Kathmandu University

System Analysis Design
Report on

Analysis and Design of "Kathmandu University Inventory System"

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Chapter 1

System Introduction

KATHMANDU UNIVERSITY INVENTORY SYSTEM(KUIS)
is a desktop based database application developed for keeping record of all
the accessories available inside an organization. The application is built in
terms to benefit the department to keep an updated record of the inventory
that are available in the department. Project is targeted to benefit the
administrative staff of Department of Computer Science and Engineering.

KUIS Stake Holders:

- System Owner: Kathmandu University

- System User : Administrative Staff of DoCSE

- System designer / developers : CS III year students

Chapter 2

Requirement Definition

2.1 Functional Requirement

1. System should display the list and category of items available in an organization.

2. System should display the status of item whether they are available or issued.

3. System should consist of a Graphical User Interface for searching items by their name, id, category,etc.

2.2 Non-Functional Requirement

1. System should not keep record of items with permanent failure status end non existing items.

Chapter 3

Use Case Analysis

A use case diagram is a modeling diagram of all the possible use cases that occurs during the interaction of system and users. In our system 'KUIS' we have chosen a single actor "Administrator" that deals with the system. The use case diagram of our system is shown below in the figure:
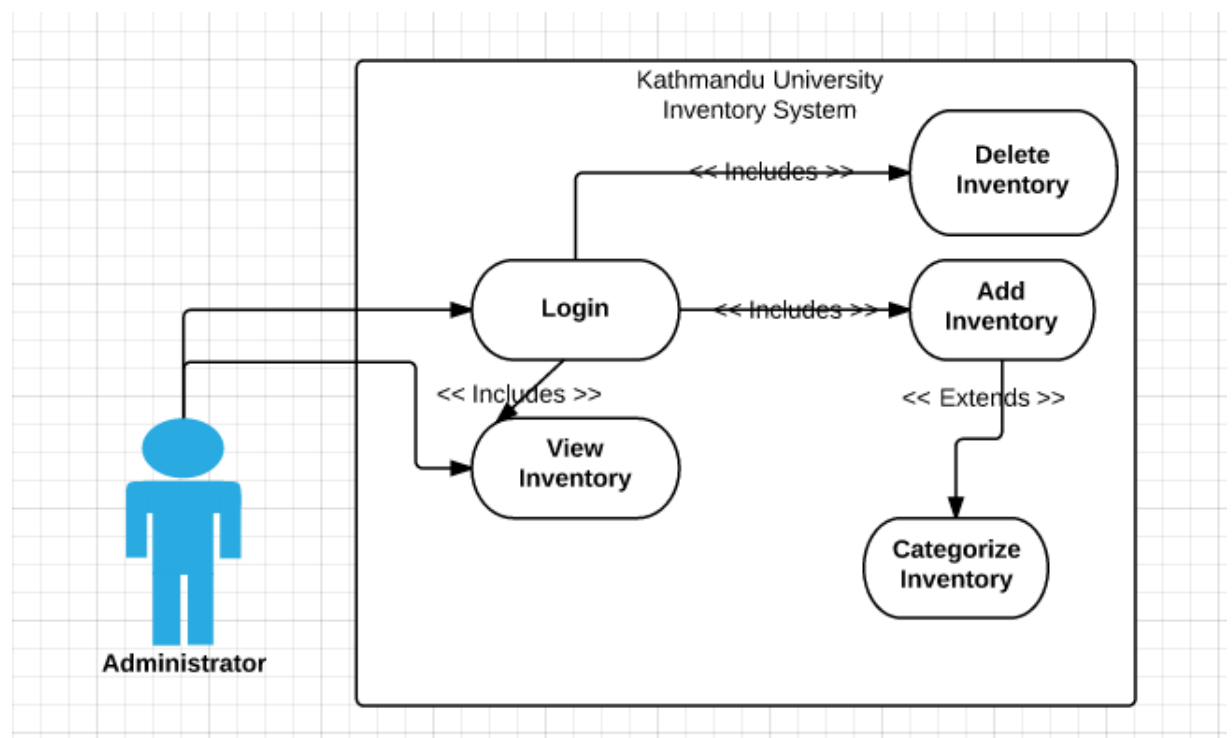

Figure 3.1: Use Case Diagram

Chapter 4

Process Design

4.1 Context Diagram

The context diagram of a system describes the overall activities carried out by a system by considering the system as a single process.Context diagram acts as a black box and shows the the overall interaction of user and the system. The context diagram for our system KUIS uses administrator as the external agent.

