COEPD – Traditional Development

Capstone Project2

**DINESH KULKARNI**

Agile-Scrum V2D2

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

***Answer***

**Agile Manifesto: -**It is foundation document that outlines the principles and values of agile software development.

**The manifesto emphasizes four key values**

1.Individuals and Interactions over processes and tools

2.Working software over comprehensive documentation

3.Customer collaboration over contract negotiation

4.Responding to a changeover following a plan

These values are supported by twelve principles that guide agile development practices, focusing on iterative development, continuous feedback, adaptive planning, and close collaboration between cross functional teams and stakeholders.

**Twelve principles of Agile software**

1.Customer satisfaction through early and continuous delivery

2.Welcome changing requirements even late in development

3.Deliver working software frequently

4.Business people and developers must work together daily throughout the project

5.Build projects around motivated individuals

6.Face to face conversation is the most effective communication

7.Working software is the primary measure of progress

8.Agile process promotes sustainable development

9.Continuios attention to technical excellence and good design enhances agility

10.Simplicity the art of maximizing the amount of work not done is essential

11.Self organizing team produce the best architectures and design

12.Regular reflection to become more effective

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

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

***Answer***

**User story: -**It is concise and simple description of a feature or functionality from the perspective of the user. It follows as a role-I want goal / Desire-so that reason / benefit.

User stories are use to capture the requirements for the software feature in a way that is understandable by both the business stakeholder and the development team.

**BV stands for Business value: -**It represents how important a user story or features to business or customer.

BV helps the team to prioritise the work that delivers the most value

BV 500 means high importance necessary to complete the order

BV 50 means low importance nice to have

**Currency note techniques** is a simple way to assign BV to user stories. We provide Rs 1000. Rs 500, Rs 100, Rs 50, Rs 20 and Rs 10 Denominations. These estimations are done by the Stakeholders (Clients). If different values are selected by the stakeholders, then discussions will happen, and they agree to one BV value to that user story.

**CP stands for complexity points: -**It indicated how difficulty user story to implement.

The effort, time, risk, technical skill, and complexity involve.

**CP is also known as Story Points (SP)**

CP is the effort required by the Scrum Developers to develop this feature (user story) using technology. Efforts include time taken to solve the complexity and write the code. CP is estimated by the Scrum Developers by using Poker cards. We provide pokers with values “?”, 1, 2, 3, 5, 8, 13, 20, 40, 100 and BIG. If the entire Project development takes 200 points, then this user story coding effort will be… how many points? … Thinking in this way, Scrum Developers will give CP to the User story.). If different values are selected by the Scrum Developers, then discussions will happen, and they agree to one CP value to that user story.

User Story No 1

|  |  |  |
| --- | --- | --- |
| User story no: -1 | Tasks: -2 | Priority: -High |
| AS A DELIVERY BOY I WANT TO REGISTERIN SCRUM FOODS SO THAT I CAN DELIVER ORDER | | |
| BV: -500 | | CP: -2 |
| Acceptance Criteria: -  1.Registration screen with fields for user name and password  2.Registartion screen with mobile number, name, address, and other fields  3.Submit button  4.Sucessfull notification | | |

User Story No 2

|  |  |  |
| --- | --- | --- |
| User story no: -2 | Tasks: -2 | Priority: -Highest |
| AS A RESTARUNT OWNER I WANT TO VIEW ORDERS SO THAT I CAN SEE ORDER LIST | | |
| BV: -500 | | CP: -5 |
| Acceptance Criteria: -  1.Order display in tabular form with order id, items, and time  2.It also display customer information | | |

User Story No 3

|  |  |  |
| --- | --- | --- |
| User story no: -3 | Tasks: -2 | Priority: -Highest |
| AS A CUSTOMER I WANT TO ADD ADDRESS SO THAT I CAN GET ORDER DELIVERED | | |
| BV: -500 | | CP: -3 |
| Acceptance Criteria: -  1.Address test box  2.Address area location is withing 5KM radius for restaurant (Business Rule) | | |

User Story No 4

|  |  |  |
| --- | --- | --- |
| User story no: -4 | Tasks: -2 | Priority: -High |
| AS A CUSTOMER I WANT TO SELECT PAYMENT MODE SO THAT I CAN MAKE PAYMENT | | |
| BV: -500 | | CP: -3 |
| Acceptance Criteria: -  1.Radio buttons for payment mode  2.Only one selection at a time  3.Payment button | | |

User Story No 5

|  |  |  |
| --- | --- | --- |
| User story no: -5 | Tasks: -2 | Priority: -High |
| AS AN ADMIN I WANT TO VIEW RESTARAUNTS SO THAT I CAN APPROVE REGISTRATION | | |
| BV: -500 | | CP: -1 |
| Acceptance Criteria: -  1.List of restaurants  2.Approval / Rejection button  3.Notification send | | |

User Story No 6

|  |  |  |
| --- | --- | --- |
| User story no: -6 | Tasks: -2 | Priority: -High |
| AS A CUSTOMER I WANT TO VIEW PRICE SO THAT I CAN ORDER FOOD | | |
| BV: -50 | | CP: -5 |
| Acceptance Criteria: -  1.Price shown next to each menu item | | |

User Story No 7

|  |  |  |
| --- | --- | --- |
| User story no: -7 | Tasks: -2 | Priority: -Highest |
| AS A CUSTOMER I WANT TO VIEW DELIVERY BOY CONTACT DETAILS SO THAT I CAN CALL | | |
| BV: -50 | | CP: -1 |
| Acceptance Criteria: -  1.Display delivery boy Name  2.Display delivery boy mobile number  3.Disply picture in tracking | | |

