Software Requirements Specification

for

CARGO TRANSPORTATION SYSTEM

Prepared by

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CHAPTER1

INTRODUCTION

1. Introduction

1.1 Purpose

The purpose of this document is to give a clear-cut idea on the system “Cargo Transportation System” which is to be implemented. This SRS document describes all aspects of the “Cargo Transportation System”. This system intended to automate the processes that is happening while shipping a cargo from location to another. Apart from the traditional systems the “Cargo Transportation System” provides Tracking and Insurance management for a cargo sent through this system.

It enables paperless processing of data which helps to save a lot of trees and also saves a lot of time and human resource for the entries. It provides the option for insurance coverage to the warehouses and transport the users can claim for the same in case the cargo went missing or meet with some destruction is a unique feature that we provide apart from the existing cargo management Systems.

1.2 Scope

The “Cargo Transportation System” system is a web based application. The Cargo Transportation System maintains the data of the vendor company’s and the transportation methods that they use, for the shipping of the cargo. The system uses both ships and the trucks for moving the cargo from the vendor’s location to the receiver’s location. The Cargo Transportation System provides the facility to track the cargo sent, and also provide the option to give the insurance coverage to the items sent.

For sending the goods a vendor must have an account with the Cargo Transport System then he will be provided with the services that to register a cargo sent it with insurance coverage and track it.

Functional Modules are,

- Cargo Management
- Warehouse Management.
- Tracking
- Insurance Management
- Report Management

1.3 Definitions, Acronyms, and Abbreviations

PHP-Hypertext Preprocessor

JS-Java Script

AJAX- Asynchronous java script and XML

HTML-Hypertext Markup Language

SQL-Structured Query Language

1.4 References

- www.geeksforgeeks.com
- www.w3schools.com
- www.stackoverflow.com
- www.tutorialspoint.com

1.5 Overview

Existing System

The existing Cargo Transportation system requires a lot of paperwork. In most cases shipping companies maintain offices in many countries so as to be able to conduct the shipping formalities locally. Consignors and consignees also require a local representative to ensure that all the documents are in order before and after shipping. The whole process is redundant in this age of computers and wastes a lot of time.

Proposed System

The proposed Cargo Transportation system will make the process faster. It will make it easy for all the stakeholders involved to share information and will make the system more accountable. Shipment orders can be placed smoothly and terms negotiated swiftly. Customs officials will be able to maintain searchable digitized records in lieu of the mountains of paperwork popular to this day. Apart from the Traditional Systems we provide an option to cover the vendors cargo with an insurance policy from a list of policies that we provide and also this system enables its users to track the progress of the cargo which they've sent through the system.it also enables the venders to interact with agents who are responsible for the successful transmission of the cargo.

CHAPTER - 2

OVERALL DESCRIPTION

2.1Product Perspective

The cargo transportation system is an autonomous web based software that intended at the computerization of various activities happening on sending a cargo by a vender to the recipient. It handles the various aspects related to the vendors, the transportation methods and everything involved in sending to receiving process. The system maintains checklist that provides what types of items can be transported via the company. Super Market also generates various types of reports in order to keep all the activities under proper control. There is online shopping facility and online salary payment. The details of employees are stored and they can apply for leave. The daily attendance can also be marked. Market Basket Analysis is an algorithm that examines a long list of transactions in order to determine which items are most frequently purchased together.

2.2 Product Features

The objective is to build a software system that is user friendly and accurately generates and stores data that automates all the tasks in a supermarket. The software system should be convenient for its users.

The major functional modules are:

- Cargo Management
- Warehouse Management.
- Tracking
- Insurance Management
- Report Management

Cargo Management:

- Registering Cargo to send.
- Select transportation method
- Cancel Booking

Warehouse Management:

- Book Warehouse
- Know Availability of warehouse
- Cancel warehouse booking
- Add warehouse
- Remove warehouse

Tracking:

- Know the route.
- Know the progress.

Insurance Management:

- View bill and clear it.
- Issue discount
- Fix transportation charges.

Report Management:

- Deal with the report generation of the applications and its various activities such as
  I. Cargo transport
  II. Warehouse availability
  III. Bills and finance report.

2.3 User Classes and Characteristics

The cargo Transportation system contain 8 users:

ADMIN: The admin can access the entire system functionalities.

Company Manager:

- He/she is responsible for Registering and maintaining the details of the company.
- Cargo Registration
- Booking Warehouse
- Determine the category of Transportation
- Makes payments.

Warehouse Manager:

- He/she is responsible for adding and removing warehouse.
- Adding & Removing Racks.
- Check rack status.
- View warehouse booking details
- Feedback
- View & manage insurance status.

Agent:

- Add Details.
- Update location.
- View company profile.
- View cargo registration details.
- Feedback.

Driver:

- Update Details

Shipincharge:

- Update Details.

Insurance Manager:

- Add insurance policy.
- View claims & manage.

Sender: he/she send the cargo

Vendor: he/she receive the cargo

2.4 Operating Environment

Hardware Specification

The hardware of the computer consists of physical components such as Input devices, Storage devices, Processing & Control units and Output devices. Computer includes external storage unit to store data in programs. The popular external storage mediums are DVD, Flash Drives etc. The Hardware Configuration involved in this project is:

Processor : Pentium IV/AMD Dual core or above

RAM : 2 GB and above

Hard disk : 500 GB and above

Software Specification

Front End : PHP (Codeigniter)

Backend : MySQL

Client on PC : Windows 7 and above.

