3. SYSTEM DESIGN DOCUMENT

1. INTRODUCTION

The purpose of the design phase is to find the solution of the problem specified in the requirement document.

The design activity is often divided into separate phases-

System Design is sometimes called as top level design. The aim of the system design is to identify the modules that should be in the system, the specification of this modules and how they interact with each other to produce the desired result. At the end of the system design all the major data structures, file formats and the major modules in the system and their specification are decided.

2. CFD (LEVEL-0): Context Flow Diagram

The Context diagram shows the system under consideration as a single high-level process and then shows the relationship that the system has with other external entities. Context diagram is also called as Context-Level Data-Flow Diagram or Level-0 Data Flow Diagram. Since a Context diagram is a specialized version of Data Flow Diagram Context Diagrams and Data-Flow Diagrams were created for systems analysis and design.

A Context diagram is possibly one of the first tools that are applied early in the requirements elicitation process within the Analysis phase of a typical System Development Life Cycle.



3. Data Flow Diagram

A DFD also known as bubble chart has the purpose of clarifying system requirements and identifying major transformations that will become programs in system design. So it is the starting point of the design phase that functionally decomposes the requirement specification down to the lowest level of details. The DFD consist of bubbles joined by lines.

A Data Flow Diagram (DFD) is a graphical representation of the”flow” of data through an information system, modelling its process aspects. A DFD is often used as a preliminary step to create an overview of the system, which can later be elaborated. DFDs can also be used for the visualization of data processing (structured design).

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| **SYMBOLS** | **DESCRIPTION** |
|  | Represents the Database |
|  | Represents the external entity |
|  | Represents the data flows    Represents the process that transforms  incoming data flows into outgoing  data flows |
| \* | Represents the AND symbol |
| + | Represents the OR symbol |

A DFD shows what kind of data will be input to the system and what data is received as the output. Also it tells where the data will come from and go to and where it is stored in the process ‘DFD can be used to visualize a data processing’. A Data Flow Diagram is a graphical representation of flow of data through information system.

A DFD may look similar to a flow chart. However there is a significant difference with the data flow diagram. The arrows in DFDs show that there is a flow of data between the two components and not that the component is sending the data that must be executed in the following component.

**CONSTRUCTING A DATA FLOW DIAGRAM**

* Process should be named and numbered for easy reference. Each name should be representative of the process.
* The direction of the flow is from top to bottom and from left to right. Data traditionally flows from source to the destination, although they may flow back to the source. One way to indicate this is to draw a long flow line back to a source. An alternative way is to repeat the source symbol as a destination. Since it is used more than once in the DFD, it is marked with a short diagonal in the lower right corner.
* When the process is exploded into lower level details, they are numbered.
* The names of data stores, sources and destination are written in capital letters.
* Process and data flow names have the first letter of each word capitalized.

DFD (LEVEL-1):

ADMIN



SELLER



BIDDER



DFD (LEVEL 2):

ADMIN: Manage product



ADMIN: Manage Package



BIDDER: Bidding a product