User Story No 8

|  |  |  |
| --- | --- | --- |
| User story no: -8 | Tasks: -2 | Priority: -Medium |
| AS A RESTARUANT OWER I WANT TO PROVIDE TIME SLOT SO THAT CUSTOMER KNOW TIME SLOT | | |
| BV: -100 | | CP: -2 |
| Acceptance Criteria: -  1.Add from and to time  2.Submit button  3.Sucess message | | |

User Story No 9

|  |  |  |
| --- | --- | --- |
| User story no: -9 | Tasks: -2 | Priority: -Low |
| AS A BUSINESS OWNER I WANT TO VIEW REVENUE REPORT SO THAT I CAN MONITOR PERFORMANCE | | |
| BV: -200 | | CP: -3 |
| Acceptance Criteria: -  1.Date filter  2.Region filter  3.Generate report  4.Download report | | |

User Story No 10

|  |  |  |
| --- | --- | --- |
| User story no: -10 | Tasks: -2 | Priority: -Low |
| AS A REGIONAL ADMIN I WANT TO MESSAGE RESTARUANTS SO THAT I CAN TRACK THEIR PERFORMANCE | | |
| BV: -200 | | CP: -3 |
| Acceptance Criteria: -  1.Select restaurant  2.Select from to date range  3.Generate report  4.Download report | | |

User Story No 11

|  |  |  |
| --- | --- | --- |
| User story no: -11 | Tasks: -2 | Priority: -Low |
| AS AN ADMIN I WANT TO SEE REGIONAL REVENUE REPORT SO THAT I CAN EVALUAT PERFORMANCE | | |
| BV: -100 | | CP: -3 |
| Acceptance Criteria: -  1.Region dropdown  2.Tabular performance data  3.Download option | | |

User Story No 12

|  |  |  |
| --- | --- | --- |
| User story no: -12 | Tasks: -2 | Priority: -Medium |
| AS A CUSTOMER I WANT TO CHAT WITH REGIONAL ADMIN SO THAT I CAN REQUEST REFUND | | |
| BV: -200 | | CP: -5 |
| Acceptance Criteria: -  1.Order ID auto population  2.Message box  3.Issue ID generation  4.Submit button  5.Success message | | |

User Story No 13

|  |  |  |
| --- | --- | --- |
| User story no: -13 | Tasks: -2 | Priority: -High |
| AS A CUSTOMER I WANT TO SEARCH FOR RESTARUANT SO THAT I CAN FIND DESIRED FOOD | | |
| BV: -300 | | CP: -3 |
| Acceptance Criteria: -  1.Search bar  2.Location based filtering  3.Real time result update | | |

User Story No 14

|  |  |  |
| --- | --- | --- |
| User story no: -14 | Tasks: -2 | Priority: -Highest |
| AS A CUSTOMER I WANT TO SAVE MULTIPLE ADDRESSESS SO THAT I CAN CHOOSE WHERE TO DELIVER | | |
| BV: -200 | | CP: -2 |
| Acceptance Criteria: -  1.Add, edit, delete address  2.Select address during order | | |

User Story No 15

|  |  |  |
| --- | --- | --- |
| User story no: -15 | Tasks: -2 | Priority: -Medium |
| AS A DELIVERY BOY I WANT TO UPDATE ORDER STATUS SO THAT CUSTOMER KNOWS PROCESS | | |
| BV: -300 | | CP: -2 |
| Acceptance Criteria: -  1.Status options like pick up, out for delivery, Delivered | | |

User Story No 16

|  |  |  |
| --- | --- | --- |
| User story no: -16 | Tasks: -2 | Priority: -High |
| AS A CUSTOMER I WANT TO SEE ESTIMATED DELIVERY TIME SO THAT I CAN PLAN ACCORDINGLY | | |
| BV: -250 | | CP: -1 |
| Acceptance Criteria: -  1.Show delivery estimate before check out | | |

User Story No 17

|  |  |  |
| --- | --- | --- |
| User story no: -17 | Tasks: -2 | Priority: -Highest |
| AS AN ADMIN I WANT TO BLOCK A USER ACCOUNT SO THAT I CAN HANDLE VIOLATION | | |
| BV: -100 | | CP: -3 |
| Acceptance Criteria: -  1.Block / Unblock option on admin dashboard  2.Confirmation message | | |

User Story No 18

|  |  |  |
| --- | --- | --- |
| User story no: -18 | Tasks: -2 | Priority: -Medium |
| AS A CUSTOMER I WANT TO APPLY PROMO CODE SO THAT I CAN AVAIL DISCOUNT | | |
| BV: -150 | | CP: -2 |
| Acceptance Criteria: -  1.Enter code  2.Validate code  3.Apply discount  4.Show adjusted price | | |

User Story No 19

|  |  |  |
| --- | --- | --- |
| User story no: -19 | Tasks: -2 | Priority: -High |
| AS A RESTARUANT OWNER I WANT TO UPDATE MENU ITEMS SO THAT I CAN MANAGE MY OFFERINGS | | |
| BV: -250 | | CP: -3 |
| Acceptance Criteria: -  1.Add/edit/delete items  2.Item prices  3.Item availability | | |

User Story No 20

|  |  |  |
| --- | --- | --- |
| User story no: -20 | Tasks: -2 | Priority: -High |
| AS A CUSTOMER I WANT TO SEE RESTARUNT RATINGS SO THAT I CAN CHOOSE QUALITY ITEMS | | |
| BV: -200 | | CP: -2 |
| Acceptance Criteria: -  1.Show star ratings  2.Review count on screen  3.Details of rating  4.All pages of ratings | | |

User Story No 21

|  |  |  |
| --- | --- | --- |
| User story no: -21 | Tasks: -2 | Priority: -Medium |
| AS A CUSTOMER I WANT TO RATE MY ORDER SO THAT I CAN SHARE MY EXPERIENCE | | |
| BV: -100 | | CP: -1 |
| Acceptance Criteria: -  1.Star ratings  2.Comment box  3.Submit button | | |

