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Software Engineering Assignment

Module:- 1

SE – Overview of IT Industry

1. What is software? What is software engineering?

Answer : Software is the set of instruction , data or program used to operate computer and execute the specific Tasks.

Software Engineering that deals with the design, development, testing and maintenance of software applications. Software Engineer apply principle and knownledge of programming languages to built Software.

2. Explain types of software.

Answer : Types of Software:-

- System Software
- Application Software
- Driver Software
- Middleware Software
- Programming Software
  System Software:-
  System Software is software that directly operates the Computer Hardware and provides the basic functionality to the users as well as to the other software to operate smoothly.
  Example:-Calculator, Calender, Clock, etc.

Application Software:-
Software that performs special functions or provides functions that are much more than the basic operation of the computer is known as **Application Software.**

Example:-Facebook, Whatsapp, Instagram, Bgmi, etc.

3. What is SDLC? Explain each phase of SDLC
Answer : Software Development Life Cycle(SDLC)

-A step by step approach to develop any product/software with high quality, lowest cost with Shortest possible time.

Phases of SDLC:-
Planning and Requirment
Planning is a crucial step in everything, just as in software development. In this same stage, requirement analysis is also performed by the developers of the organization.

Analysis
In this stage, all the requirements for the target software are specified. These requirements get approval from customers.
And Analysis by Software Requirement Specification.

Designing
Software Requirements Specification is a reference for software designers to come up with the best architecture for the software.
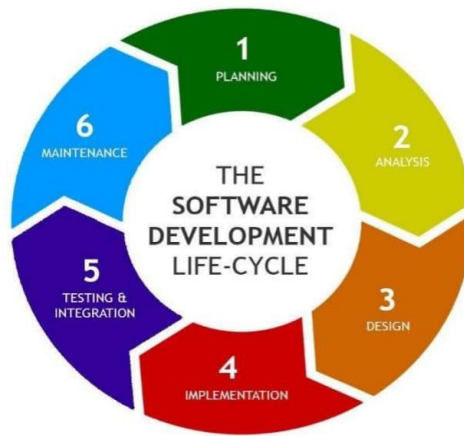
Implementation
At this stage, the fundamental development of the product starts. For this, developers use a specific programming code as per the design.

Testing and Integration
After the development of the product, testing of the software is necessary to ensure its smooth execution.

