1. What is software? What is software engineering?

Ans:

- Software:-

Software is a set of instructions or programs that instruct a computer to perform specific tasks, encompassing various applications like operating systems, utility programs, user applications, and video games, and is a crucial component of modern computing.

- Software engineering:-

Software engineering is a systematic, disciplined approach to designing, developing, testing, and maintaining software systems, utilizing engineering principles to produce high-quality, reliable, and efficient systems using various methodologies, tools, and practices.

Software engineering involves understanding and documenting software requirements, creating a blueprint, implementing it, testing it, and maintaining it throughout its lifecycle. It emphasizes collaboration, project management, and best practices to create high-quality software that meets user needs and is long-term maintainable. It involves updating, enhancing, and fixing issues throughout the software's lifecycle.

2. Explain types of software

Ans:

Types of Softwares are as below:

(1) Application software

(2) System software

(3) Driver software

(4) Middleware

(5) Programming software.

(1) 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.

- Examples of Modern Applications include office suites, graphics software, databases and database management programs, web browsers, word processors, software development tools, image editors and communication platforms.

Example:Microsoft Office, Paint, Powerpoint etc..

(2) 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.

- 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..

Example:Notepad ,Calculator etc..

(3) 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.

Example: Audio Driver,Video Driver etc..

(4) 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.

Example: database middleware,application server middleware

(5) 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.

Examples : Turbo c,Eclipse,Sublime etc..

3. What is SDLC? Explain each phase of SDLC

Ans:

The Software Development Life Cycle (SDLC) refers to a methodology with clearly defined processes for creating high-quality software. in detail, the SDLC methodology focuses on the following phases of

software development:

1. Requirement Gathering
2. Analysis
3. Designing
4. Implementation
5. Testing
6. Maintenance

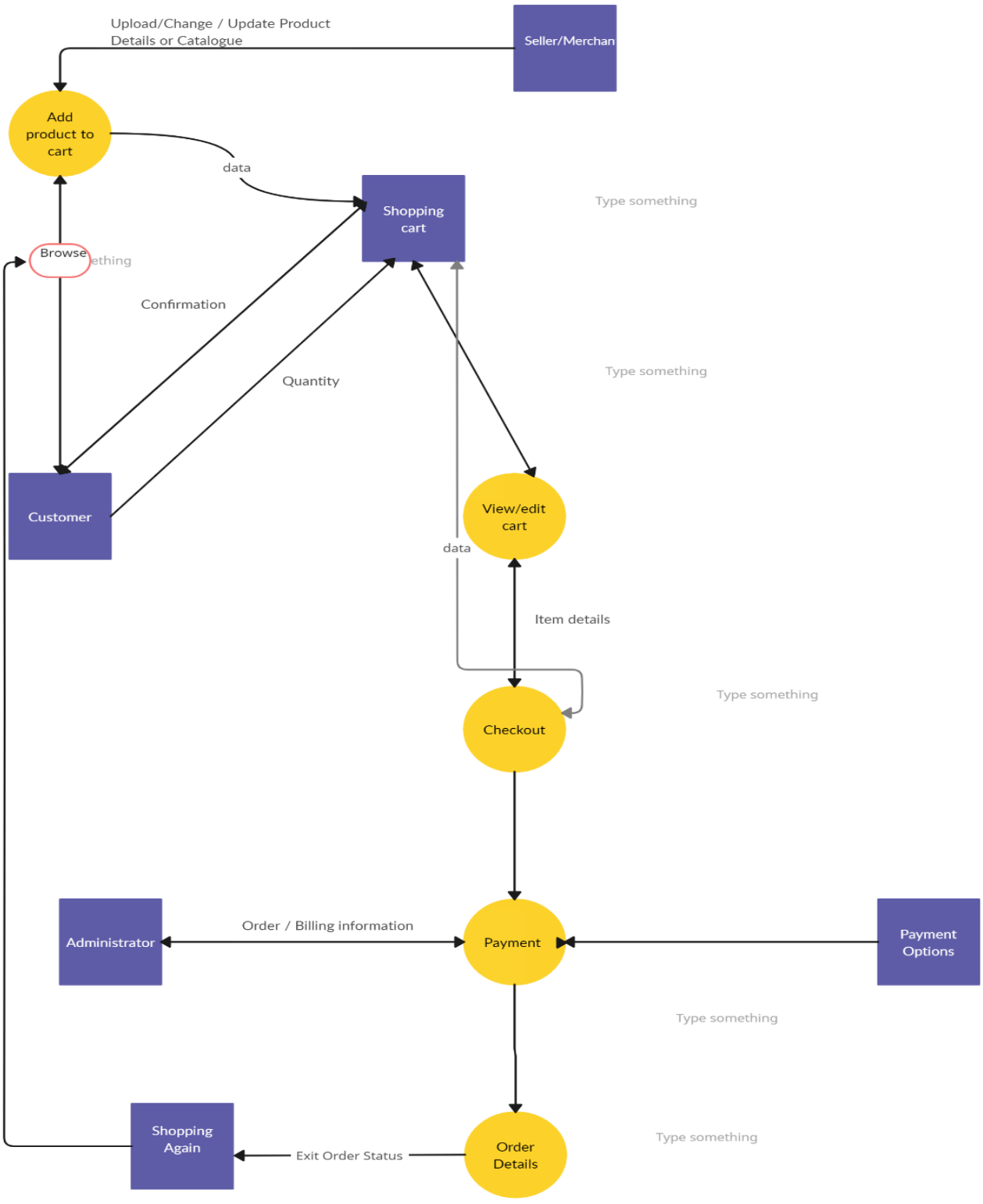
4. What is DFD? Create a DFD diagram on Flipkart

