SE-1

1.What is software? What is software engineering?

➔ Software is the non physical part of computer which cannot be seen and touched.It is used to operate computers and execute specific tasks.

➔ Software engineering is the branch of computer science that deals with the design,development,testing and maintenance of software applications.

2.Explain types of software

1. **Application Software:**Software that performs special functions which are more than basic operation of computer is known as Application software.
   eg: Microsoft suits,database management etc…
2. **System Software:**These software programs are designed to run a computer's application programs and hardware.
   eg:OS(Windows,Linux,Mac,Ubuntu…
3. **Utility Software:** This type of application software is used to support the computer infrastructure.As well as it is designed to analyze,optimize and maintains the system.
   eg:Antivirus,disk repair etc...
4. **Driver Software:**A driver is the software component that lets the operating system and device communicate.
   eg: Block drivers,Motherboard drivers,open source drivers…
5. **Middleware:**Middleware is software that lies between an operating system and the applications running on it.Using middleware allows users to perform such requests as submitting forms on a web browser.The best example of middleware is Web Server.
6. **Programming software:**A software which helps a developer to develop other software applications.Compilers,Assemblers, Interpreters are examples of Programming software.

3.What is SDLC? Explain each phase of SDLC

➔ The full name of SDLC is Software Development Cycle.It is a structured

process that is used to design,develop and test good quality software.

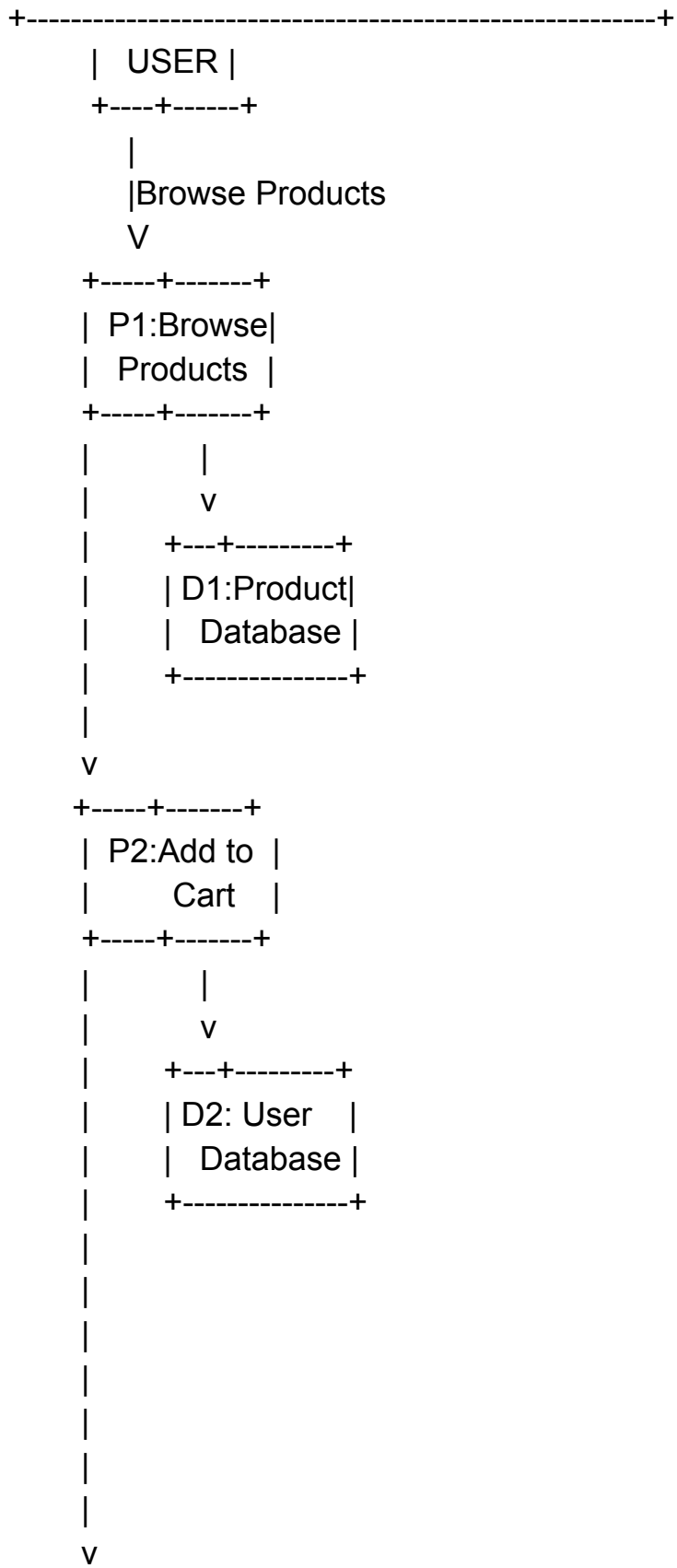
➔ It specifies the tasks to be performed at various stages by a software engineer or developer.There are 6 stages of SDLC.They are:

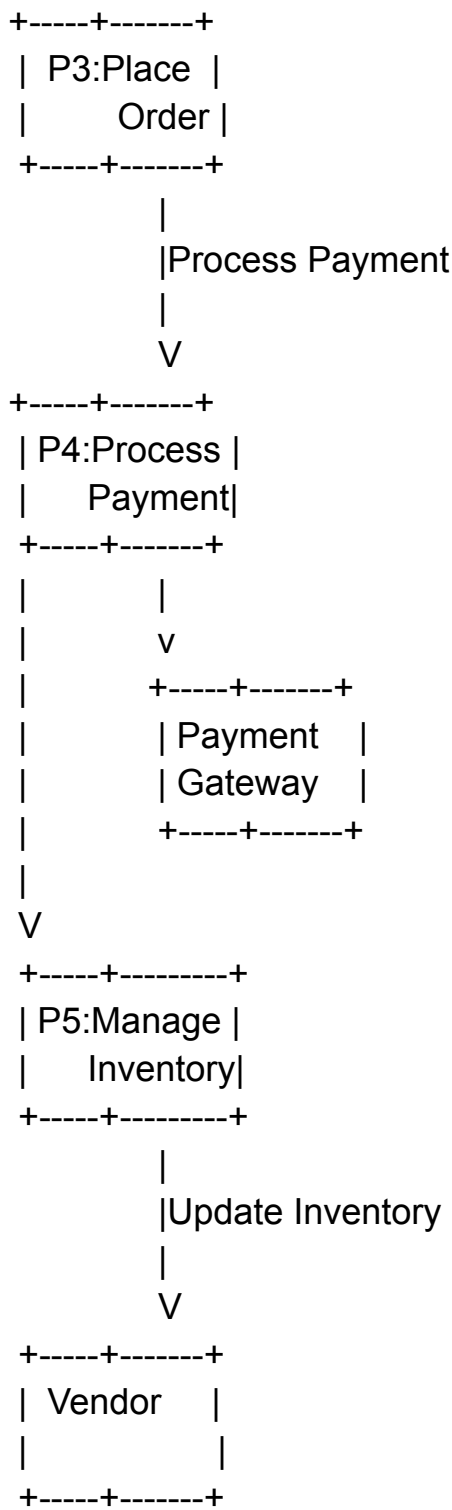
1. **Planning:**Planning is the very first step of any process.Without planning the cost and resources required for equipments or tools can not be purchased.
2. **Designing:**At this stage the software applications have various designs and outlook which are performed by graphic designers and developers.If there occurs failure then the whole process can be wasted because this is the crucial stage.
3. **Building:**In this phase,the development team codes the product.They will start from small coding tasks so that they can achieve the final result easily.
4. **Testing:**In this phase the development team combines automation and manual testing to check the software for bugs.Because without checking the customers can suffer and they also have bad impression about us.
5. **Deployment:**When teams develop software they will put same code on different software where the users have access to.It is used to check whether it can run on different environment or not.
6. **Maintenance:**This is the final stage of Software Development Life Cycle which fixes bugs,resolves customer issues,and manages software changes.