User Story No 22

|  |  |  |
| --- | --- | --- |
| User story no: -22 | Tasks: -2 | Priority: -Medium |
| AS A RESTARUNT OWNER I WANT TO VIEW CUSTOMER FEEDBACK SO THAT I CAN IMPROVE SERVICE | | |
| BV: -150 | | CP: -5 |
| Acceptance Criteria: -  1.Feedback listed with filters  2.Sorting with date  3.Sorting with positive / negative feedback | | |

User Story No 23

|  |  |  |
| --- | --- | --- |
| User story no: -23 | Tasks: -2 | Priority: -Low |
| AS A DELIVERY BOY I WANT TO SEE MY DELIVERY HISTORY SO THAT I CAN TRACK MY WORK | | |
| BV: -100 | | CP: -2 |
| Acceptance Criteria: -  1.Past orders date  2.Past addresses  3.Past amount for orders | | |

User Story No 24

|  |  |  |
| --- | --- | --- |
| User story no: -24 | Tasks: -2 | Priority: -Medium |
| AS A CUSTOMER I WANT REORDER PAST ITEMS SP THAT I CAN SAVE TIME | | |
| BV: -250 | | CP: -2 |
| Acceptance Criteria: -  1.Reorder button in past order | | |

User Story No 25

|  |  |  |
| --- | --- | --- |
| User story no: -25 | Tasks: -2 | Priority: -Medium |
| AS AN ADMIN I WANT TO VIEW SYSTEM LOGS SO THAT I CAN TRACK USAGES AND ERRORS | | |
| BV: -150 | | CP: -3 |
| Acceptance Criteria: -  1.Logs include timestamps  2.User actions  3.Errors | | |

User Story No 26

|  |  |  |
| --- | --- | --- |
| User story no: -26 | Tasks: -2 | Priority: -High |
| AS A RESTARUANT OWNER I WANT TO TEMPORARILY CLOSE MY RESTATRUANT LISTING SO THAT I CAN PAUSE ORDERS | | |
| BV: -100 | | CP: -2 |
| Acceptance Criteria: -  1.Toggle active / Inactive status | | |

User Story No 27

|  |  |  |
| --- | --- | --- |
| User story no: -27 | Tasks: -2 | Priority: -Low |
| AS A RIGIONAL ADMIN I WANT TO MANAGE REGIONAL DELIVERY BOYS SO THAT I CAN ASSIGN TASK | | |
| BV: -200 | | CP: -3 |
| Acceptance Criteria: -  1.Assugn delivery boys to restaurant  2.View schedules | | |

User Story No 28

|  |  |  |
| --- | --- | --- |
| User story no: -28 | Tasks: -2 | Priority: -Medium |
| AS A CUSTOMER I WANT TO FILTER RESTRUANTS BY CUISINESO THAT I CAN FIND MY PREFERENCE | | |
| BV: -150 | | CP: -2 |
| Acceptance Criteria: -  1.Filter option with cuisine categories | | |

User Story No 29

|  |  |  |
| --- | --- | --- |
| User story no: -29 | Tasks: -2 | Priority: -High |
| AS A CUSTOMER I WANT TO TRACK MY ORDER LIVE SO THAT I KNOW DELIVERY STATUS | | |
| BV: -300 | | CP: -3 |
| Acceptance Criteria: -  1.Real time map view  2.Status update | | |

User Story No 30

|  |  |  |
| --- | --- | --- |
| User story no: -30 | Tasks: -2 | Priority: -Highest |
| AS A CUSTOMER I WANT TO PAY USING WALLET SO THAT I CAN AVOID CASH HANDLING | | |
| BV: -150 | | CP: -3 |
| Acceptance Criteria: -  1.Wallet balance check  2.Recharge  3.Amount deducted and update on order | | |

User Story No 31

|  |  |  |
| --- | --- | --- |
| User story no: -31 | Tasks: -3 | Priority: -High |
| AS A CUSTOMER I WANT TO MARK FAVORITE RESTAURANTS SO THAT I CAN ACCESS THEM QUICKLY | | |
| BV: -100 | | CP: -2 |
| Acceptance Criteria: -  1.Favorite button on listings  2.Favorites section in profile | | |

User Story No 32

|  |  |  |
| --- | --- | --- |
| User story no: -32 | Tasks: -2 | Priority: -High |
| AS A DELIVERY BOY I WANT TO RAISE ISSUES SO THAT I CAN REPORT PROBLEMS | | |
| BV: -100 | | CP: -2 |
| Acceptance Criteria: -  1.Issue form  2.Order ID field  3.Description box  4.Submit button | | |

User Story No 33

|  |  |  |
| --- | --- | --- |
| User story no: -33 | Tasks: -3 | Priority: -Medium |
| AS AN ADMIN I WANT TO ASSIGN ROLES TO USERS SO THAT I CAN CONTROL ACCESS | | |
| BV: -150 | | CP: -2 |
| Acceptance Criteria: -  1.Role dropdown  2.Save button  3.Confirmation message | | |

User Story No 34

|  |  |  |
| --- | --- | --- |
| User story no: -34 | Tasks: -2 | Priority: -Medium |
| AS A CUSTOMER I WANT TO SEE FOOD CATEGORIES SO THAT I CAN BROWSE EASILY | | |
| BV: -100 | | CP: -2 |
| Acceptance Criteria: -  1.Categories like pizza, desert, burgers shown on home screen | | |

