**System Design**

**Introduction :**

* **System Analysis :**

The system analysis approach emphasises a closed look on all parts of the system. The analyst must consider all the system elements, their inputs, outputs, control, feedback and the environment when the system is being constructed.

* **System Design :** The goal of system design phase is to produce a model or representation of the system, which can be used to build the system. Here the emphasis is on translating the requirements of the system into design specification.

1. **Applicable Documents :**

The document used in system design is Software Requirement Specification Document.

1. **Functional Decomposition :**

The system can be decomposed into functional components as follows.

The Component –

* Registration component for customers, sellers(farmers) and workers.
* Login component for customers, sellers, workers and administrators.
* Produce selling component for sellers.
* Product selling component for administrator.
* Produce purchase request component for customers.
* Product purchase component for sellers.
* Product purchase approval component for sellers.
* Product purchase report component for customer and administrator.
* Category, variety and item type setting components for administrator.

1. **Program Description :**
   1. **Context Flow Diagram** :

Context flow diagram is a top level data flow diagram. It only contains one process node that generalises the function of the entire system in relationship to external entities. In context diagram the entire system is treated as a single process and all its inputs, outputs, sinks and sources are identified and shown.



* 1. **Data Flow Diagram** :

A data flow diagram is a graphical representation of the flow of data through an information system. A data flow diagram can also be used for the visualization of the data processing. It is common practice for a designer to draw a context level DFD. It shows the interaction between the system and the outside entities. This context level DFD, is then exploded to show more detail of the system being modelled.

A DFD represents flow of data through a system. Data flow diagrams are commonly used during problem analysis. It views a system as a function that performs the input into the desired output. A DFD shows movement of data through the different transformations or processes in the system.

Data Flow diagrams can be used to provide the end users with the physical idea of where the data they input ultimately has an effect upon the structure of whole system from order to dispatch to restock how any system is developed can be determined through data flow diagram. The appropriate register saved in database and maintained by appropriate authorities.

**Notations in the DFD :**

|  |  |
| --- | --- |
| **Symbol** | **Description** |
|  | The circle or bubble represents a process. A process is named and each process is represented by a named circle. |
|  | The source or sink is represented as a rectangular box. The source or sink is the net originator or the consumer of the data that flows in the system. |
|  | The arrow represents the flow of data through the system. The labeled arrows enter or leave the bubbles. |
|  | The database is represented with the open box symbol. |

**Top Level DFD - Level-1** :



**DFD Level 2:**



**DFD Level 3:**



**DFD Level 4:**



**DFD Level 5:**



**DFD Level 6:**

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**DFD Level 7:**

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