**SOFT SKILL NOTES**

**What are the application software types?**

There are two types of application software. They are System Software and Application software.

System Software is Operation System like Windows, Ios, Android, Linux.

Application Software is a type of computer program that performs specific functions. There are four types of application software and they are Web Based Applications, Mobile Applications, Desktop Applications and Hybird Applications.

**What are the three layers of software?**

Front-End (User Interface UI), Database (DB) and Application Interface (API).

**Who works in the business department?**

Project Manager (PM), Project Owner (PO) and Business Analyst (BA).

**Can you give several examples of the functionalities in any software?**

Click, zoom in & out, select, scroll page, enter/type a value, upload/download a file, video & voice call

**Can you give several examples of the non-functionalities in any software?**

Response time, performance, security, accessiblity, installation

**What is the acronym of SDLC?**

SDLC means Software Development Life Cycle. There are 6 steps in the SDLC process. First is Requirement Gathering, second is Design, third is Development, fourth is Testing, fifth is Production, sixth is Maintenance step.

**What is the goal of each step?**

🡪 In Requirement Gathering step, the goals are

1. Business team collects the detail requirements.

2. Analyze the requirements & Plan how to develop the app.

3. Document all the funcrional and non-functional reqreuiments.

🡪 In Design step, the goal is:

Architectures and designers creates Design Documents, Design the application User Interface (UI).

🡪 In Development step, the goal is:

Developers build the software by writing code using the chosen programming language.

🡪 In Testing step, the goal is:

Perform software testings based on functional and non-functional requirements.

🡪 In Production step, the goal is:

Moving the develoeped software to the production environement so that the users can Access to the software.

🡪 In Maintenance step, the goals are:

1. Bug fix : There may be some bugs occurs in production that missed in testing step.

2. Project support with the help of developers, Dev-ops, engineers and business team.

3. Update and improve the software by adding new features.

**Who is responsible for each step?**

In Requirement Gathering step 🡪 PM, PO, BA, Client

In Design step 🡪 PM, PO, BA, Client, Designers, Developers

In Development step 🡪 Developers

In Testing step🡪 QAs, Performance Testers, Security Engineers, Client, End Users

In Production step 🡪 Everyone who is involved to develop the app

In Maintenance step 🡪 Support team

**What is the output of each step?**

In Requirement Gathering step 🡪 SRS Document

In Design step 🡪 SDS Document, Prototype Of The App

In Development step 🡪 Initial version of the project/software

In Testing step🡪 Bug Free Software

In Production step 🡪 End Users Use The App

In Maintenance step 🡪 Providing support

**How many environments do you have?**

1.Dev (development) Environment

2.QA / Test Environment

3.Staging / Pre-Production Environment

4.Production Environment

**What is software testing?**

Software testing is a process to assure the quality of a software. It is a verifying if the actual software matches the client’s expected requirements.

**What are the target objects to be tested in the software testing?**

Documents, Codes, Software’s functional and non-functional parts.

**Who performs testing in SDLC?**

Business team members, Designers, Developers, Testers, The Client / Stakeholders, End Users.

**How is software testing done? What are the testing procedures?**

There are two type of software testing. They are Manual testing and Automatic testing. Software Documents (SRS,SDS) are being tested manually. Software’s codes are being tested automatically. In the production environment, the software is being tested manually and automatically by qas, end users and clients.

**Why is software testing required?**

Helps in saving Money, Provides security, Increases the software quality, Satisfies the customer, Enhances the development process, Makes to add new features easier, determines the performance of the software.

**What are the testing types?**

There are two types of testing. Static Testing and Dynamic Testing.

**What is the Static Testing?**

Static Testing is testing the documents (SDS, SRS) of the software. It is a verification process. The business team and designers read and test various documents to prevent errors.

There are three ways in Static Testing. They are Review, Walk-through and Inspection.

**What is the Dynamic Testing?**

Dynamic Testing is testing the software’s codes and the software itself. It is a validation process. In Dynamic testing, the developers, testers and the client test the software by providing input and examining the output to find and fix the bugs.

There are three types of Dynamic Testing. They are White box testing, Black box testing and Gray box testing.

**What is White Box Testing? - Who performs? - In which Environment?**

White box testing is testing the software with a good knowledge of the software's internal code structure. It is performed by developers in Dev environment.

**What is Black Box Testing? - Who performs? - In which Environment?**

Black box testing is testing the software without any code knowlodge. It is performed by the manual testers in QA environment, the client and end users in staging environment.

**What is Gray Box Testing? - Who performs? - In which Environment?**

Gray box testing is testing the software with the partial code, tech knowledge. It is performed by Automation Engineers, QA/SDET, Performance Engineers in QA environment.

**What is the difference between system testing and integration testing?**

While developing a software or application product, it is tested at the final stage as a whole by combining all the product modules and this is called as System Testing. It is performed at the end of the development. This testing is classified into functional and non-functional requirements of the system.

Integration testing is the collection of the modules of the software, where the relationship and the interfaces between the different components are also tested. It is performed by developers in Dev environment.

**What is the role of QA in a project development?**

The Quality Assurance (QA) role is the role responsible for guaranteeing a level of quality for the end client, and to help the software development team to identify problems early in the process.

**What are the functional testing types?**

There are four types of the functional testing. They are Unit testing, Integration testing, System testing and User Acceptance testing (UAT).

Unit testing is the first level of testing. Developers test the software’s individual unit or module from theirs code perspective in Development environment. It is a part of White box testing.

Integration testing is the second level of testing. Developers test a group of related modules to check data transfer and connectivity between several units or modules in Development environment. It is a part of White box testing.

System testing is the third level of testing. The software is tested as a whole from the application perspective. Testers compare the actual results with the expected results. System testing divides into Functional and Non-Functional testing. It is performed by QA testers and performance testers in QA environment. It is a part of Gray box or Black box testing.

User Acceptance testing (UAT) is the fourth level of testing. UAT aims to evaluate whether the software is acceptable for release. UAT divides into Alpha and Beta testing. When UAT is carried out by an organization’s testers, it is known as Alpha testing. When UAT is done by the client and end users, it is known as Beta testing.

**What is Agile?**

Agile is an approach to project management that centers around incremental and iterative steps to completing projects. The incremental parts of a project are carried out in short-term development cycles. The approach prioritizes quick delivery, adapting to change, and collaboration.

**Why do we need Agile? Waterfall and Agile?**

In Agile, process is shorter and quicker than Waterfall. There are self-organized teams in Agile. There are more communication with the business and development teams. In Agile, all team members are working together daily, and it is open any changes. But Waterfall is not open to any changes. In Waterfall, customer’s requirements must be very clear.

**How do you describe a scrum team?**

Scrum is one of the Agile frameworks. Scrum encourages the team to work together, learn through experiences, self-organize while working on a problem, and reflect on their wins and losses to improve continuously. In the Scrum team, there is no overall team leader. Scrum team creates and adapts their ways of working.

**What is parking lot?**

A "Parking Lot" is the place for any discussions that stop the Team from answering the 3 main questions. Only interested people stay for the "Parking Lot" to discuss issues after the Daily Scrum.