User Story No 35

|  |  |  |
| --- | --- | --- |
| User story no: -35 | Tasks: -2 | Priority: -Medium |
| AS A RESTAURANT OWNER I WANT TO SEE ORDER ANALYTICS SO THAT I CAN TRACK TRENDS | | |
| BV: -200 | | CP: -3 |
| Acceptance Criteria: -  1.Graphs of order count  2.Total income in peak time | | |

User Story No 36

|  |  |  |
| --- | --- | --- |
| User story no: -36 | Tasks: -2 | Priority: -High |
| AS A CUSTOMER I WANT TO SET DELIVERY INSTRUCTIONS SO THAT I GET FOOD NEEDED | | |
| BV: -100 | | CP: -1 |
| Acceptance Criteria: -  1.Text box for instructions in checkout | | |

User Story No 37

|  |  |  |
| --- | --- | --- |
| User story no: -37 | Tasks: -3 | Priority: -Highest |
| AS A CUSTOMER I WANT TO CANCEL MY ORDER SO THAT I CAN AVOID WRONG FOOD DELIVERY | | |
| BV: -150 | | CP: -2 |
| Acceptance Criteria: -  1.Cancel option before dispatch  2.Refund notice | | |

User Story No 38

|  |  |  |
| --- | --- | --- |
| User story no: -38 | Tasks: -3 | Priority: -Highest |
| AS AN ADMIN I WANT TO VIEW CUSTOMER COMPLAINTS SO THAT I CANADDRESS THEM PROMPTLY | | |
| BV: -150 | | CP: -2 |
| Acceptance Criteria: -  1.Complaint list  2.Status filter  3.Mark as resolved | | |

User Story No 39

|  |  |  |
| --- | --- | --- |
| User story no: -2 | Tasks: -3 | Priority: -Medium |
| AS A REGIONAL ADMIN I WANT TO VIEW MAPS OF DELIVERY ZONE SO THAT I CAN PLAN EFFECIENTLY | | |
| BV: -200 | | CP: -3 |
| Acceptance Criteria: -  1.Map view  2.Zone by colour  3.Edit boundaries | | |

User Story No 40

|  |  |  |
| --- | --- | --- |
| User story no: -40 | Tasks: -2 | Priority: -High |
| AS A CUSTOMER I WANT TO SCHEDULE AN ORDER IN ADVANCED SO THAT I CAN GET FOOD ON TIME | | |
| BV: -250 | | CP: -3 |
| Acceptance Criteria: -  1.Date picker at check out  2.Time picker at check out  3.Order queued accordingly | | |

User Story No 41

|  |  |  |
| --- | --- | --- |
| User story no: -41 | Tasks: -2 | Priority: -Highest |
| AS A CUSTOMER I CAN DELETE MY ACCOUNT | | |
| BV: -200 | | CP: -2 |
| Acceptance Criteria: -  1.Profile screen  2.Delete button  3.Remark for delete account | | |

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

Business Value and Complexity Points

***Answer***

**Epic: -**In Agile epic is large body of work that can be broken down into several smaller user stories. Epics are generally high-level requirements that captures broad objectives or features and are completed over multiple sprints.

A epic is a large user story or 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 product backlog.

**They help in**

1.Organizing related stories

2.Planning and prioritization

3.Aligning stakeholders on big picture goals

**Example epics from SCRUM FOODS**

EPIC: -1 Customer ordering experience

User story: -As a customer I want to browse the restaurants and place the order easily so that I can get my favourite food delivered quickly and conveniently

Description: -Enable customer to discover, customize, and place orders efficiently

Business Value BV: -2000

Complexity points CP: -25

User stories under this epic

User story 3: -Add address

User story 4: -Select Payment method

User story 6: -View price

User story 13: -Search for restaurants

User story 16: -See estimated delivery time

User story 24: -Reorder past items

User story 31: -Mark Favourite restaurant

User story 34: -View food category

User story 40: -Schedule an order advanced

EPIC: -2 Restaurant Management

User story: -As a restaurant owner I want to manage my menu, orders, and restaurant profile so that I can conveniently handle customer orders and keep my offerings up to date

Description: -Allow restaurant owners to manage their menu, orders, timings, and insights

Business Value BV: - 1800

Complexity Points CP: -23

User stories under this epic

User story 2: -Views order

User story 8: -Provide time slot

User story 19: -Update Menu items

User story 22: - View customer feedback

User story 26: -Temporarily close listings

User story 35: - See order analytics

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

***Answer***

**Business Value BV: -**It represents overall value that a user story or feature brings to the business or organization

**Techniques: -**MoSCow (Must have, should have, could have, Won’t have ), Currency note technique

**Complexity points / Customer priority CP: -**It represents the importance and urgency of a user story or feature from the perspective of the end user or customer

**Techniques: -**Planning poker

**Evaluate BV: -**

1.Assess the potential impact on revenue generation, cost saving, or other measurable business metrics for example user story that enables the upselling or introduces new revenue stream would have higher BV

2.Consider alignment of the user story with strategic objectives and long-term vision of the SCRUM FOODS application

3.Assign relative value or weight to each user story based on its potential business impact

**Evaluate CP: -**

1.Understand the needs, pain point, and expectation of end user of the SCRUM FOODS application

2.Consider user feedback, user research, and market demand to gauge the importance of the user story from the customer’s perspective

3.Assess the potential impact on enhancing the user experience, improving the convenience, or addressing critical user needs

4.ssign a relative priority or weight to each other story based on its significance to the customers

|  |  |  |
| --- | --- | --- |
| Aspects | Business Value BV | Complexity Points CP |
| Definition | Represents the benefit or value a feature brings to the business | Represents the effort or difficulty in implementing the feature |
| Perspective | Product Owner / Stakeholder | Development team |
| Unit | Value based, often symbolic | Abstract point scale |
| Technique | Currency note | Poker card |
| Purpose | Helps in prioritizing features based on impact | Helps in estimating the team’s effort and planning sprints |

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

***Answer***

**A sprint** is a time box iteration in scrum during which specific set of work usually user stories or backlog items is planned, developed, tested, and made potentially shippable or ready to deliver.