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

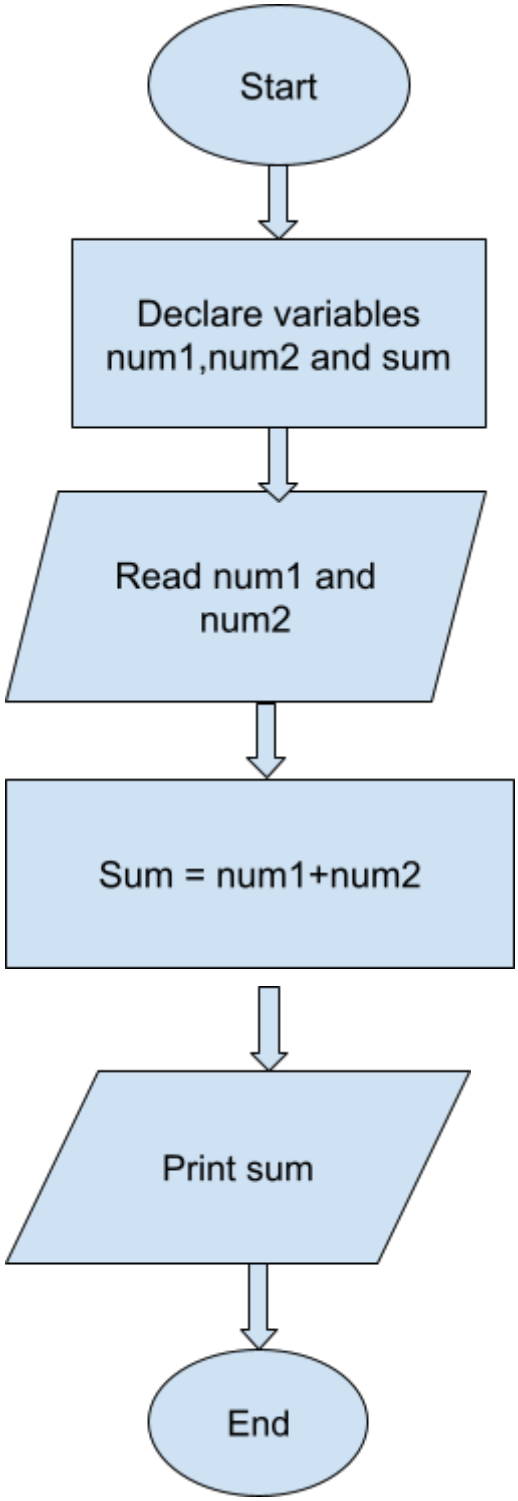
➔ DFD represents the flow of data within information systems.

Data Flow Diagrams provide a graphical representation of the data flow of a system that can be understand by both technical and non-technical users.


USER
Browse Products
P1:Browse Products
D1:Product Database
P2:Add to Cart
D2: User Database