Maintenance

After detailed testing, the conclusive product is released in phases as per the organization's strategy. Then it is tested in a real industrial environment. It is important to ensure its smooth performance.
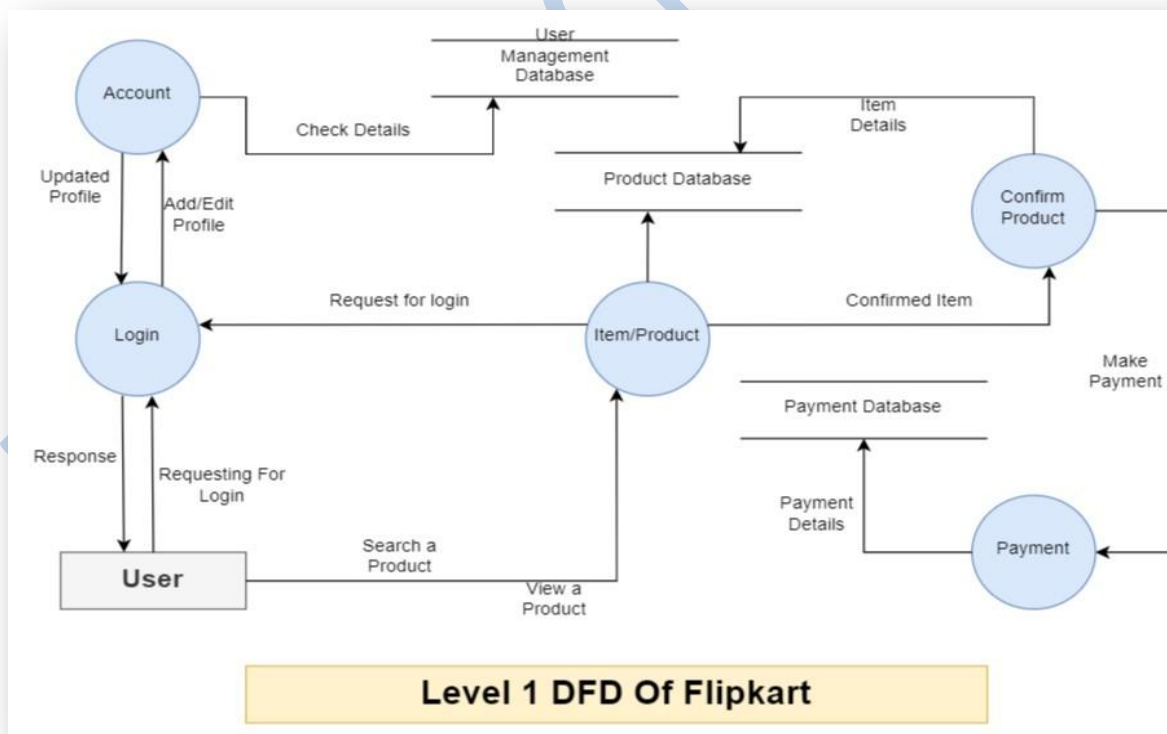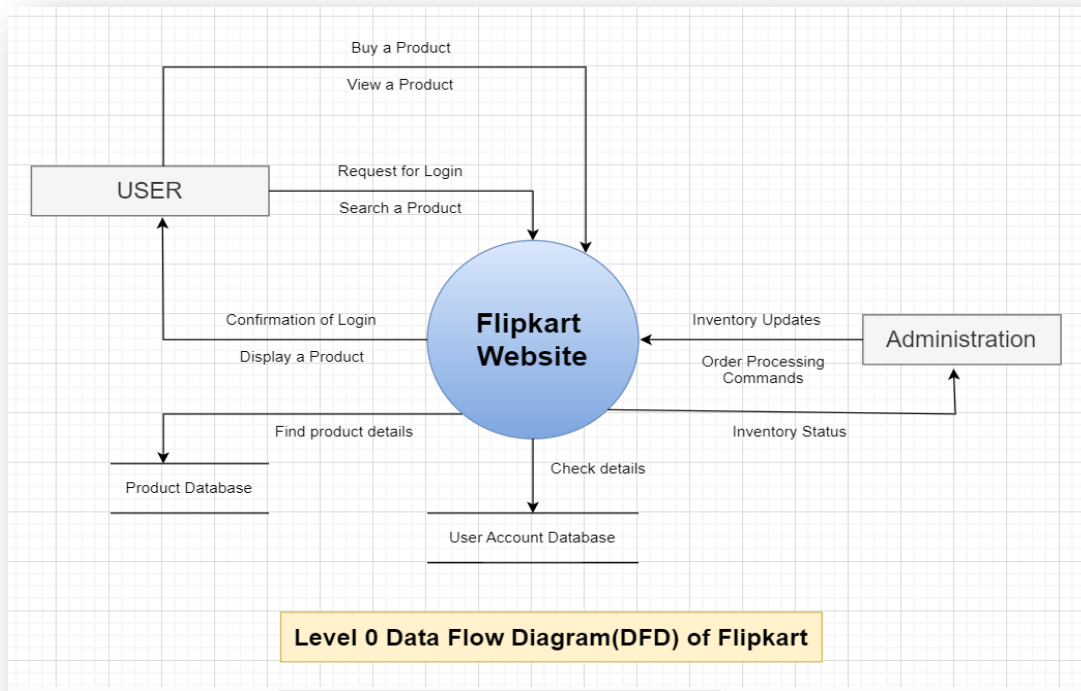

