

MODULE: 1 (SDLC)

Q1: What is software? What is software engineering?

ANS Software is a set of programs (sequence of instructions) that allows the users to perform a well-defined function or some specified task.

=>Software engineering defined as process of analyzing user requirements & then designing, building, & testing software application which will satisfy their requirement.

Q2: Explain types of software.

ANS Types of software given below

Application software=> The most common type of software, application software is a computer software package that performs a specific function for a user, or in some cases, for another application. An application can be self-contained, or it can be a group of programs that run the application for the user. Example include office suites, graphics software, databases and database management programs, web browsers, word processors, software development tools, image editors and communication platforms.

System software=> These software programs are designed to run a computer's application programs and hardware. System software coordinates the activities and functions of the hardware and software. In addition, it controls the operations of the computer hardware and provides an environment or platform for all the other types of software to work in. The OS is the best example of system software; it manages all the other computer programs. Other examples of system software

include the firmware, computer language translators and system utilities.

Driver software=> Also known as device drivers, this software is often considered a type of system software. Device drivers control the devices and peripherals connected to a computer, enabling them to perform their specific tasks. Every device that is connected to a computer needs at least one device driver to function. Examples include software that comes with any nonstandard hardware, including special game controllers, as well as the software that enables standard hardware, such as USB storage devices, keyboards, headphones and printers.

Middleware=> The term middleware describes software that mediates between application and system software or between two different kinds of application software. For example, middleware enables Microsoft Windows to talk to Excel and Word. It is also used to send a remote work request from an application in a computer that has one kind of OS, to an application in a computer with a different OS. It also enables newer applications to work with legacy ones.

Programming software=> Computer programmers use programming software to write code. Programming software and programming tools enable developers to develop, write, test and debug other software programs. Examples of programming software include assemblers, compilers, debuggers and interpreters.

Q3. What is SDLC? Explain each phase of SDLC.

ANS The software development lifecycle (SDLC) is the cost-effective and time-efficient process that development teams use to design and build high-quality software.

=> Various phases of SDLC are given below

1) Requirement Gathering and Analysis

During this phase, all the relevant information is collected from the customer to develop a product as per their expectation. Any ambiguities must be resolved in this phase only.

2) Design

In this phase, the requirement gathered in the SRS document is used as an input and software architecture that is used for implementing system development is derived.

3) Implementation or Coding

Implementation/Coding starts once the developer gets the Design document. The Software design is translated into source code. All the components of the software are implemented in this phase.

4) Testing

Testing starts once the coding is complete and the modules are released for testing. In this phase, the developed software is tested thoroughly and any defects found are assigned to developers to get them fixed.

5) Deployment

Once the product is tested, it is deployed in the production environment or first User Acceptance testing is done depending on the customer expectation.

