The Agile methodology is a project management approach that involves breaking the project into phases and emphasizes continuous collaboration and improvement. Teams follow a cycle of planning, executing, and evaluating.

**2 ) Different ceremonies in Agile**

The four key ceremonies in Agile are:

* Sprint Planning
* Daily Standup (or Daily Scrum)
* Sprint Review
* Sprint Retrospective

**1. Sprint Planning**

This ceremony occurs at the beginning of each sprint,(which is typically a two-to-four-week time frame). The purpose of sprint planning is to define what can be delivered in the sprint and how that work will be achieved. The Product Owner presents the highest-priority items from the product backlog, and the team discusses and estimates the effort required to complete each item. The team then commits to completing a set of tasks, creating a sprint backlog.

**Sprint Planning** **Participants**: The Scrum Master, Product Owner, and the entire development team participate in this meeting.

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

This is a short, daily meeting (usually 15 minutes or less) that occurs at the same time and place each day. The purpose is to keep the team aligned and informed about progress, identify any obstacles or issues, and ensure that everyone is on track to meet the sprint goal. Each team member answers three questions: What did I accomplish yesterday? What will I do today? Are there any obstacles or blockers in my way?

## ****3. Sprint Review****

At the end of each sprint, the team holds a sprint review meeting to demonstrate the work that was completed. The Product Owner, stakeholders, and team members attend. The team presents the completed work, and stakeholders provide feedback.

**Duration**: Typically 1-2 hours for a two-week sprint, with longer sprints requiring more time.

## ****4. Sprint Retrospective****

This is a meeting held at the end of each sprint to reflect on the sprint process and identify opportunities for improvement. The team discusses what went well, what didn’t go well, and what actions can be taken to improve the next sprint. The goal is to continuously improve the team’s processes and performance.

**Duration**: Typically 1-2 hours for a two-week sprint, with longer sprints requiring more time.

**3. ) Estimation techniques in Agile**

1. **Dot Voting:** In Dot Voting Techniques all the user stories along with their description are posted on the board. Each member put a dot in front of those stories that they consider most important. This way the stories are sorted according to their priorities. This is done to select the most important stories that should be taken forward.
2. **T-Shirt Size:** This technique helps in open and mutual collaborative discussions. In this technique, t-shirt sizes -XS (Extra Small), S (Small), M (Medium), L (Large), and XL (Extra Large) are used. User stories are given t-shirt sizes according to the member’s understanding. This technique provides rough estimation very fast.
3. **Planning Poker:** Planning Poker is the most famous Estimation technique in Agile. This technique makes sure that every member participates in the estimation and shares his/her opinion. In this technique cards with numbers on them, are given to each member of the team. The Product Owner reads the story, after which every member has to hold the card showing the level of effort they will make for the user story. Discussion and Re-estimation go on until the whole team reaches a consensus.
4. **The Bucket System:** The Bucket System estimation technique is much faster than the Planning Poker technique. In this buckets are created with random values: 0, 1, 2, 3, 4, 5, 8, 13, 20, 30, 50. The whole team estimates the items by placing them in these “buckets”. In the Bucket System Divide and Conquer approach is followed.
5. **Large/Uncertain/Small:** This technique is for doing rough estimation and it is simpler than the Bucket system technique. All the items are categorized in Large/Uncertain/Small. First simple user stories are chosen for estimation then more complex ones are taken. It’s a good technique when comparable items are in the Product Backlog.
6. **Relative Estimation:**In this technique, teams estimate user stories according to one another rather than giving them exact numerical values. For instance, they can state, without assigning specific point values, that Story X is twice as complex as Story Y. This method prioritizes selection and ranking while simplifying estimation.
7. **Story Points:**In this estimation technique, user stories are given story points based on complexities, effort, and risk by teams. Story points are a metric without units and can stand in for any comparable value decided by the team. This method is adaptable and frequently used alongside Planning Poker.
8. **Estimation Based on Velocity:**This technique states the amount of work a team can accomplish in a sprint is measured by the team’s velocity. Teams calculate the amount of user story points that can commit to in the following sprint using their average velocity over several sprints.

**4.) Explain Scrum**

Scrum is an Agile framework that is used for developing, delivering, and sustaining complex products. It is mainly used for software development,

**5) What are different roles in scrum**

1. **Scrum Team**: Scrum team is a collection of individuals from the company (typically 6-10 people) who make sure to deliver the project requirements or increments.
2. **Product Owner**: The project owner represents the stakeholders and they are the ones responsible for prioritizing the backlog which ultimately leads to maximum value and team work.
3. **Scrum Master**: The scrum master is an important individual who serves as a guide and mentor to make sure their team understands the scrum framework and it’s values. the scrum master is highly involved dealing with day to day tasks with their team members.

**6) User Stories**

User Stories are short, simple descriptions of a feature or functionality from the perspective of a user. User stories are used to capture requirements in an agile project and help the development team understand the needs and expectations of the users.