Technologies used : JS, HTML5, AJAX, J Query

2.5 Design and Implementation Constraints

2.6 User Documentation

2.7Assumptions and Dependencies

CHAPTER - 3

SPECIFIC REQUIREMENTS

3. Specific Requirements

3.1 External Interface Requirements

The “Cargo Transportation System” will use the following input/output devices for a personal computer. The external interfaces are:

- Keyboard
- Mouse
- Monitor
- Printer
- Mobile phone

3.1.1 User Interfaces

FORMS	**DESCRIPTION**
Home Page	Log into the site as a Administrator, Employee, Manager, or Ordinary User. User
User Registration	Registering Ordinary users
Employee Management	Save employee information, view and update them
Cargo Management	Registering and Tracking Cargo
Insurance Management	Manage Insurance Policies
Warehouse Management	Manage the racks of the Warehouse

Tracking a Cargo	The users can Track the progress of the Cargo.
Feedback/Comments	The users can post comments/feedbacks about products.

3.1.2 Hardware Interfaces

Online examination is a web-based application

3.1.3 Software Interfaces

Database Server: MySQL

Development End: PHP

Client on PC: Any Browser

3.1.4 Communications Interfaces

3.2 Functional Requirements

Functional requirements define the fundamental actions that system must perform. The functional requirements for the system are divided into some main categories Cargo Management,Warehouse Management,Tracking,Insurance Management,Report Management.

Cargo Management

Introduction

The user can login in to the system ,Register the cargo and Track it.

Inputs

In this module for the users to Registering Cargo to send,Select transportation method and Cancel Booking

Processing

After the successful Registration the user will be able to Track the Cargo**.**

Warehouse Management

Introduction

The User can book the empty racks in a warehouse for the storage of his cargo when the warehouse is not available the user will be provided with 3rd party warehouses.

Inputs

In this module the details of warehouse such as number of racks ,warehouse location etc. are provided**.**

Processing

The warehouse Racks can be booked by the users.

Insurance Management

Introduction

The User can select an insurance package from a list of insurance packages provided by the company.

Inputs

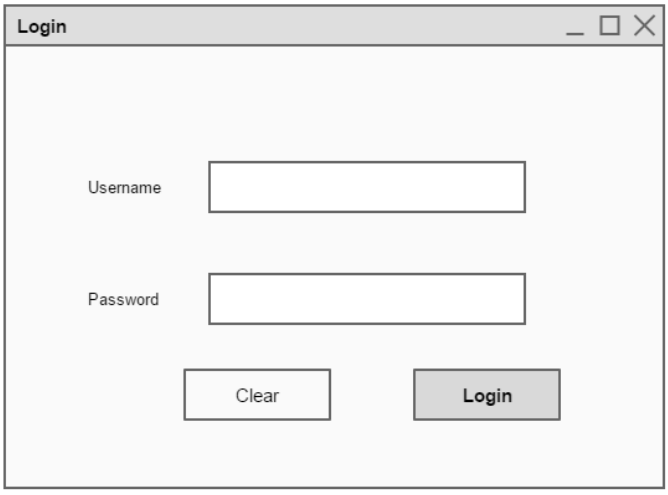
The input will be a list of insurance packages.

Processing

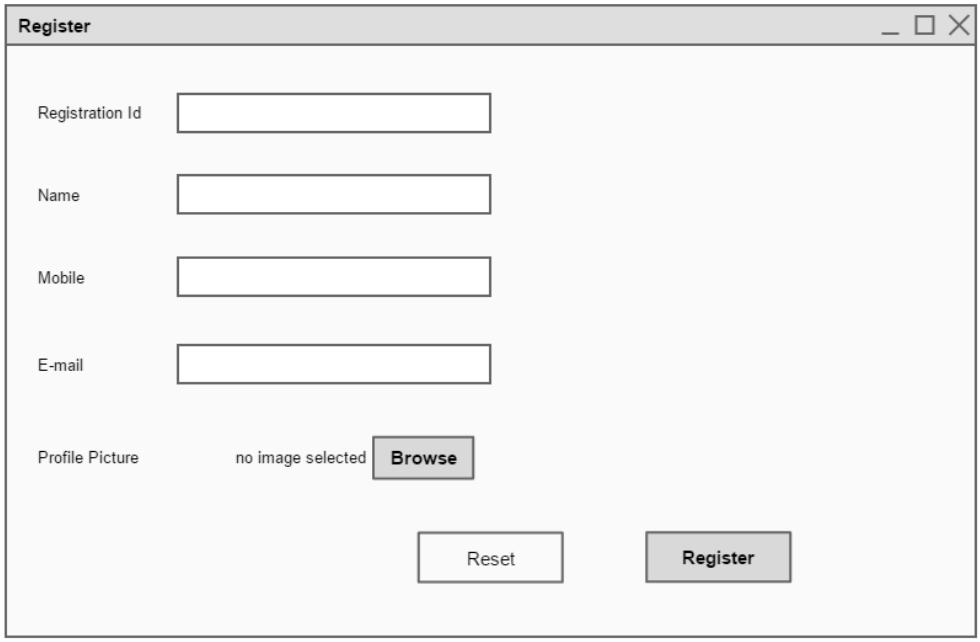
The user can enable an insurance package according to his/her interest.