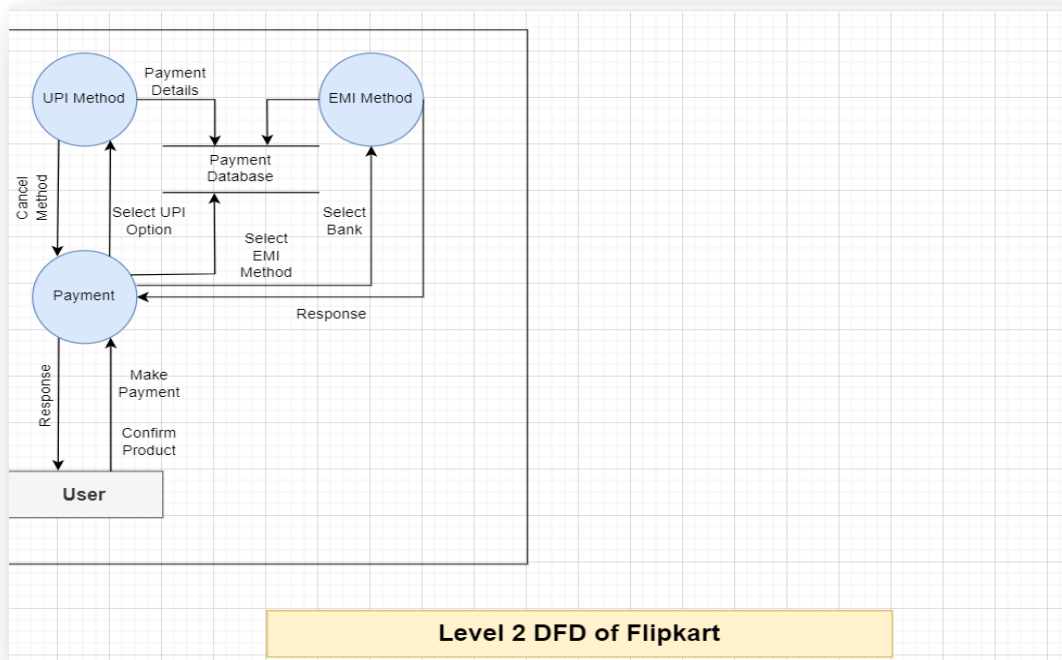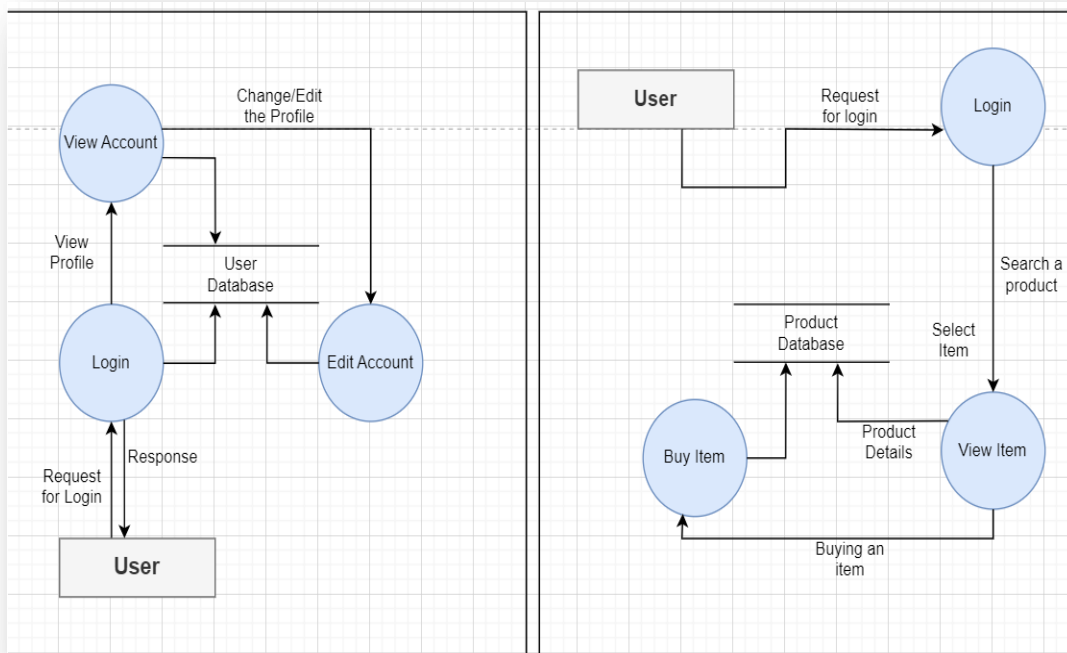## 4. What is DFD? Create a DFD diagram on Flipkart.

Ans. Data Flow Diagram (DFD) is a graphical representation used to visualize the flow of data through a system. It helps to illustrate how data moves from input to output, highlighting the processes that transform data and how data is stored and utilized.