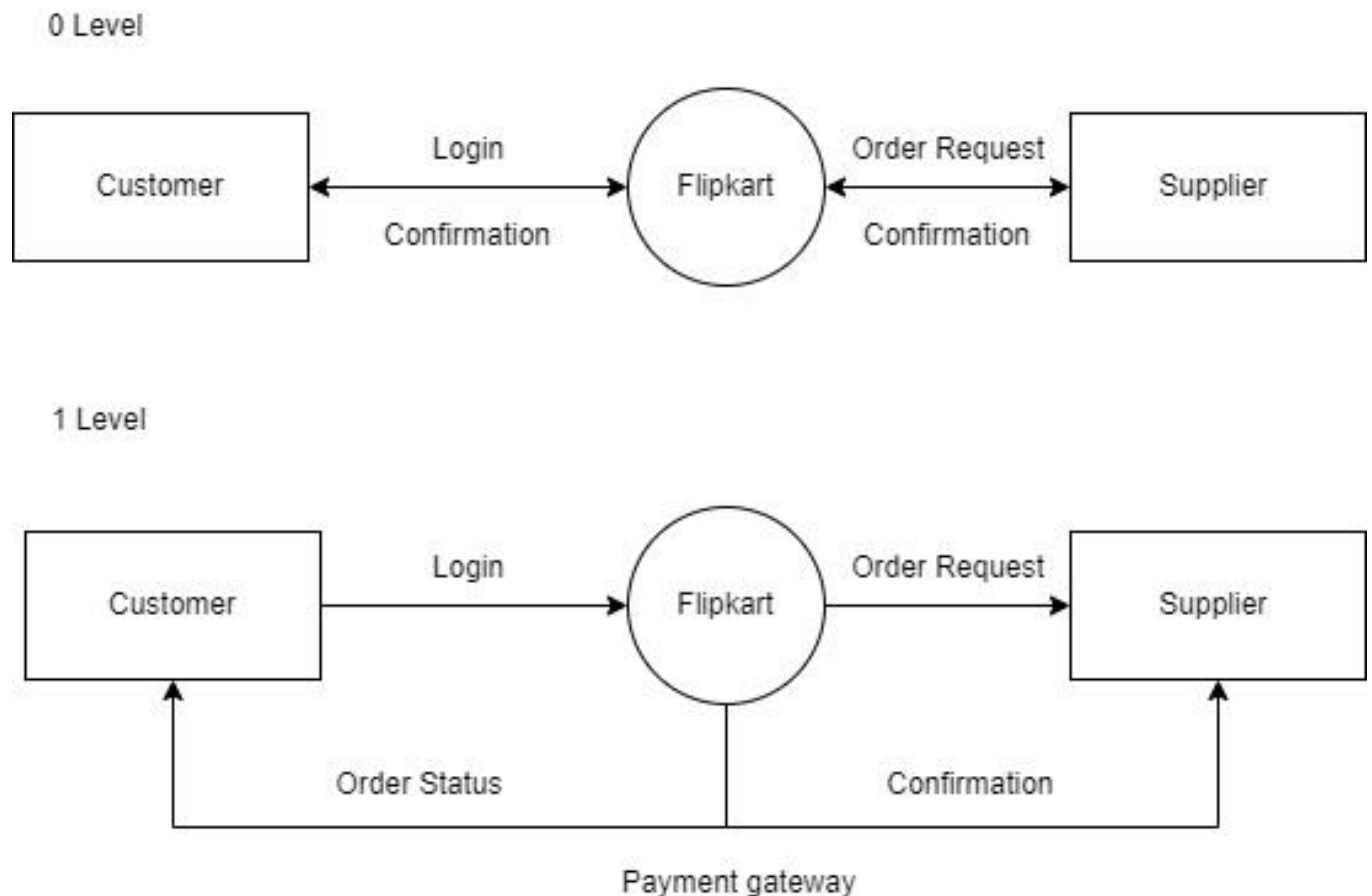
6) Maintenance

After the deployment of a product on the production environment, maintenance of the product. if any issue comes up and needs to be fixed or any enhancement is to be done is taken care by the developers.

Q4: What is DFD? Create a DFD diagram on Flipkart.

ANS A data flow diagram (DFD) maps out the flow of information for any process or system.

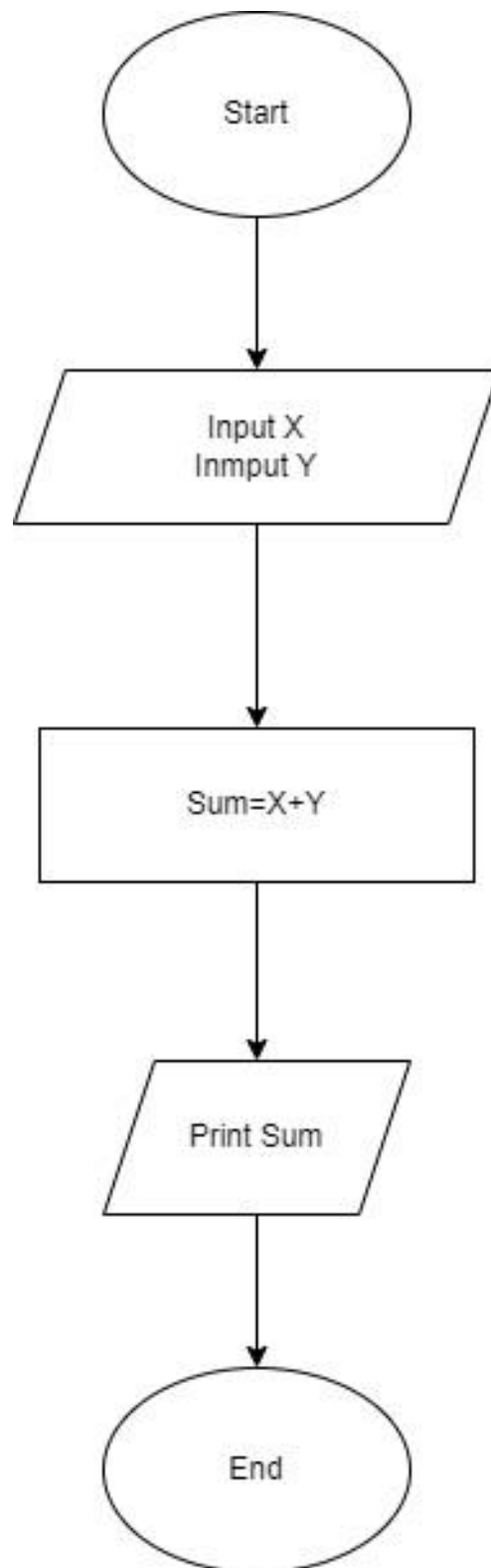
Example



Q5: What is Flow chart? Create a flowchart to make addition of two numbers.

