Module:1

1. What is software? What is software engineering?

Software:Software is the programs and routin for a computer or the program material of and electronic devicewhich make it ran.

An examole of software is excel.

(1). Windows

(2). Operating system

(3). Ms-word

(4). Ms-excel

Software engineering:- Software engineering is a technique through which we can developed or created software for computer systems and any other electronic device.in other word software engineering is a process which user needs are analyzed and software is designed based on there need.in software engineering the development of software using well define scientific principal method and procedares.software engineer baild thesh software and application by using designing and programming language.

2. Explain tyeps of software.

Application Software:- This is the most common type of computer software, and can be defined as end-user programs that help you perform tasks or achieve a desired outcome. The end-user is the person who is actually using a product or program. (They are the one for whom the “end result” is designed.) Some examples of application software include internet browsers, a CRM tool like Hubspot, a photo-editing software like Adobe or Lightroom, or a word processing application like Microsoft Word. Application software is installed on a computer or mobile device based upon a user’s need. Because this is the most common type of software, there are many options available and users can choose the one that best fits their needs, budget, and expectations. (For example, anyone wanting to look on the internet could use Chrome, Safari, or even Firefox.)

System Software:- System software helps the user, the computer or mobile device, and an application all work together seamlessly. This makes system software crucial to running any kind of application software as well as the whole computer system.

Think about when your laptop or phone has an update. This is system software in action: there is a tweak made to the system software that helps your computer or phone continue to work well and keep applications running. Apple’s iOS is an example of system software, as is Microsoft Windows. System software is always running in the background of your device, but it is never something you will use directly. In fact, the only time most people remember it’s there is when it is time for an update.

3. What is SDLC? Explain each phase of SDLC

Sdlc standr for “software development life cycle “ model it described the sequence of phaser or steps to development ane software.in simple word entire life time of software from beginning to ending.

It contains three main stages:-(1)Conception stage

(2)Impelement stage

(3)Mainntence stage

The SDLC model is classibied into three categories based on there advantages and dis advantages:-(1)Waterfall model

(2)Prototype model

(3)Spiral model

PHASES OF SDLC

Planning Stage:- The planning stage (also called the feasibility stage) is exactly what it sounds like: the phase in which developers will plan for the upcoming project. By developing an effective outline for the upcoming development cycle, they'll theoretically catch problems before they affect development.

Development stage:- The development stage is the part where developers actually write code and build the application according to the earlier design documents and outlined specifications. Developers will follow any coding guidelines as defined by the organization and utilize different tools such as compilers, debuggers, and interpreters.

Implementation stage:- After testing, the overall design for the software will come together. Different modules or designs will be integrated into the primary source code through developer efforts, usually by leveraging training environments to detect further errors or defects. The

all the specifications for software, hardware, and network requirements for the system they plan to build. This will prevent them from overdrawing funding or resources when working at the same place as other development teams.

Design Stag:- The design stage is a necessary precursor to the main developer stage.

Developers will first outline the details for the overall application, alongside specific aspects, such as its:

* User interfaces
* System interfaces
* Network and network requirements
* Databases

They’ll typically turn the SRS document they created into a more logical structure that can later be implemented in a programming language. Operation, training, and maintenance plans will all be drawn up so that developers know what they need to do throughout every stage of the cycle moving forward.

Once complete, development managers will prepare a design document to be referenced throughout the next phases of the SDLC.

‍Analysis Stage:- The analysis stage includes gathering all the specific details required for a new system as well as determining the first ideas for prototypes.

Developers may:

* Define any prototype system requirements
* Evaluate alternatives to existing prototypes
* Perform research and analysis to determine the needs of end-users

Furthermore, developers will often create a software requirement specification or SRS document.

This includes all the specifications for software, hardware, and network requirements for the system they plan to build. This will prevent them from overdrawing funding or resources when working at the same place as other development teams.

Testing Stage:- Building software is not the end.

Now it must be tested to make sure that there aren’t any bugs and that the end-user experience will not negatively be affected at any point.

During the testing stage, developers will go over their software with a fine-tooth comb, noting any bugs or defects that need to be tracked, fixed, and later retested.

t’s important that the software overall ends up meeting the quality standards that were previously defined in the SRS document.

Depending on the skill of the developers, the complexity of the software, and the requirements for the end-user, testing can either be an extremely short phase or take a very long time. Take a look at our [top 10 best practices for software testing projects](https://clouddefense.ai/blog/10-best-practices-for-software-testing-projects) for more information.

4.What is DFD? Create a DFD diagram Flipkart

DFD:-A graphiycal tool,useful for communicating with user, and other personnel.Useful for analyzing existing as well as proposed systems.Foucus on the movement of data between external entities and processes and between processes and data store.A reatively simple technique to learn and use.

FLIPKART DIAGRAM

Login

Add Category

A

Admin

Add Item

### `

User

Manage Item

Manage Order

Change Password

Make Payment

registration

View Item

5. What is Flow chart? Create a flowchart to addition of two number.

Make Order

Flowchart is a symbolic or diagrammatic representation of an algorithm. It uses several geometrical figures to represent the operations, and arrows to show the direction of flow.

Sum=a+b

Stop

Print Sum

Inout a,b

6. what is Use case Diagram? Create A Use-Case on bill payment on paytm.

So what is a use case diagram? A [**UML**](https://en.wikipedia.org/wiki/Unified_Modeling_Language) use case diagram is the primary form of system/software requirements for a new software program underdeveloped. Use cases specify the expected behavior (what), and not the exact method of making it happen (how). Use cases once specified can be denoted both textual and visual representation (i.e. use case diagram). A key concept of use case modeling is that it helps us design a system from the end user's perspective. It is an effective technique for communicating system behavior in the user's terms by specifying all externally visible system behavior.

Payment server

Payment broker

vendor

customer