**Forexample:**  
As the project manager of a construction team, I want our team-messaging app to include file sharing and information update so that my team can collaborate and communicate with each other in real-time as a result the construction project development and completion will be fast

**EPIC**

A [Jira Epic](https://atlassian.sjv.io/c/1359419/1541686/17715?subId1=jira-epic) is a task that can be broken down into several smaller user stories as per customers’ requirements. As a result, teams can accomplish bigger goals by breaking their work down into smaller pieces.

### **Task:**

Task is the smallest element of a project and can be completed in one working day. Task can be assigned to a team member and marked as completed when finished. Some other features of task are:

* Task is a part of sprint or scrum.
* If the task is bigger, it can also be split into sub-tasks.
* Tasks can be linked and can be locked by other tasks.

7.) **Product backlog** : Product backlog contains all the tasks that needed to be done in relation to a specific product.

**Sprint backlog** : A Sprint backlog is everything that needs to be completed for a specific sprint.

8) Spike and Zero Sprint in agile

Sprint Zero: It is introduced to perform some research before initiating the first sprint. Usually this sprint is used during the start of the project for activities like setting development environment, preparing product backlog and so on.

Spikes: Spikes are type of stories that are used for activities like research, exploration, design and even prototyping. In between sprints, you can take spikes for the work related to any technical or design issue. Spikes are of two types Technical Spikes and Functional Spikes

9) Sprint duration in your project

The duration of a Project Sprint can vary depending on the project and team preferences. Typically, a sprint lasts between one to four weeks

10 ) What is the Release cycle you follow

11) Average story points in a sprint

12. What are the different task you perform for a user story

When working with user stories in Agile development, there are several tasks that typically need to be performed to bring the user story from conception to completion. Here are some common tasks:

1. **Story Refinement**: This involves reviewing the user story with the team to clarify its requirements, acceptance criteria, and any potential dependencies or obstacles.
2. **Estimation**: Team members estimate the effort required to complete the user story, often using story points or another relative sizing method.
3. **Task Breakdown**: Breaking down the user story into smaller, actionable tasks that can be assigned to individual team members. These tasks should represent the specific actions needed to fulfill the user story.
4. **Design and Planning**: Planning the technical approach and design for implementing the user story. This may involve architectural decisions, interface design, or other technical considerations.
5. **Implementation**: Writing the code, creating assets, or performing any other necessary work to fulfill the requirements of the user story.
6. **Testing**: Writing and executing tests to ensure that the user story meets its acceptance criteria and functions as expected. This may include unit testing, integration testing, and user acceptance testing.
7. **Review**: Reviewing the completed work with the team to ensure that it meets the acceptance criteria and aligns with the overall goals of the project.
8. **Demo**: Demonstrating the completed user story to stakeholders or product owners to gather feedback and ensure that it meets their expectations.
9. **Documentation**: Updating documentation, such as user manuals or technical specifications, to reflect any changes or additions resulting from the completion of the user story.
10. **Deployment**: Deploying the completed user story to the appropriate environment, whether it's a staging environment for further testing or a production environment for end users.

13 ) What is Sprint Demo, when this is conducted

A Sprint Demo, also known as a Sprint Review, is an essential ceremony in Agile development methodologies like Scrum. It occurs at the end of each sprint and serves to showcase the work completed during that sprint to stakeholders, product owners, and other interested parties. The primary purpose of the Sprint Demo is to gather feedback and ensure that the product increment meets the stakeholders' expectations and aligns with the project's goals.

During the Sprint Demo:

1. **Showcasing Work**: The development team presents the completed user stories and features that were worked on during the sprint. This typically includes demonstrating the new functionality implemented and any improvements made to existing features.
2. **Feedback Gathering**: Stakeholders, product owners, and other attendees provide feedback on the demonstrated work. They may ask questions, provide suggestions, or raise concerns about the functionality or usability of the product.
3. **Acceptance**: The product owner assesses whether the completed work meets the acceptance criteria defined for each user story. They may accept the work as complete or identify any outstanding issues or changes needed.
4. **Prioritization**: Based on the feedback received during the Sprint Demo, stakeholders and the product owner may adjust priorities for upcoming sprints or reprioritize the product backlog.
5. **Transparency**: The Sprint Demo promotes transparency by providing visibility into the progress of the project and allowing stakeholders to see tangible results at the end of each sprint.

The Sprint Demo is typically conducted towards the end of the sprint, shortly before the Sprint Planning meeting for the next sprint. Its timing allows the team to incorporate feedback into future work and adjust priorities as needed. The Sprint Demo is an opportunity for collaboration and communication between the development team and stakeholders, fostering a shared understanding of the product and its direction.

14) Explain Sprint Retrospective

## ****Sprint Retrospective****

This is a meeting held at the end of each sprint to reflect on the sprint process and identify opportunities for improvement. The team discusses what went well, what didn’t go well, and what actions can be taken to improve the next sprint. The goal is to continuously improve the team’s processes and performance.

**Duration**: Typically 1-2 hours for a two-week sprint, with longer sprints requiring more time.

15) What is Sprint Grooming/ Backlog refinement

In agile development approaches, especially Scrum, backlog grooming, also called backlog refinement or backlog management, is a process where the product owner and development team work together to analyze and prioritize items in the product backlog. The work that has to be done on a project is represented by a dynamic list of features, upgrades, and user stories called the **product backlog**.