**Sprint duration: -**

1.Typically, last 1 to 4 weeks depending on teams’ preference

2.Most common 2 weeks short enough for quick feedback long enough to deliver value

**Key characteristics**

1.Time boxed: -It has fix duration that does not change once the sprint starts

2.Goal oriented: -Each sprint has a sprint goal a clear objective the teams commit to

3.Deliverable: -By the end of the sprint the team should deliver a potentially shippable product increment

**Stakeholders in sprint**

1.Product owner

2.Scrum master

3.project team (Developers, Testers)

**Occasionally**

1.Customer / End User

2.Business stakeholders

**Sprint workflow**

1.Sprint planning

1.Decide what to work on (from the product backlog)

2.Break work in to task

3.Define sprint goal

2.Daily scrum (Stand up)

1.A 15 min daily meeting to sync up

What did I do yesterday?

What will I do today?

Any blockers?

3.Development work

1.Team collaborates, builds, tests, and integrates the features

4.Sprint review

1.Demonstrat the completed work to stakeholders

2.Get feedback

5.Sprint retrospective

1.Reflect on what went well, what did not, and how to improve in the next sprint

**Sprint rules: -**

1.No change to sprint scope after it starts

2.Only development team can decide how much work to take in

**Goal of a sprint**

Deliver a working product increment that adds value and is ready for feedback, testing or even release

**Sprint duration 2 weeks: -**Each sprint in scrum foods lasts for 14 days during which a set of features from product backlog are designed, developed, tested and release

**Sprint value: -**At the end of each sprint scrum foods will deliver working product increment such as “Customer registration, restaurant listings, food ordering functionality”

**Scrum: -**1 day daily 15 minutes it is daily team meetings to inspect the progress.

**Scrum value: -**The value of each scrum is team alignment, and quick solutions to blockers

Frontend team updates the login screen progress and backend team plan integration today

**PBI Product backlog item: -**A PBI is user story or feature added to product backlog

Example: - As a customer I want to search for restaurant so that I can find my desired food

Task: -It is a unit of work required to complete the PBI done by one developer

Example: -

1.Design search UI

2.Implement search filter in frontend

3.Connect API to search functionality

WIP Work in progress: -work currently being developed or tested during the sprint

Example: -Delivery boy registration page is in progress

Sprint backlog: -It includes following

1.PBIs committed to this sprint

2.Their task

3.The current WIP items

4.What is done at any point of time

**Sprint Backlog**

|  |  |  |  |
| --- | --- | --- | --- |
| PBI | Task | WIP | Done |
| User registration | Design registration UI  Create backend API  Validated inputs  Store in DB | Backend API integration for delivery boy registration page | Customer registration UI design |
| Restaurant menu management | Create Add/ Edit /Update UI  Setup menu API  Connect to DB | UI for Add / edit in progress | DB schema created |
| Search for restaurant | Design search bar  Implement search API | Search API in development | Search UI design |
| Place order with payment | Add address module  Integrate payment gateway  Check out screen | Payment gateway integration | Address module completed |
| Live order tracking | Add location map  Show delivery boy status  Auto refresh status | Map integration with live tracking | Delivery status feature completed |
| Rate and review order | Rating stars UI  Submit feedback to DB  Show ratings on restaurant page | Rating logic implementation | UI and Db connection for feedback done |
| Promo code application | Create promo code input  Validate code  Adjust total amount | Promo validation is in progress | Promo input field and UI done |
| Delivery boy status update | Create status dropdown  Backend for updating status  Notify customer | Backend logic for order status update | Status dropdown for UI |

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

|  |  |  |
| --- | --- | --- |
| Aspect | Product Backlog | Sprint backlog |
| Definition | A prioritised list of all features, enhancements, bug fixes, and tasks for the product | A subset of product backlog selected for specific sprint |
| Scope | Covers the entire scrum foods project | Focuses only on item chooses for the current 2-week sprint |
| Ownership | Maintain by product owner | Manage by development team |
| Content example | User registration  Order tracking  Restaurant ratings | User registration API  Payment gateway integration  Promo code logic |
| Change frequency | Continuously evolving as new requirements come in | Frozen during the sprint as no scope change is allowed once sprint starts |
| Detail level | High level features and epics | Broken down in task day by day |
| Purpose | To provide road map for the products capabilities | To track and complete work committed for the current sprint |
| Team | Every one contributes to product backlog | Development team contribute to sprint backlog |
| Metrics | Release burndown metrics is used | Sprint burndown metrics is used |

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

***Answer***

**An impediments log** is a document list of obstacles, or issue that blocks the scrum team’s progress. These are typically raised during daily scrums and are address by scrum master.

**Purpose: -**To identify, track, and resolve blocker quickly ensuring the team can deliver sprints goals without delay.

It is an issue log or obstacle log is a document or tool use in Agile software development to track and manage obstacle, bottlenecks, or any factors that impede the progress of project or team.

