1. **Explain SDLC at high level?**

SDLC: software development lifecycle mainly has 7 steps

1. **Feasibility study**

* In this phase decisions are made whether to buy or build software buy taking few parameters in to consideration like time, budget, resources etc.

1. **Requirement Analysis**

* Here Business analysts will build complete requirement specifications like business rules, security requirements, use cases, sample screen designs, sample reports
* Client or product owner can also check and approve this prior to the design work

1. **Design**

* Design has two types logical design and physical design
* Logical design includes the design of general hierarchy and how well the components will fit together etc.
* Physical design is a bit detail oriented which includes database, scheme, layout along with individual fields and tables in database .

The design part will be reviewed by various departments like

* Software development team
* Enterprise Architect
* Operations
* Customers

1. **Code**

* Here it is all taken over by the programmers, they try to build the code to meet the business requirements and will look to reuse the code to save time.
* Unit testing should start at this point
* Demo’s also begin at this phase.

1. **Testing**

* Ensures that the system works properly with different types of testing
* Unit Testing(Developer level)
* Integration Testing(component level)
* Load Testing(no.of users support)
* User acceptance testing(Actual users or clients will test)

1. **Deploy**

* Released into the production for the users to use.
* Complex systems are rolled out in phases
* Deployment should be done when there is limited usage on the system

1. **Operational/ Maintenance Phase**

* Support operations begin at this phase
* Helpdesk is used to address users problems and queries
* Software fixes are developed at this point
* Patching and maintenance updates begin.

1. **What is waterfall and why it is still relevant?**

* The Waterfall model is the earliest SDLC approach that was used for software development.
* The waterfall Model illustrates the software development process in a linear sequential flow. This means that any phase in the development process begins only if the previous phase is complete.
* It is also referred to as a linear-sequential life cycle model.

**It is still relevant because**

* Simple and easy to understand and use
* Works well for smaller projects where requirements are very well understood.
* Process and results are well documented.

1. What is agile and roles of scrum?

* Agile methodology is a practice that promotes **continuous iteration**  of development and testing throughout the software development lifecycle of the project
* Individual and team interactions over processes and tools
* Working software over comprehensive documentation

Roles of scrum are:

* **Scrum Master:**

Scrum Master is responsible for setting up the team, sprint meeting and removes obstacles to progress

* **Product owner:**

The Product Owner creates product backlog, prioritizes the backlog and is responsible for the delivery of the functionality at each iteration

* **Scrum Development Team:**

Team manages its own work and organizes the work to complete the sprint or cycle within the given time. This mainly include the works of the developers.

1. Who is Scrum Master?

* Scrum Master is responsible for setting up the team, sprint meeting and removes obstacles to progress
* Ensuring a good relationship between the team and product owner as well as others outside the team
* Addressing team dynamics

1. Differentiate product backlog and sprint backlog?

* **Product Backlog**

1. The product backlog is compiled of all the things that must be done to complete the whole project.
2. Product backlog break down all the list of series of things in to small steps for the development team to understand clearly.
3. Even though it is planned out, still there is flexibility with product backlog and milestones can be changed based on the requirement.

* **Sprint Backlog**

1. Sprint backlog is subset of product backlog
2. It contains only those items, that can be completed during each sprint.
3. Unlike the product backlog, though, the sprint backlog is unchanged during the period of the sprint.
4. What is an epic and story?

* **Epic:**

An epic is a large body of work that can be broken down into a number of smaller stories. Epics are almost always delivered over a set of sprints

* **Story:**

Stories are the breakdowns of epic in to smaller parts for the better understanding of the developer.

For example IF an epic is “X” then the stories are ‘X-1’,’X-2’,’X-3’.

1. What is velocity in scrum?

Velocity is a measure of the amount of work a Team can tackle during a single Sprint and is the key metric in Scrum. Velocity is calculated at the end of the Sprint by adding up the Points for all fully complete user stories

1. Explain scrum ceremonies?

* Organising the backlog:

Creating the stories based on the requirement of the customer or product owner and even product owner will be involved at this level.

* Sprint Planning:

It is the process of planning the sprint with the specific amount of time allocated for each story in the sprint so that we can have a estimated time when the sprint can be finished when the product owner asks for the estimation. Planit poker is an example for the sprint planning.

* Sprints

Sprints are the designed for specific amount time which has epic, stories and backlogs and the sprint will be running for few weeks and it is continous cycle and repeats every 3-4 weeks until the requirements are met for the product owner.

* Sprint Execution:

Sprint execution involves different types of testing of the product up to which the development is finished and product owner also get involved at this point of time.

* Daily stand up:

It includes the status of the sprint of the yesterday and what is to be done today and discussed about the blockages.

* Sprint Review:

In this sprint review all the pros and cons of the particular functionality will be discussed and will get detailed analysis about that. The changes will be addressed and figured out.

* Sprint Retrospective:

In the sprint retrospective the things that can be done in a better easy way will be discussed and product owner can also be involved in this phase to get a better result.

1. What is grooming ?

Grooming (or refinement) is a meeting of the Scrum team in which the product backlog items are discussed and the next sprint planning is prepared. Product grooming is critical in product management because it means keeping the backlog up to date and getting backlog items ready for upcoming sprints

1. How jira board is effective in scrum?
2. Bug tracking is done easily with help of jira
3. Highly customisable allows users to create any type of issue.
4. Works for different types of users like developers, project managers, managers and other not technical business persons.
5. Helps to maintain sprints and user stories clearly.

1. Differentiate between scrum and waterfall?

Scrum:

1. It includes stake holders and customers at each phase.
2. Reviewing regular sprints in development process saves time and money.
3. It works well difficult and complex projects.
4. It has no defined stages.

Waterfall:

1. Customer will be contacted only at the delivery date.
2. It may take extra time as reviewing is only done after the result.
3. It works well with smaller projects.
4. Waterfall has clear and defined stages to work on the project.
5. Explain the responsibilities of the product owner?
6. Defining the vision
7. Managing the product backlog
8. Prioritizing needs
9. Overseeing development stages
10. Anticipating client needs
11. Acting as the primary communicator
12. Evaluating product progress at each iteration.