### The main objectives are:

* **Setting priorities**: Ascertain that the most significant and valuable items are positioned highest on the backlog.
* **Detailing:**Divide more complex features or user stories into more feasible, smaller assignments. This is helpful in the team’s understanding of the specifications and helps them calculate the amount of work needed for each item.
* **Estimation**: Give backlog items relative effort estimates (like Scrum story points).
* **Clarity:**Ascertain that the team understands and can express clearly the backlog items.
* **Adaptation**: Maintain a flexible and adaptive backlog. The backlog might need to be modified as the project develops or as new information becomes available to reflect shifting requirements or priorities.

**16)** **What is the purpose of conducting Daily stand up/Daily scrum meeting**

The purpose of conducting Daily Stand-Up or Daily Scrum meetings in Agile methodologies like Scrum is to enhance communication, coordination, and transparency within the team. These brief meetings typically last around 15 minutes and are held at the same time and place every day.

Here's a breakdown of their purposes:

1. **Information Sharing**: Team members share updates on what they accomplished yesterday, what they plan to do today, and any blockers they're facing. This keeps everyone informed about the progress and impediments.
2. **Coordination**: It helps in synchronizing the team's activities. By knowing what others are working on, team members can identify dependencies and potential conflicts early on.
3. **Problem Identification and Resolution**: If someone encounters an issue or a blocker, the Daily Stand-Up provides an opportunity to raise it, enabling the team to collectively brainstorm solutions or offer assistance.
4. **Accountability**: By publicly stating their commitments for the day, team members create a sense of accountability to each other.
5. **Alignment**: It ensures that everyone understands the overall project goals and how their work contributes to them. This alignment helps in maintaining focus and prioritizing tasks effectively.
6. **Iterative Improvement**: Daily Stand-Up meetings also provide a forum for continuous improvement. Team members can reflect on what worked well and what didn't in the previous day, allowing them to adapt and optimize their processes incrementally.

**17)** **How many team members were in your scrum team**

rum teams typically consist of 5 to 9 members, although there can be variations depending on the project's size and complexity. The idea is to keep the team small enough to maintain effective communication and collaboration while having enough diverse skills to handle the project's requirements.

18) What is spill Over

In the context of project management, "spill over" typically refers to tasks or work items that were not completed within the expected time frame or sprint duration.

19) Explain Test Closure Report

A Test Closure Report is a document prepared at the end of the testing phase of a project. Its purpose is to summarize the testing activities, results, and any relevant information gathered during the testing process. Here's an overview of what it typically includes:

1. **Introduction**: The report usually begins with an introduction that outlines the objectives and scope of the testing phase.
2. **Testing Summary**: This section provides a high-level summary of the testing activities performed, including the types of testing conducted (e.g., unit testing, integration testing, system testing, etc.), the resources involved, and the overall timeline.
3. **Test Results**: It includes a detailed breakdown of the test results, highlighting the number of test cases executed, passed, failed, and any defects found during testing. This section may also include metrics such as defect density, test coverage, and pass/fail rates.
4. **Defects**: A detailed list of all defects identified during testing, including their severity, priority, status, and resolution. This section may also include information on any unresolved defects and their impact on the project.
5. **Test Environment**: Details about the testing environment, including hardware, software, configurations, and any issues encountered related to the test environment setup.
6. **Testing Tools**: Information about the testing tools and technologies used during the testing phase, including their effectiveness, limitations, and any recommendations for improvement.
7. **Conclusion**: A concluding section that summarizes the key findings, lessons learned, and recommendations for future testing efforts. It may also include any remaining risks or concerns that need to be addressed.

20) Explain Sprint Burnt down and burn up

In Agile project management, particularly in Scrum, "Sprint Burn down" and "Sprint Burn up" are two visual tools used to track the progress of work during a sprint.

1. **Sprint Burn down**:
   * Sprint Burn down chart is a graphical representation that shows the amount of work remaining in a sprint over time.
   * The vertical axis represents the amount of work (often measured in story points or tasks) remaining to be completed, while the horizontal axis represents time (usually in days).
   * As the sprint progresses, team members update the chart daily to reflect the remaining work. Ideally, the chart should show a downward trend, indicating that work is being completed steadily throughout the sprint.
   * If the chart shows a flat line or an upward trend, it may indicate that the team is falling behind schedule or encountering unexpected obstacles.
2. **Sprint Burn up**:
   * Sprint Burn up chart, on the other hand, represents the cumulative work completed over time during a sprint.
   * Similar to the Sprint Burn down chart, it has the vertical axis representing work completed and the horizontal axis representing time.
   * The chart shows the total amount of work completed each day during the sprint. The ideal scenario is for the chart to show a steady upward trend, indicating progress towards completing the sprint goal.
   * The Sprint Burn up chart can also include a line representing the total planned work for the sprint. This line helps the team compare actual progress against the planned target.