**Example**

1.Third part payment gateway is down

2.Delivery tracking map is not loading due to missing geolocation permission in app

3.Delivery partner shortage in specific region

4.Technical issue causing intermittent order processing failures

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ID | Date Identified | Impediment description | Impact | Owner | Status |
| 1 | 14-04-2025 | Third part payment gateway is down | Blocks payment feature release | Scrum master | Open |
| 2 | 15-04-2025 | Delivery tracking map is not loading due to missing geolocation permission in app | Affects order tracking functionality | Scrum master | WIP |
| 3 | 15-04-2025 | Delivery partner shortage in specific region | Food delivery functionality is failed | Scrum master | Open |
| 4 | 16-04-2025 | Technical issue causing intermittent order processing failures | Order is not confirming | Scrum master | WIP |

It is not a bug

An impediment is anything that blocks or slow down the team’s progress during the sprint

1.Not always related to code

2.Can be technical, personal, or organisational

3.Raised during daily scrum

4.The scrum master or product owner is responsible for impeding activity

Where as bug is defect or error in the system that causes the system behave incorrectly

1.It is related to code or functionality

2.Bugs are typically added in product backlog and prioritized

3.Can be found during the testing or reported by user

4.Fix by development team

**Impendent report**

|  |  |
| --- | --- |
| Log Id | 1 |
| Description | Delivery partner shortage in specific region |
| Impact | Delays in order delivering and increased customer dissatisfaction |
| Priority | High due to impact on customer experience |
| Assign to | Operation team and HR team |
| Status | Open |
| Action Taken | The team is actively recruiting new delivery partners in the region and working for fast tacking onboarding process |
| Resolution | Efforts are ongoing for recruitment of delivery partners in that region |

**Sprint 1 Summary SCRUM FOODS**

Sprint duration

Start time: -11.00am

End Time: -13.00pm

Duration: -2 hr

Sprint planning meetings

Participants

1.Product owner

2.Scrum master

3.Scrum developers

Discussion points

1.Discuss sprint velocity and BV of selected user stories

2.Reviewed available resources and team capacity

3.Comunicated sprint goal, client expectations, and timelines

4.Confirmed that sprint duration is 2 week

Each user story was broken down into 2 individual development tasks totalling 20 tasks

Scrum count in sprint

Sprint is 2 weeks =10 working days -10 daily scrums-1 per day

Each scrum=15 mins

**Scrum 1 Day 1**

Start time 11.00am

End time 11.15am

Duration 15 min

Participants: -Scrum developer

1.What task did you work in this scrum

Ans:-I work on customer registration UI and validation logic

2.What task will you work on next scrum

Ans:-I will work on payment integration service and check out functionality

3.Any challenges/Impediments?

Ans: -Yes, Facing issue with third party payment gateway environment

**Scrum 2 Day 2**

Start time 11.00am

End time 11.15am

Duration 15 min

Participants: -Scrum developers DevA, DevB, DevC

1.What task did you work in this scrum

Ans: -work on registration, Restaurant view API, and payment integration

2.What task will you work on next scrum

Ans: -Testing the registration module and completing the restaurant API

3.Any challenges/Impediments?

Ans: -Yes, Delay in payment gate way response

**Scrum 3 Day 3**

Start time 11.00am

End time 11.15am

Duration 15 min

Participants: -Scrum developers DevA, DevB, DevC

1.What task did you work in this scrum

Ans: -Finalize registration testing, address filtering, and wallet features

2.What task will you work on next scrum

Ans: -Push registration module to be done, integrate wallet and address selection

3.Any challenges/Impediments?

Ans: -UI delay due to image assets not shared by design team

**Scrum 4 Day 4**

Start time 11.00am

End time 11.15am

Duration 15 min

Participants: -Scrum developers DevA, DevB, DevC

1.What task did you work in this scrum

Ans: -Tracking, chat, and analytics

2.What task will you work on next scrum

Ans: -Wrap up, Testing, and move items to done

3.Any challenges/Impediments?

Ans: -Minor data in consistency in analytics under review

**Sprint 1 closing activity**

From the done state of sprint backlog, we created product increment which is working version of Scrum foods application that includes 10 completes user stories (Minimum viable product MVP)

This increment can now demonstrate and delivered to client for feedback and validations

**Product increment MVP include**

1.User registration for delivery boys and restaurant owner

2.View order

3.Add delivery address

4.Payment mode selection

5.Admin approval for restaurants

6.View menu price

7.Contact delivery boys

8.Restaurant time slot management

9.Customer address management

10.Estimated delivery time display

**Sprint retrospective meeting**

Participants: -Only scrum developers

Challenges faced: -

1.Integration delay due to API issue

2.UI inconsistences across different devices

3.Missed daily updates from few teams’ members

Lesson learnt: -

1.Maintain close coordinate with third party API team

2.Assign UI reviver for daily feedback

3.Ensure every one attend daily scrum call meeting

This lesson will help to improve sprint planning and execution in the next sprint

**Sprint review meeting**

Participate: -Scrum developers, Product owner, Scrum master, client, third party reviewers

Discussion summary: -

Velocity: -

Total complexity points CP planned-20

Completed in sprints 10 user stories =20 CP (100% completion)

Sprint burn down chart: -Showed steady progress across all scrum no major delays

Product burn down chart: -

Total project CP 100

Remaining CP after sprint 1 80

Product insights

MVP looks functional and stable

Stake holder suggested live order tracking in next sprint

Improved restaurant search and filter option are needed

**Velocity: -**It is a measurement of the amount of work a scrum team can complete during a sprint

At the end of the sprint

Add the CP of all the completed product backlog items PBIs

Only Done items count towards the velocity

Sprint burn down chart is a graph that shows the how much works remains in a sprint day by day. It helps to visualise whether they are on track to complete all committed work by the end of sprint

X axis-Sprint days

Y axis-Remaining work

Product burn down chart: -It is visual tool to track the overall progress of the project towards completing all the work in product backlog

The product backlog chart shows

1.Total amount of work to be completed

2.Work completed after each sprint

3.Remaining work over time until the project is finished

X axis: - Time (Each sprint)

Y axis: -Remaining CP

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

Velocity – How many CP is covered in this sprint

***Answer***

**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 effort required to complete each user story and backlog items.

SCRUM master is usually calculated the velocity

**How it is calculated**

1.Story point estimation

2.Tracking completed work

3.Summing story point

4.Average velocity

Velocity is a measure of how much work a scrum team can complete in a single sprint usually expressed in terms of complexity points CP

