iterative improvements.

**Question 16 – Difference between Business Analyst n Product Owner– 3 Marks**

Both Business Analyst and Product Owner are members of the scrum team. Role and responsibility of both people are complementary and critical in delivering successful projects. Difference between both through various perspectives are given below.

**Focus**:

1. **Business Analyst**: Works on understanding business needs, analyzing requirements, and bridging the gap between stakeholders and the development team.
2. **Product Owner**: Focuses on the product vision, prioritizing the product backlog, and ensuring the development team delivers value aligned with business goals. He will decide what needs to be in the product.

**Role in Agile**:

1. **Business Analyst**: Often supports the Product Owner by detailing requirements, creating documentation, and ensuring clarity in tasks.
2. **Product Owner**: Owns the product backlog, makes prioritization decisions, and is the voice of the customer.

**Decision-Making**:

1. **Business Analyst**: Advises on requirements and process improvements but usually doesn't make final product decisions.
2. **Product Owner**: Has authority to make decisions regarding features, scope, and priorities.

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

**Product Owner with 3 Years of Experience**

**Name**: [Name]

**Contact**: [Phone Number] | [Email Address] | [LinkedIn Profile]

**Professional Summary:**

Highly motivated Product Owner with 3 years of experience in driving product development using Agile methodologies. Skilled in managing product backlogs, prioritizing features, and collaborating with cross-functional teams to deliver value-driven solutions aligning with product vision and ensures customer needs are always achieved.

**Skills:**

* Agile Methodologies (Scrum, Kanban)
* Create and Manage Product Vision
* Product Backlog Management
* Requirement Gathering and Analysis
* User Story Writing and Prioritization
* Stakeholder Collaboration
* Roadmap Planning and Execution
* Jira, Confluence, Trello
* Excellent Communication and Leadership
* Strategy driven decision making.

**Professional Experience:**

1. **Product Owner**

**[Company Name] [Duration]**

* Collaborated with stakeholders to define and prioritize product features in alignment with business goals.
* Managed the product backlog, wrote user stories, and ensured acceptance criteria met quality standards.
* Conducted sprint planning, grooming, and retrospectives with development teams.
* Delivered a 15% increase in user engagement by implementing customer-centric features.
* Worked closely with UI/UX teams to enhance the user experience based on feedback and analytics.
1. **Junior Product Owner**

**[Company Name] [Duration]**

* Assisted in defining product goals and maintaining the product backlog.
* Coordinated with development teams to ensure timely delivery of features.
* Monitored KPIs and reported progress to stakeholders.
* Supported end-user testing and incorporated feedback for continuous improvement.

**Education:**

**Bachelor of Technology in Computer Science**

[University Name], [Year of Graduation]

**Certifications:**

* Certified Scrum Product Owner (CSPO)
* Agile Certified Practitioner (ACP)

**Achievements:**

* Successfully launched two major product releases, achieving a 20% increase in customer satisfaction.
* Reduced feature delivery time by 10% through efficient backlog prioritization and sprint planning.