1.5.1 Input Form

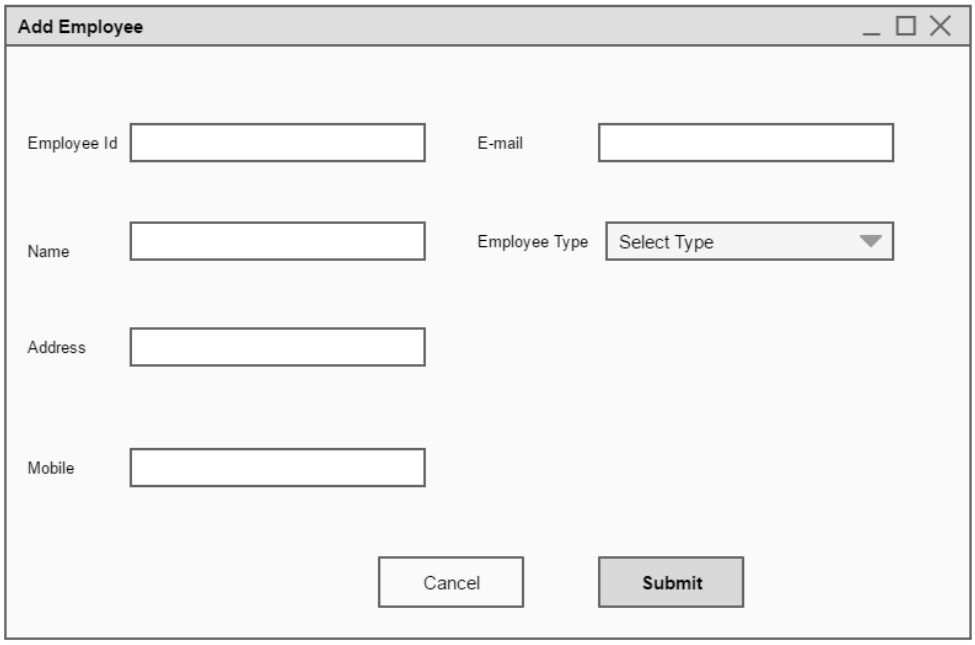
LOGIN PAGE



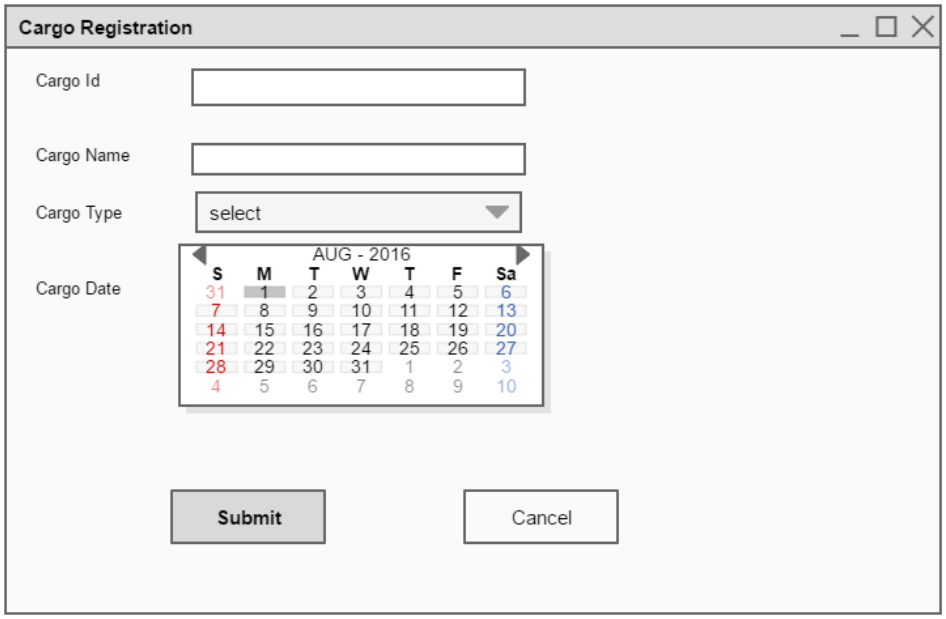
REGISTER FORM



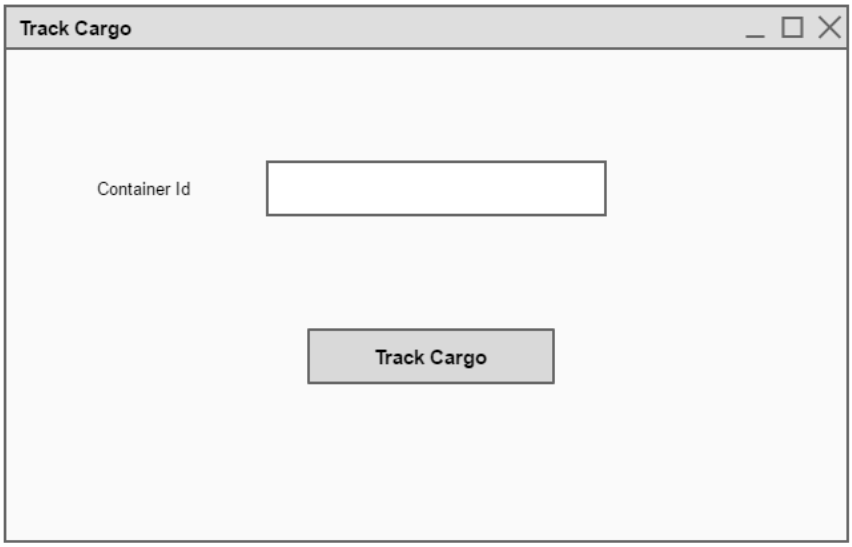
ADD EMPLOYEE



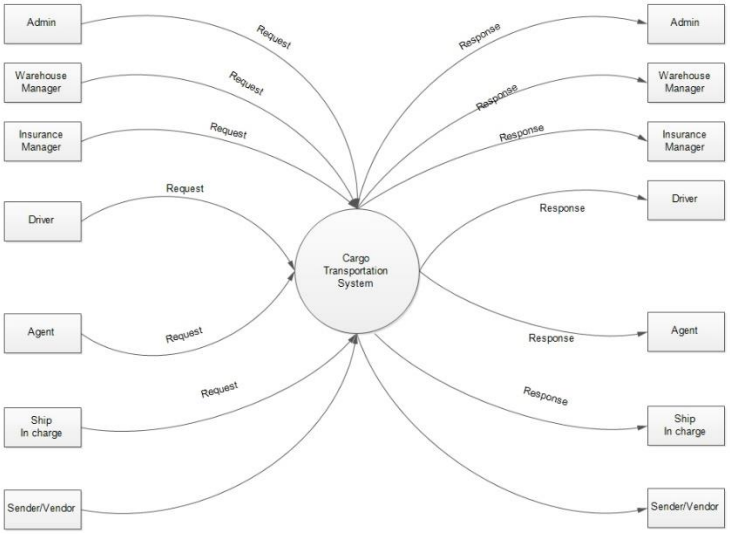
ADD CARGO



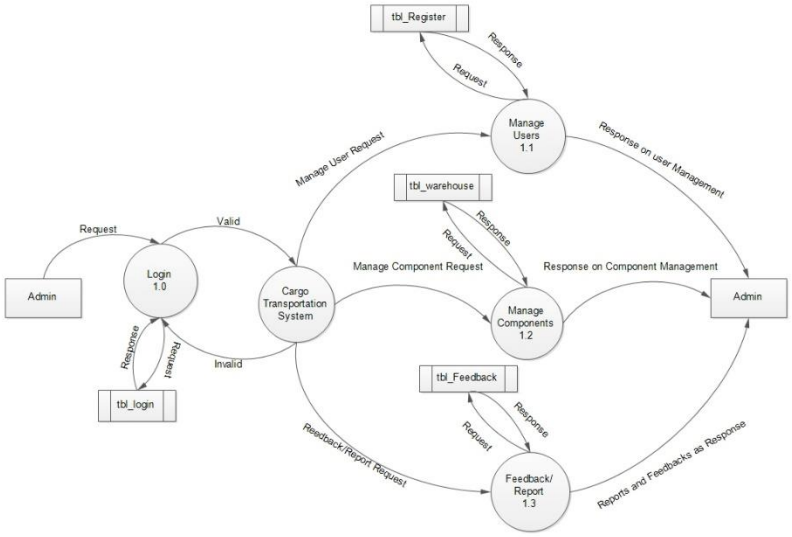
TRACK CARGO



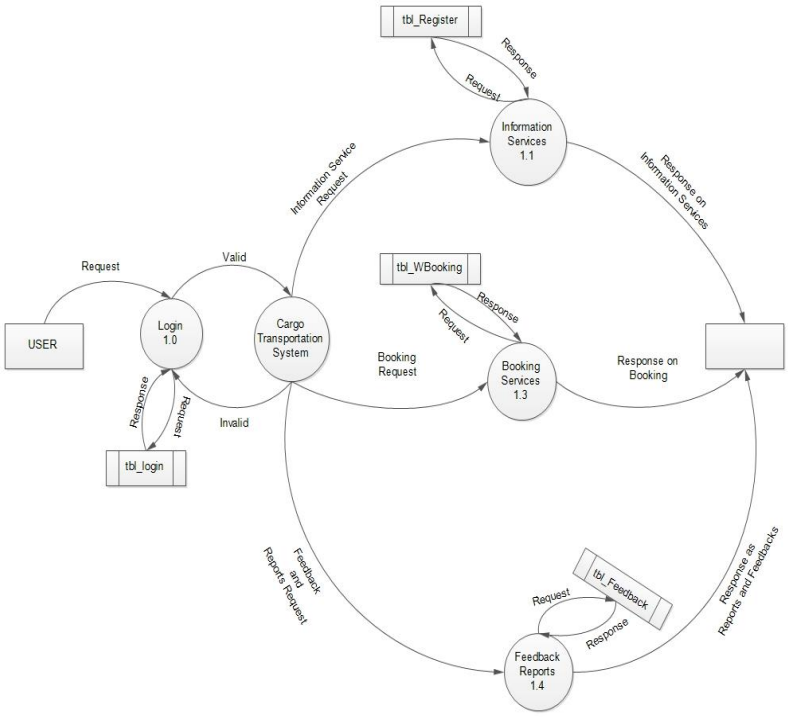
LEVEL 0 DFD



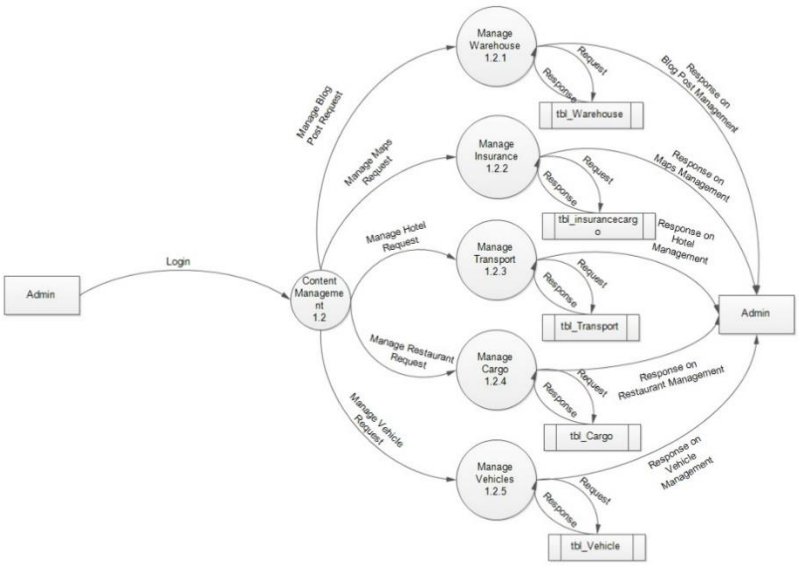