ANS A flowchart is a diagram that depicts a process, system or computer algorithm.

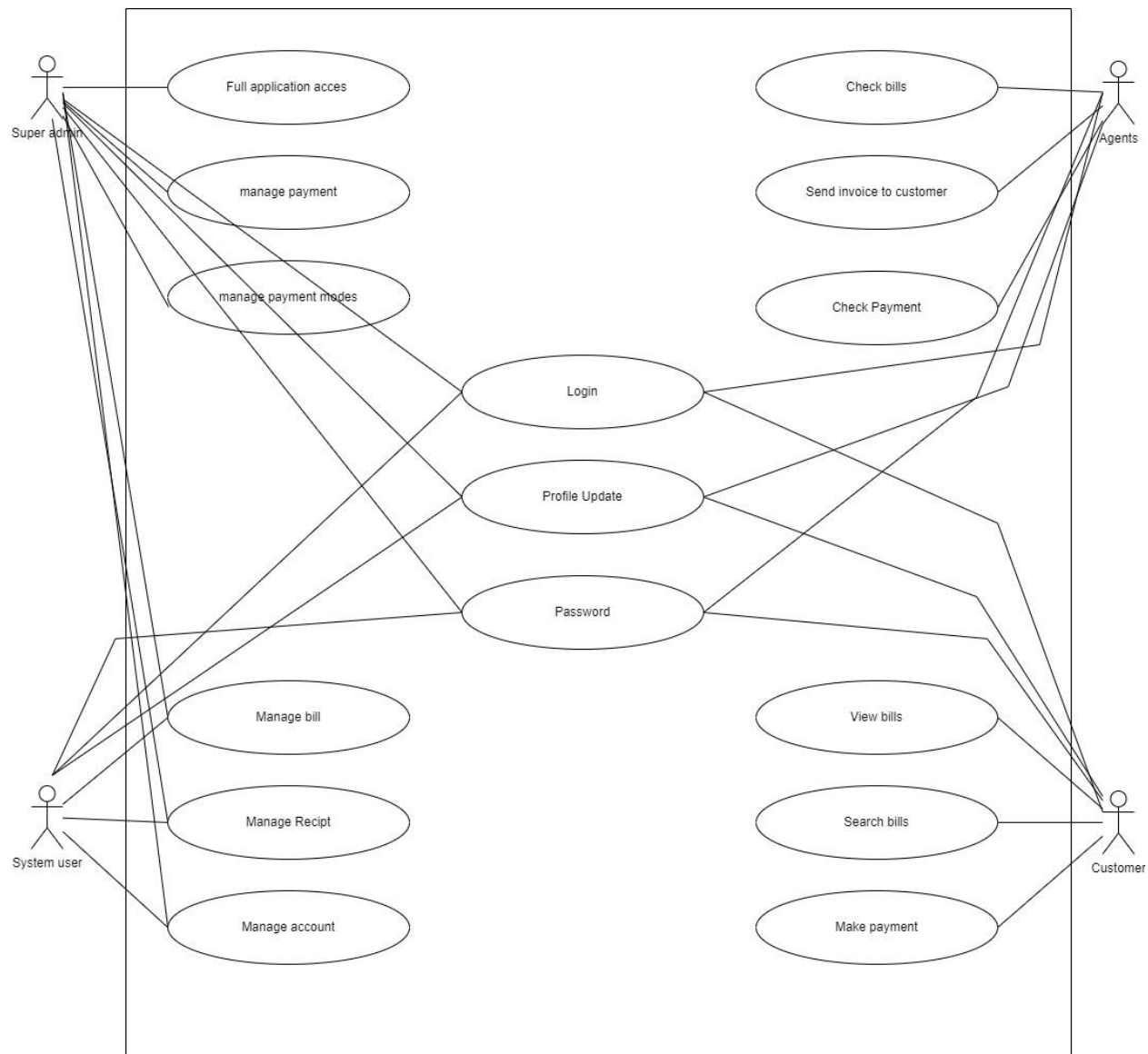
Example



Q6: What is Use case Diagram? Create a use-case on bill payment on paytm.

ANS A use case diagram is a graphical depiction of a user's possible interactions with a system. A use case diagram is used to represent the dynamic behavior of a system.

Example



Use case diagram of Bill Payment in Paytm