For our case study Scrum foods

In sprint 1 10 user stories are selected

The total complexity points of these stories=20 CP

10 stories were completed and move to done status

**So, team velocity is 20 CP for sprint 1**

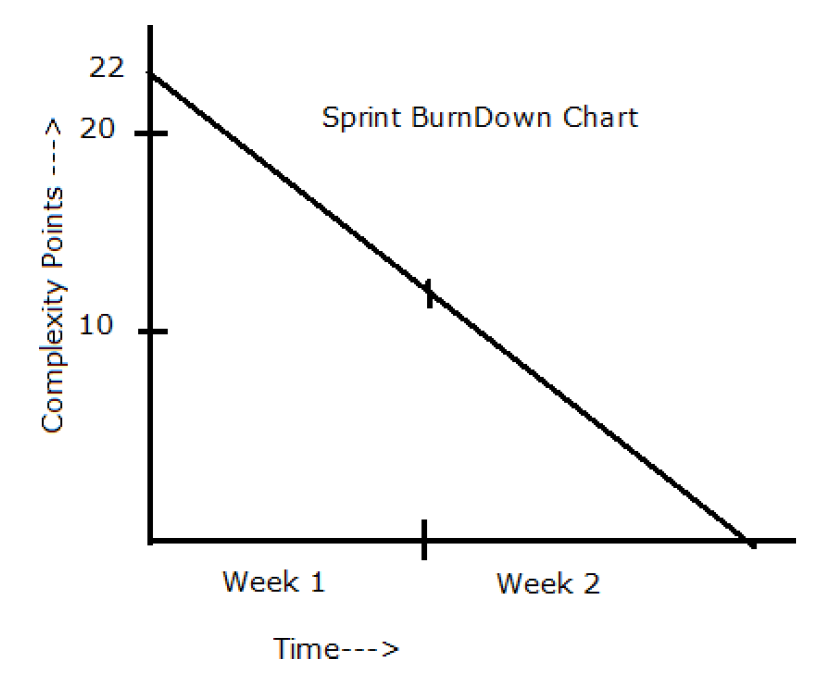
**Question 9** – Draw Sprint Burn Charts n Product Burn Down Charts– 3 Marks

Answer

**Sprint burn down chart** is a graph that shows the how much works remains in a sprint day by day. It helps to visualise whether they are on track to complete all committed work by the end of sprint

X axis-Sprint days

Y axis-Remaining work



**Product burn down chart: -**It is visual tool to track the overall progress of the project towards completing all the work in product backlog

The product backlog chart shows

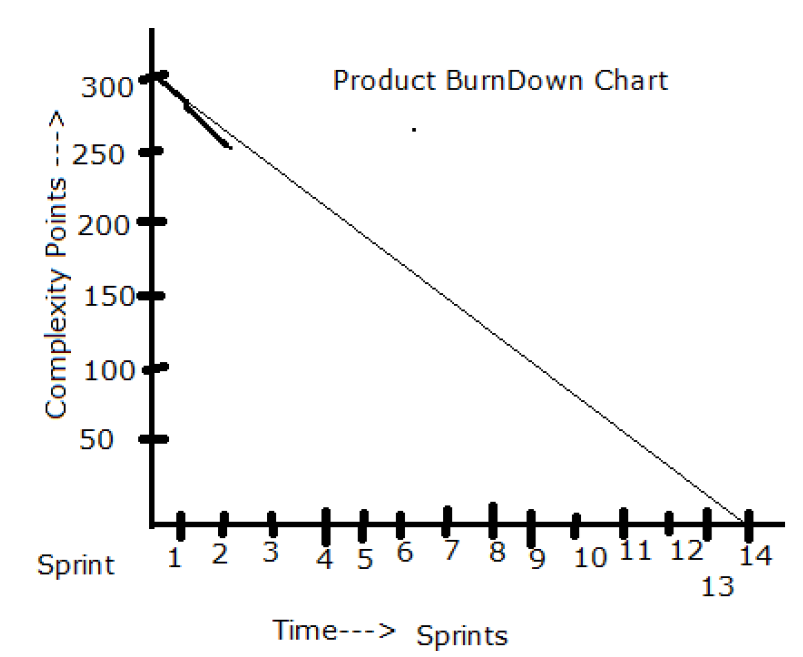
1.Total amount of work to be completed

2.Work completed after each sprint

3.Remaining work over time until the project is finished

X axis: - Time (Each sprint)

Y axis: -Remaining CP



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

***Answer***

Product grooming is also known as backlog grooming or refinement, it is an important activity in agile software development that involves reviewing, prioritizing, and refining items in product backlog

The goal of product grooming is to ensure that the backlog is well prepared, organized, and ready for implementation in upcoming sprint

It is typically a collaborative effort involving the product owner, development team, and other relevant stakeholders

**How it is conducted?**

1.Setting the context

2.Backlog review

3.Prioritization

4.Refinment and estimation

5.Dependency analysis

6.Acceptance criteria

7.Backlog grooming meeting

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

|  |  |  |
| --- | --- | --- |
| Role | Scrum Master | Product Owner |
| Primary Focus | Ensures the scrum process followed effectively | Maximize product value by managing the product backlog |
| Key responsibility | Facilitate scrum ceremonies and removes impediments | Defines and prioritizes user story and backlog items |
| Interaction with team | Acts as coach and servant leader to the scrum team | Acts as bridge between stakeholders and development team |
| Goal | Helps the team improve and work efficiently | Ensure the right product is built to meet customer needs |
| Reporting | Reports to top management about efficiency of team and quality of product | Reports to top management and client |

**SCRUM Master**

The scrum master is responsible for ensuring that the scrum process is understood and followed by the team. They act as facilitator, coach, and servant leader to the scrum team. The scrum master removes any obstacle or impediments that may hinders the team’s progress and ensure that scrum ceremonies like daily stand-up calls, sprint planning, sprint review, sprint retrospective are conducted effectively. They also work on improving the team efficiency and promoting a healthy agile mindset within the team.