LEVEL 1 DFD FOR ADMIN



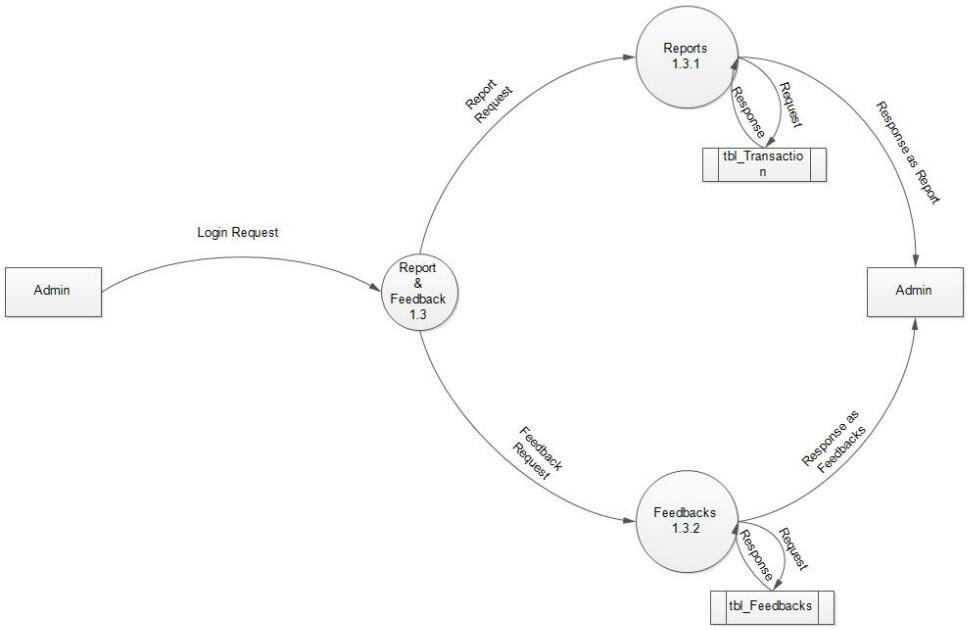
LEVEL 1 DFD FOR USER



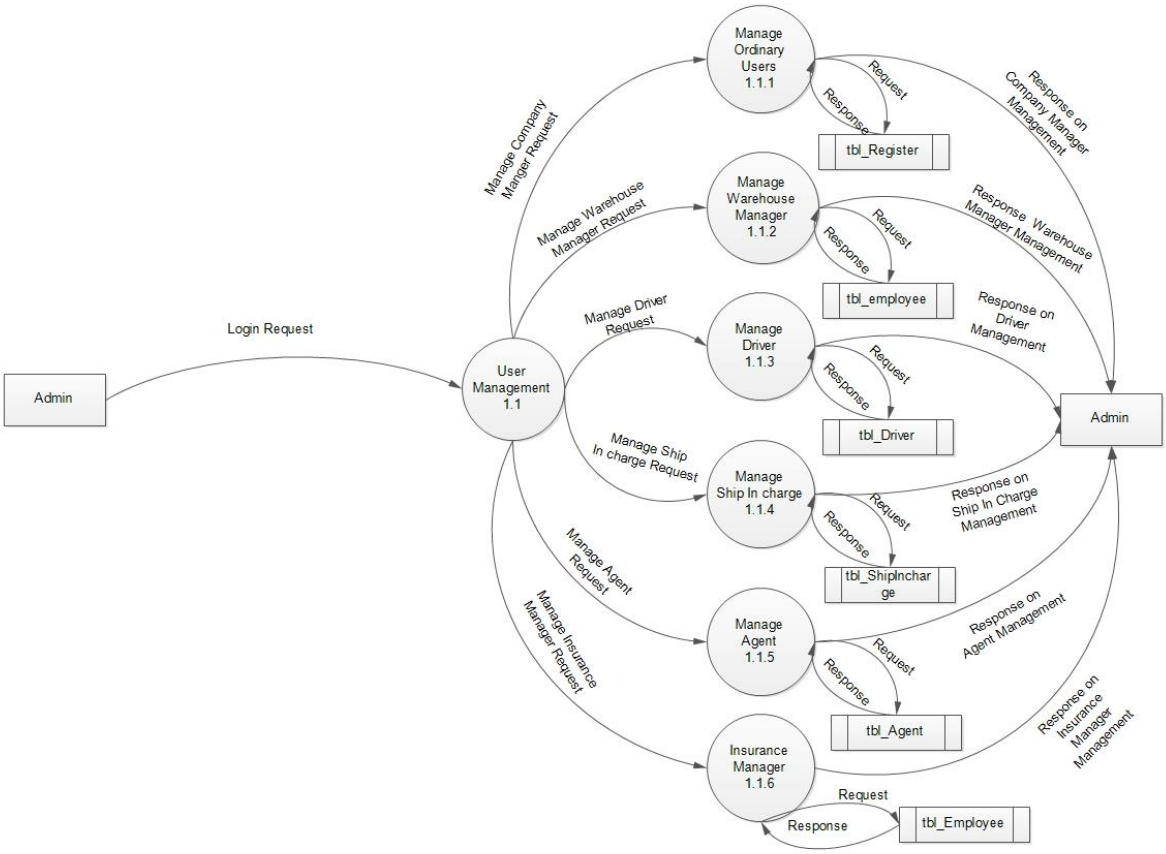
LEVEL 2 DFD OF ADMIN FOR COMPONENT MANAGEMENT



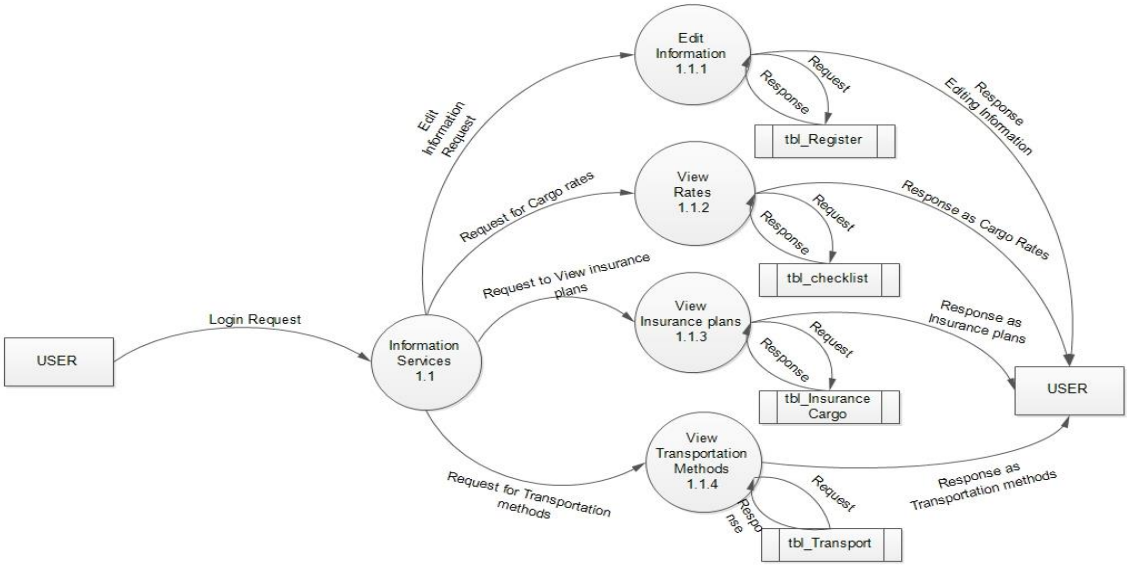
LEVEL 2 DFD OF ADMIN FOR REPORT MANAGEMENT



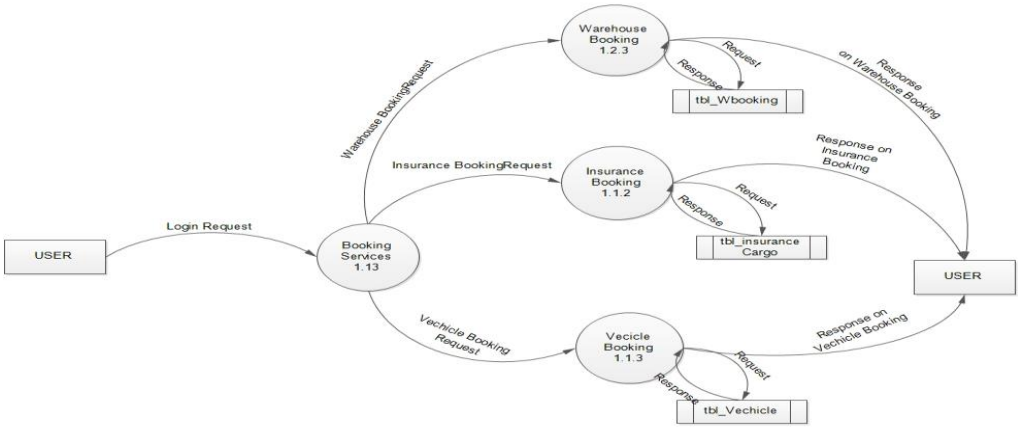
LEVEL 2 DFD OF ADMIN FOR USER MANAGEMENT



LEVEL 2 DFD OF USER FOR INFORMATION SERVICES



LEVEL 2 DFD OF USER FOR BOOKING SERVICES



3.7.3 Use Case Diagram

3.7.4 Sequence Diagram

3.7.5 Table Design

Table 1:tbl_Register

Primary key:RegId

Name	**Type**	**Size**	**Description**
RegId	int	20	Primary key(auto increment)
RegName	Varchar	200	Name of user
RegHousename	Varchar	300	House Name of user
RegPlace	Varchar	200	Place of user
RegState	Varchar	200	State of user
RegCountry	Varchar	200	Country of user
RegPin	Varchar	10	Pin no of user post office
RegPhone	Number	12	Phone number of user
RegEmail	Varchar	200	Email of user
RegImage	Varchar	300	Path to user profile picture
RegDOB	date		Date of birth of user
RoleId	Number	20	Foreign Key(Table:tbl_Role)
RegStatus	Boolean	NA	Status of user