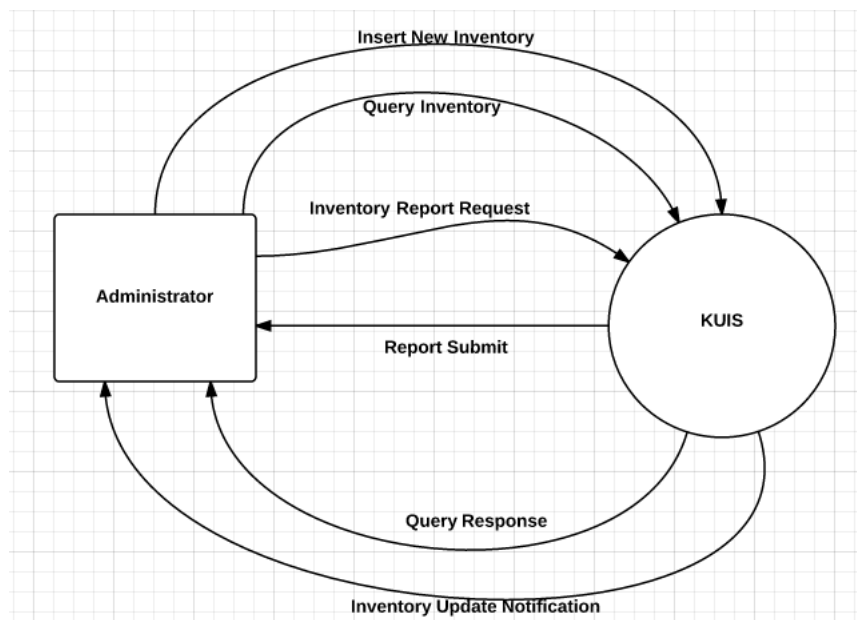The context diagram for our system is shown in figure below:

Figure 4.1: Context Diagram of KUIS

4.2 Level-0 Data Flow Diagram

A Level-o DFD breaks the single process of the context diagram into several process and illustrates in more understandable way through the flow of logical data. Level-0 diagram shows the changes in the data occured during the execution of process.

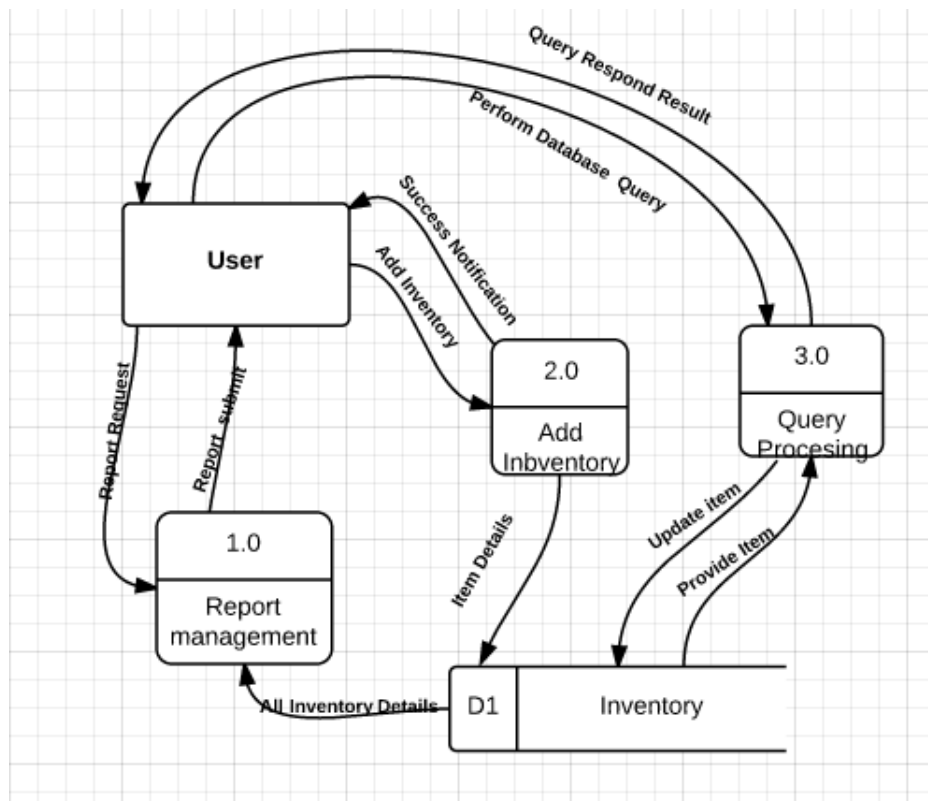The Data Flow Diagram of our system KUIS is show below in the figure:

Figure 4.2: Level-0 Data Flow Diagram of KUIS

Chapter 5

Data Modelling

5.1   Entity-Relationship Diagram

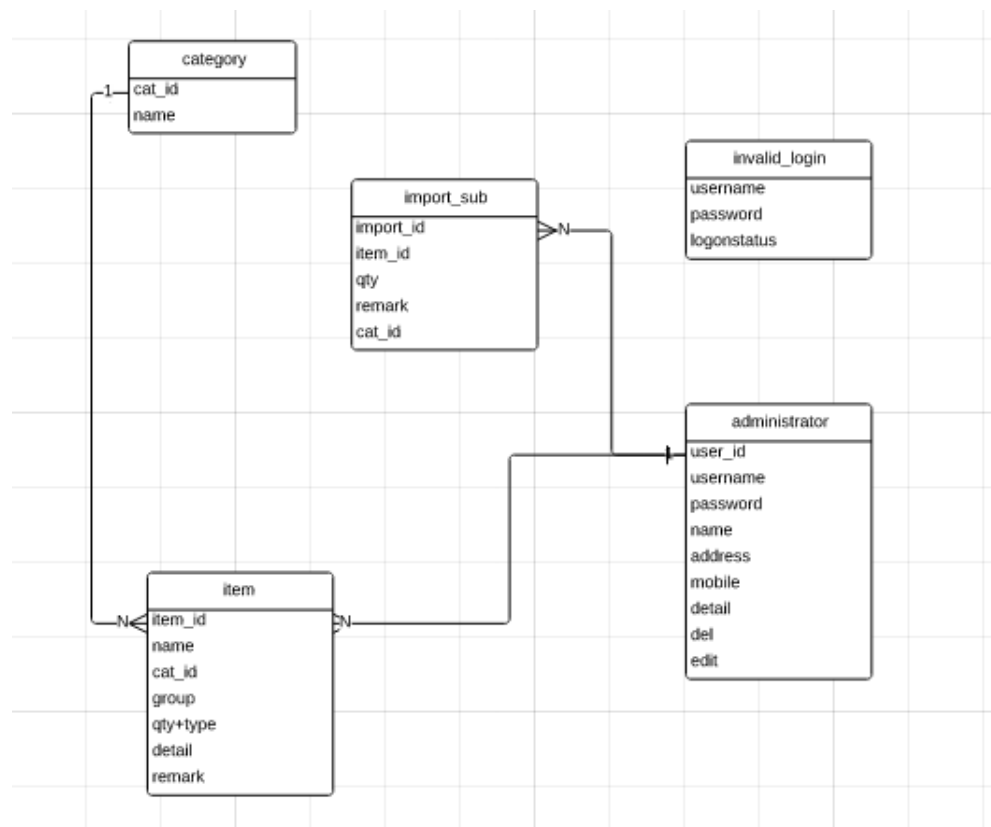The entity relationship diagram for our system KUIS is shown below in the figure:

Figure 5.1: Entity Relationship Diagram of KUIS

5.2 Data Dictionary

5.2.1 Administrator

Field Name	Data Type	Description
user_id	Varchar	Stores id of the user
username	Varchar	Stores Username
password	Varchar	Stores Password
name	Varchar	Stores name of the administrator
address	Varchar	Stores address of the administrator
mobile	integer	Stores mobile number of administrator
detail	Text	Stores details about the administrator
del	Boolean	Stores if admin has delete authority
edit	Boolean	Stores if admin has edit authority

Table 5.1: Table: Administrator

5.2.2 invalid login

Field Name	Data Type	Description
usenrame	Varchar	Stores invalid user's username
password	Varchar	Stores the password
loginstatus	Time	Stores Time od Login

Table 5.2: Table: invalid_ login

5.2.3 item

Field Name	Data Type	Description
item_ id	Varchar	Stores the item id
name	Varchar	stores the item name
cat_ id	Varchar	Stores the category id
group	Char	Stores the group of item
qty	integer	Stores the quantity of item
remark	Text	Stores the ramark about item

Table 5.3: Table: item

5.2.4 import sub

Field Name	Data Type	Description
import_id	Varchar	Stores importet id
item_id	Varchar	Stores item id
cat_id	Varchar	Stores category id
qty	integer	Stores Quantity of item
remark	Text	Stores remark of the item

5.2.5 Category

Field Name	Data Type	Description
cat_id	Varchar	Stores the category of items
name	Char	Stores the name of the category

Table 5.5: Table: category