**PRODUCT Owner**

The product owner is responsible for maximizing the value of the product developed by the scrum team. They manage the product backlog which involves creating, refining, prioritizing, and updating user stories based on business needs and stakeholder’s input. The product owner ensures that the development team works on the most valuable features first and that each user story has clear acceptance criteria. They act as the main point of contact between stakeholder and the development team ensuring alignment with the product vision and goals.

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

***Answer***

**1.Sprint planning meeting**

Purpose: -To plan the work for upcoming sprint

Participant: -Product owner, Scrum master, development team

Key activities: -

1.The product owner presents prioritized backlog items

2.The team select items they can commit to completing

3.The team defines the sprint goal and creates sprint backlog

Outcome: -A clear plan for what will be delivered and how it will be achieved

**2.Daily Scrum (Daily stand up)**

Purpose: -To synchronize the team’s work and plan for the next 24 hour

Duration: -15 min max

Participant: - Scrum master, development team

Key activities: - Each team member answer the below questions

1.What did I do yesterday?

2.What will I do today?

3.Are there any blockers?

**3.Sprint review meeting**

Purpose: -To review the work completed during the sprint and gather feedback

Participant: -Scrum team and stakeholder

Key activities: -

1.Demonstartion of completed features (working product)

2.Product owner confirms what is done

3.Stakeholder provides the feedback

Outcome: -Feedback may influence the product backlog for future sprint

**4.Sprint retrospective**

Purpose: -To reflect on sprint process and identify improvements

Participant: -Scrum team only

Key focus area

1.What went well?

2.What did not go well?

3.What can we improve?

Outcome: -Action items for improving team performance for future sprints

**5.Backlog refinement (Product grooming)**

Purpose: -To ensure the product backlog is updated, detailed and prioritize

Participant: -Product owner and development team

Key activities: -

1.Breaking down large item’s epics into user stories

2.Estimating stories

3.Adding acceptance criteria

**6.Release planning**

Purpose: -To discuss and plan the high-level scope, timelines and goals of the project or release

Participant: -Product owner, stakeholder, development team

This occurs at the start of the project or any major release

**7.Ad-hoc meeting**

This is schedule as needed to address specific topic such as resolving impediments, discussing technical challenges, and additional collaboration and sessions

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

**Answer**

**Sprint size: -**

1.Sprint size refers to the duration of the sprint in a scrum project

2.It is usually fixed and time boxed typically ranging from 1 to 4 weeks

3.Most commonly teams use 2-week sprint cycle

4.The same size is maintained throughout the project to ensure consistency and predictability

**Scrum size: -**

1.Scrum size refers to the size of the scrum team

2.According to the scrum guideline the ideal team size is 5 to 11 members

3.This includes

1 Product owner

1 Scrum master

3-9 Developers

4.A team of this size allows effective collaboration without becoming too large to manage

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

***Answer***

**DOR means Definition of Ready**

1.DOR means that a user story or back log item is ready to be picked up by development team in a sprint

2.It ensures that the item is well defined, understood, and actionable

3.Criteria may include

1.Clear descriptions and acceptance criteria

2.Estimated efforts

3.Dependencies identified

4.Tastable requirements

**DOD means Definition of Done**

1.DOD means that the user story is 100% complete and meets all the quality standards

2.It ensures the work is potentially shippable

3.Criteria may include

1.Code completed and review

2.Tested (Unit, Integration etc.)

3.Documentation updated

4.Accepted by product owner

In short

**DOR: -Ready to start work**

**DOD: -Work is complete and shippable**

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

**Answer**

Prioritization techniques help the product owner decide the order in which backlog items should be developed to deliver maximum value

**Common technique includes**

1.MoSCoW Technique

Must have

Should have

Could have

Won’t have (Now)

Helps to identify critical features and optional features

2.Kano model

Categorise the features into

1.Basic needs (expected)

2.Performance needs (Higher is better)

3.Delighter (Unexpected but exciting)

Helps balances user satisfaction

3.Value vs effort matrix

1.Compares the business value of a feature against the effort to develop

2.Items with high value and low effort are prioritize first

**MVP (Minimum viable product)**

1.MVP is the smallest version of the product that delivers core functionality and value to early user

2.It is developed quickly to

1.Tets the product idea

2.Get user feedback

3.Reduce risk and development cost

Helps in learning what users want before building the full product

In short prioritization technique guides what to build first and MVP focuses on building the minimum needed to launch and learn quickly

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

|  |  |  |
| --- | --- | --- |
| Aspects | Business Analyst BA | Product Owner PO |
| Primary Role | Gathers, Analyse, and documents business requirements | Owns the product and manages the product backlog |
| Focus area | Understanding the business needs and translating them into requirements | Maximizing product value and aligning development with business goal |
| Stakeholder interaction | Acts as liaison between business stakeholder and technical team | Directly communicate with stake holder and development team |
| Decision making power | Suggests requirements but does not own the final decision | Has the authority to prioritize and accept / reject backlog items |
| Ownership | Does not own the product or backlog | Owns the product vision and backlog |
| Deliverables | Requirement documents, user stories, process models and use cases | Prioritized backlog, product roadmap, Acceptance criteria |
| In Agile | Optional role in agile | Core role in agile and scrum |
| Authority | Limited decision-making authority | Has full authority over backlog prioritization, scope decision |

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