Table 2:tbl_Role

Primary key:RoleId

Name	Type	Size	Description
RoleId	int	20	Primary key(auto increment)
RoleName	Varchar	200	Name of Role
RoleStatus	Boolean	NA	Status of Role

Table 3:tbl_Login

Primary key:LoginUname

Foreign key:RegId(tbl_Register)

Field	DataType	Size	Description
LoginUname	varchar	200	Username of User
LoginPwd	varchar	200	Password of User
RegId	int	20	Registration Id

Table 4:tbl_Employee

Primary key:empId

Field	DataType	Size	Description
empId	int	20	Employee Id
empName	varchar	200	Employee Name
empAdd	varchar	200	Employee Address
empPhno	Numeric	12	Phone Number
empEmail	varchar	200	Email Address
empDes	char	25	Designation of Employee

Table 5:tbl_Checklist

Primary key:ChecklistId

Foreign key:empId(tbl_Employee)

Field	**DataType**	**Size**	**Description**
ChecklistId	int	20	Ckecklist Id
empId	Varchar	200	Employee Id
ChecklistName	Varchar	200	Name of the Checklist Item
ChecklistDate	Datetime	NA	Date&Time of the Checklist Item Added
ChecklistStatus	int	2	Status of Checklist Item

Table 6:tbl_Cargo

Primary key:CargoId

Foreign key:CompId(tbl_Company)

Field	DataType	Size	Description
CargoId	int	20	Cargo Id
CompId	int	20	Company Id
CargoName	varchar	200	Name of the Cargo
CargoType	varchar	200	0 ->Ordinary 1 ->Exclusive 2 ->Living 3 ->Forzon
CargoDate	Datetime	NA	Date of ordering Cargo
CargoStatus	int	2	Status of Cargo

Table 7:tbl_Container

Primary key:ContainerId

Foreign key:CargoId(tbl_Cargo)

Field	**DataType**	**Size**	**Description**
ContainerId	int	20	Container Id
CargoId	int	20	Cargo Id
Containertype	Numeric	2	0 ->Normal 1 ->Refregirator 2 ->Explosing Protected
ContainerStatus	int	2	Status of Container

Table 8:tbl_Vechicle

Primary key:VechicleNo

Foreign key:empId

Field	DataType	Size	Description
VechicleNo	varchar	200	Vechicle Number
empId	int	20	Employee Id
VechicleType	int	2	0 ->Truck 1 ->Lorry 2 ->Van
VechicleDate	datetime		Date &Time of Adding Vechicle
VechicleStatus	int	2	Status of Vechicle

Table 9:tbl_Driver

Primary key:DriverId
Foreign key:RegId(tbl_Register)
TransId(tbl_Transfer)

Field	DataType	Size	Descruption
DriverId	int	20	Driver Id
RegId	int	20	Registration Id
DriverlicNo	varchar	200	Driving Licence Number
DriverExp	Numeric	2	Year of Experience
DriverStatus	int	2	Status of Driver
TransId		20	Transfer Id

Table 10:tbl_ship

Primary key:ShipId
Foreign Key:empId(tbl_Register)

Field	DataType	Size	Description
ShipId	varchar	200	Ship Id
ShipName	varchar	200	Name of Ship
ShipDate	Datetime	NA	Date & Time of Adding Ship
ShipStatus	int	2	Status of Ship

Table 11:shipincharge

Primary key:ShipinchargeId
Foreign Key:ShipId(tbl_Ship)

Field	DataType	Size	Description
ShipinchargeId	varchar	200	Shipin Charge Id
ShipId	varchar	200	Ship Id
PassportNo	varchar	200	Passport Number
yearexp	Numeric	2	Year of Experience
jointDate	DateTime	NA	Joint Date of Shipincharge
Status	int	2	Status

Table 12:tbl_Transport

Primary Key:TransId

Foreign Key:CargoId(tbl_Cargo)

Field	Type	Size	Description
TransId	int	20	**Transport Id**
CargoId	int	20	**Cargo Id**
TransType	Numeric	2	**0 ->Vechicle** **1 ->Ship** **2 ->Vechicle+Ship**
TransarriveDate	DateTime	NA	Date &Time of Transport Arrival
TransdeptDate	DateTime	NA	Date &Time of Transport Depature
TransFrom	Varchar	200	Transport From Place
TransTo	varchar	200	Transport To Place
TransStaus	int	2	Status of Transport

Table 13:tbl_TransportmethodVechicle

Primary Key:TransmethodId
Foreign key:TransId(tbl_Transport)

Field	DataType	Size	Descrption
TransmethodID	int	20	TransportMethod Id
TransId	int	20	Transport Id
VechicleId	varchar	200	Vechicle Id
VechicleAccessFromDate	Datetime	NA	Date &Time of vechicle access from the cargo
VechicleAccessToDate	Datetime	NA	Da
VechicleFrom	varchar	200	Starting vechicle place
VechicleTo	varchar	200	Ending vechicle place
Status	int	2	status

Table 14:tbl_TransportmethodShip

Primary key:TransmshipId
Foreign key:TransId(tbl_transport), ShipId(tbl_Ship)

Field	DataType	Size	Description
TransmshipId	int	20	TransportMethod Ship Id
TransId	int	20	Transport Id
ShipId	varchar	200	Ship Id
ShipaccessFromdate	DateTime	NA	The date of loading cargo to the ship
shipaccessTodate	DateTime	NA	The date of unloading cargo from the ship
ShipFrom	varchar	200	Ship Starting Place
ShipTo	varchar	200	Ship Ending Place
Status	int	2	Status