Component of DFD:-

-External Entity

-Process

-Data Flow

-Data Store

-:DFD Diagram of Flipkart:-

3

Level 0 Data Flow Diagram(DFD) of Flipkart

Level 1 DFD Of Flipkart

Level 2 DFD of Flipkart

Description of level 0 DFD on Flipkart:-

User to Flipkart:
-User can buy the product/item or view the details about the product.
-User can login or Registration their username, Password and Mobile no., etc into the website

Flipkart to User:
-They First of all check the user details in the database then confirm their login.
-If the user search the product site will display the product.

Administration to Flipkart:
-Order Processing Command to the site and inventory updates gives to the site.

Description of Level 1 DFD of Flipkart:
-User can requesting for login in the login process then they response back to the User
-In Account process user can change or edit the profile.
-In Product Process we can search a product ,compare the product that they display from the the product database.
-After selecting the product we confirm the order and doing further process.
-At the end we select the payment option to make a payment which is store in payment database.

Description of Level 2 DFD of Flipkart:
1) Account Process:
   -User first of all register or login in the site. They fill the details which is store in User management Database.
   -We can add or edit the profile in the account process.

2) Product/Item Process:

-User can search the product. Site will display a number of product related to their search.

-User can select the item and view the details about the item in details.

-At the end if the User want that product they select buy option for further process.
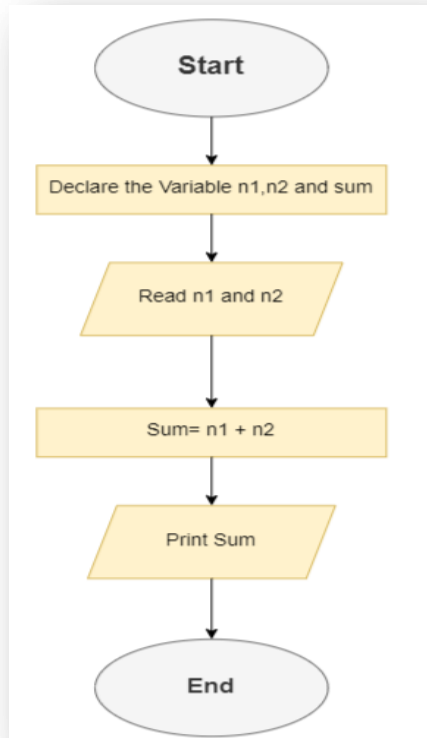
3) Payment Process:
   -If the User performing all the process at the end there is a payment process in that you can select the option of payment that how the payment you pay for example: UPI, Debit/Credit Card, COD, etc.
   -That all are store in the Payment Database as **we mention in above Level 2 DFD Diagram.**

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

Ans. Flowchart is a graphical representation of an algorithm. Programmers often use it as a program-planning tool to solve a problem. It makes use of symbols which are connected among them to indicate the flow of information and processing.
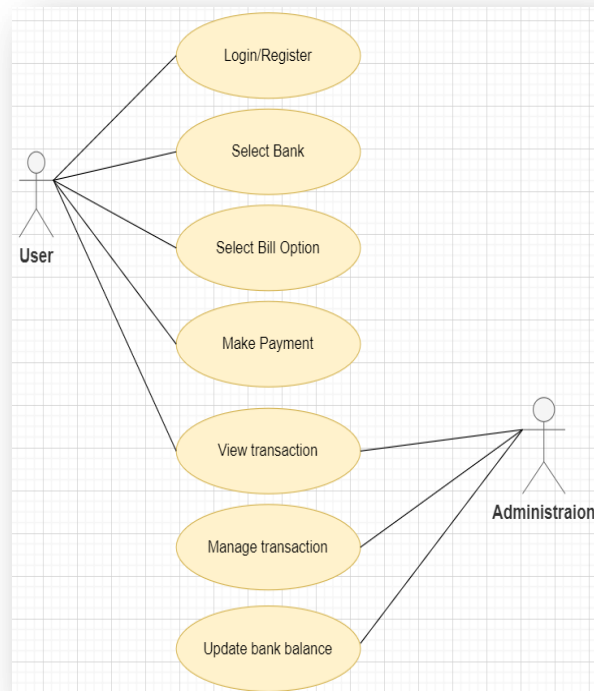
Flowchart of addition of two number

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

Ans. A Use Case Diagram is a vital tool in system design, it provides a visual representation of how users interact with a system. It serves as a blueprint for understanding the functional requirements of a system.

Use Case Diagram of bill payment on paytm.

Submitted By Ansari Amanhusain Kalimuddin