Ans:

A Data Flow Diagram (DFD) is a visual representation of data flow within a system, used in systems analysis and design to illustrate how data moves through various processes and stores.

Flipkart DFD is attached below:

Flipkart


Upload/Change / Update Product Details or Catalogue
Seller/Merchan
Add product to cart
data
Shopping cart
Type something
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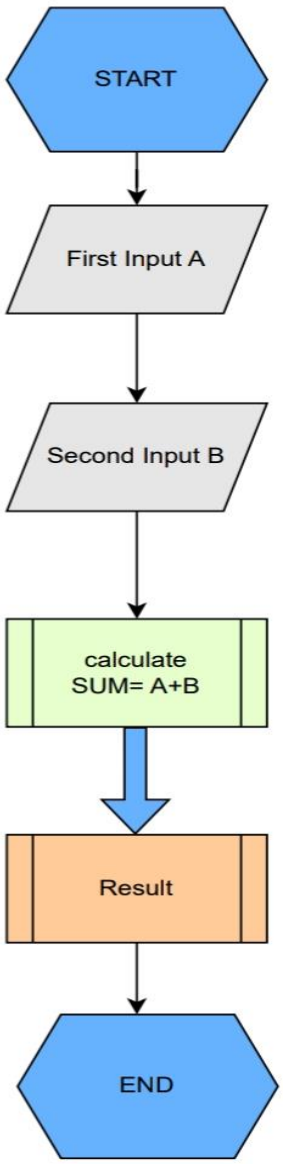
ething
Confirmation
Quantity
Type something
Customer
View/edit cart
data
Item details
Type something
Checkout
Administrator
Order / Billing information
Payment
Payment Options
Type something
Shopping Again
Exit Order Status
Order Details
Type something

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

Ans:

A flowchart is a graphic representation of an algorithm or process that uses different forms to stand for distinct activities or steps. A flowchart is a visual representation of a process, with shapes representing different steps and arrows indicating the flow, which can be created using software.

flowchart of addition of two numbers



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

Ans:

A use case diagram is a graphic that shows how various actors interact with a system. It shows the functionality that a system offers and the ways in which outside entities communicate with it.