Table 15:tbl_Agent

Primary key:AgentId

Field	DataType	Size	Description
AgentId	int	20	Agent Id
empId	int	20	Employee Id
AgentenrolledDate	DateTime	NA	Date which Enrolled as a agent
AgentExp	Numeric	2	Agent Experience
AgentStatus	int	2	Status of Agent

Table 16:tbl_AgentOnTransport

Primary key:AgntransId
ForeignKey:TransId(tbl_Transport), agentId(tbl_Agent)

Field	DataType	Size	Description
AgnTransId	int	20	Agent on Transport Id
TransId	int	20	Transport Id
AgentId	int	20	Agent Id
AgnTransStatus	int	2	Status for Agent on Transport

Table 17:tbl_warehouse

Primary key:warehouseId
Foreign key:empid(tbl_employee)

Field	**DataType**	**Size**	**Description**
warehouseId	**int**	**20**	**Warehouse Id**
empId	**int**	**20**	**Employee Id**
WarehouseNoRacks	**Number**	**25**	**Number of Racks**
warehouseLocation	**varchar**	**200**	**Location of Warehouse**
warehouseType	**Number**	**2**	**0 ->Normal 1 ->Refrigarated 2 ->Explosive protected**
warehouseAddDate	**DateTime**	**NA**	**Date of Adding Warehouse**
warehouseStatus	**int**	**2**	**Status of Warehouse**

Table 18:tbl_WarehouseBooking

Primary key:WbookingId
Foreign Key:CargoId(tbl_Cargo)

Field	DataType	Size	Description
WbookingId	int	20	Warehouse Booking Id
CargoId	int	20	Cargo Id
wbookingFromDate	DateTime	NA	Warehouse Booking From Date
WbookingToDate	DateTime	NA	Warehose Booking To Date
WbookingRacks	Numeric	25	Number of Booking Racks
WbookingStatus	int	2	Status for warehouse Booking

Table 19:tbl_WarehouseInsurance

Primary Key:WinsuranceId
Foreign Key:WbookingId(tbl_WarehouseBooking)

Field	DataType	Size	Description
WinsuranceId	int	20	Warehouse Insurance Id
WbookingId	int	20	Warehouse Booking Id
ClaimAmt	Numeric	10,8	Claim Amount
WinsuranceStatus	int	2	Status of Warehouse Insurance

Table 20:tbl_InsuranceCargo

Primary Key:Insurcargo Id
Foreign Key:CargoId

Field	DataType	Size	Description
InsurancecargoId	int	20	Insurance Cargo Id
CargoId	int	20	Cargo Id
ClaimAmt	Numeric	10,8	Claim Amount
Insurancecargo Status	int	2	Status of Cargo Insurance

Table 21:tbl_Billing

Primary Key: BillId

Foreign Key: RegId(Table : tbl_Register)

Field	DataType	Size	Description
BillId	int	20	Primary key
RegId	int	20	Registration Id
BillAmount	Number	10,8	Total Amount
BillDate	DateTime	NA	Date and Time of Bill
BillStatus	Number	2	Status of Bill

Table 22:tbl_Transaction

Primary Key: TransactionId

Foreign Key: BillId(Table : tbl_Billing)

Name	Type	Size	Description
TransactionId	int	20	Primary key
BillId	int	20	Billing Id
TransactionDate	DateTime	NA	Date and Time of Transaction
TransactionStatus	Number	2	Status of Transaction

Table 23: tbl_Card

Primary Key: CardId

Foreign Key: TransactionId(Table : tbl_Transaction)

Name	Type	Size	Description
CardId	int	20	Primary key
TransactionId	int	20	Transaction Id
CardNo	Number	16	Card No
CardNameOnTheCard	Varchar	200	Name on the Card
CardExpiryDate	Date	NA	Expiry Date of The Card
CardCVV	Varchar	200	CVV Number of the Card
CardStatus	Number	2	Status of Card

Table 24:tbl_path

Primary key:pathId

Foreign Key:TransId(tbl_Transport)

Field	DataType	Size	Description
PathId	int	20	Primary key
PathLogitude	number	12	Logitude of a point along the path
PathLatitude	number	12	Lattitude of a point along the path
Location	varchar	200	Current Location
PathtimeArrival	datetime	NA	Arrival time at the specific point
PathtimeDepature	datetime	NA	depature time at the specific point
PathStatus	int	2	Status

Table 25:tbl_FeedBack

Primary Key:FeedBackId

Foreign Key: RegId(Table : tbl_Register)

Name	Type	Size	Description
FeedbackId	Number	20	Primary key(auto increment)
RegId	Varchar	200	Foreign Key(Table : tbl_Registration)
FeedBackName	Varchar	200	Name of feedback
FeedbackDate	DateTime	NA	Date and Time of Feedback
FeedbackStatus	Boolean	NA	Status of Feedback

Table 26:tbl_FeedBackData **Primary Key:FeedBackDataId**

Foreign Key: FeedbackId(Table : tbl_Feedback)

Name	Type	Size	Description
FeedbackDataId	Number	20	Primary key(auto increment)
FeedbackId	Varchar	200	Foreign Key(Table : tbl_Feedback)
FeedBackDataQuestion	Varchar	200	Question for Feedback
FeedbackDataAnswer	Varchar	200	Answer For Feedback Question
FeedbackStatus	Boolean	NA	Status of Feedback