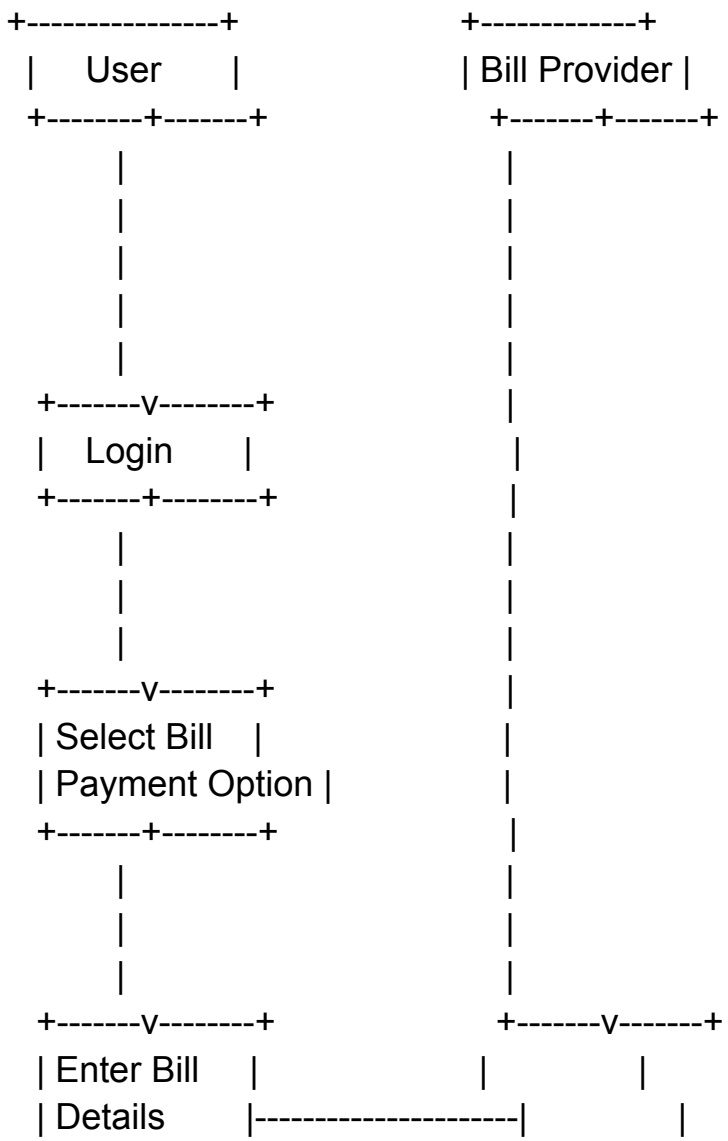

P3:Place Order
Process Payment
P4:Process Payment
Payment Gateway
P5:Manage Inventory
Update Inventory
Vendor

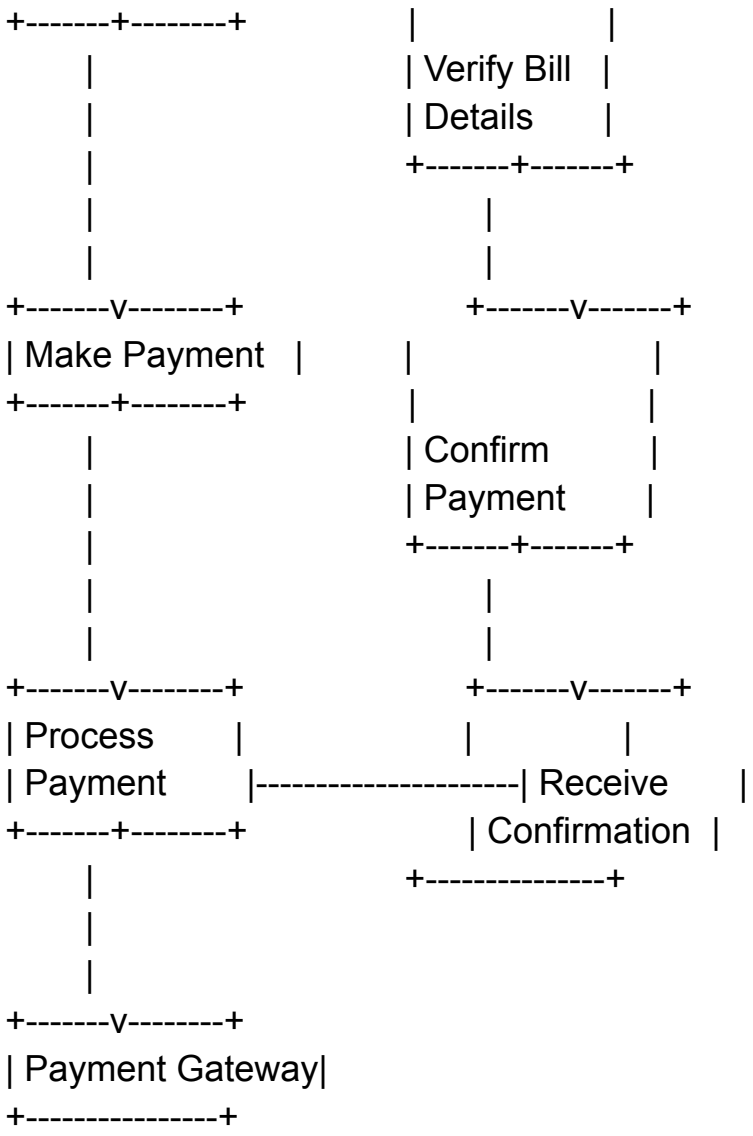
5.What is Flow chart? Create a flowchart to make addition of two numbers.



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

- ➔ A case diagram is a type of Unified Modelling Language(UML) diagram that represents the interaction between actors(users) and a system under consideration to accomplish specific goals.
- ➔ It provides a high level view of the system's functionality the various ways users can iteract with it.




Verify Bill Details
Make Payment
Confirm Payment
Process Payment
Receive Confirmation
Payment Gateway