Relational Schema of Transport Management System

We are going to store the data regarding the shipments, the status of shipments, previously stored location and product details for making it easy for the user and reducing efforts of entering the details again and again.

Below given is the relational database schema for Transport Management System:

user_table

user_id	**int AI PK**
user_email	**varchar(50)**
user_password	**varchar(50)**
user_name	**varchar(50)**

status

status_id	**int PK**
status_name	**varchar(255)**

mas_accesorial

AccesorialID	int AI PK
AccesorialCode	char(3)
Description	varchar(30)
Status	bit(1)
MAS_Accesorial_Group_ID	int
IsSystem	bit(1)
Client_ID	int FK Ref to “mas_client” table

shipment

load_no	int AI PK
shipper_name	varchar(255)
shipper_country	varchar(255)
shipper_state	varchar(255)
shipper_postal	varchar(20)
consignee_name	varchar(255)
consignee_country	varchar(255)
consignee_state	varchar(255)
consignee_postal	varchar(20)
carrier_id	int
mode_of_shipment_id	int
equipment_id	int
weight	decimal(10,2)
payment_terms_id	int
product_class	int
stackable	tinyint(1)
hazardous	tinyint(1)
hazardous_specialist_contact	varchar(20)
PO_no	varchar(255)
SO_no	varchar(255)
shipment_value	decimal(10,2)
special_notes	text
freight_cost	decimal(10,2)

status	int

mas_servicelevel

ClientID	int FK Ref to “mas_client” table
ServiceLevelID	int AI PK
ServiceLevelCode	varchar(3)
Description	varchar(30)
Status	bit(1)
ServiceLevelGroupID	int

mode_of_shipments

id	**int AI PK**
name	**varchar(255)**

mas_product

product_id	**int AI PK**
length	**decimal(10,2)**
width	**decimal(10,2)**
height	**decimal(10,2)**
package_type	**varchar(255)**
stackable	**tinyint(1)**
hazardous	**tinyint(1)**
PCF	**decimal(10,2)**
class	**int**
value_per_unit	**decimal(10,2)**

mas_loc

id	int AI PK

company_name	varchar(255)
country	varchar(255)
state	varchar(255)
postal	varchar(20)

mas_client

ClientID	int AI PK
ClientName	varchar(100)
ShortName	varchar(5)
Address1	varchar(50)
Address2	varchar(50)
CityID	int
PostalID	int
IsActive	bit(1)
ActivateDate	datetime
DeactivateDate	datetime
IsCorporate	bit(1)
ContactName	varchar(30)
ContactEmail	varchar(200)
ContactPhone	varchar(15)
CorporateID	int
CurrencyID	int
StateID	int
BusinessSizeID	int
IsSystem	bit(1)
CreatedBy	varchar(50)

CreatedDate	datetime
ModifiedBy	varchar(50)
ModifiedDate	datetime
ContactFax	varchar(15)
ClientType	varchar(2)
CreditLimit	decimal(10,2)
LoadnoPrefix	varchar(5)
CalculateBenchMark	bit(1)
BillToCode	varchar(50)
BaseCurrencyCode	varchar(3)

mas_paymentterms

PaymentTermID	decimal(2,0) PK
Description	varchar(30)

Procedures:

AddLocation:

- It checks whether the company's location already exists in the "mas_loc" table.
- If it doesn't exist, then it adds the company details(company_name, country, state, postal) to the "mas_loc" table.

AddShipment:

- It takes shipment details from users and adds it to the "shipment" table.

AddProduct:

- It takes product details from the user and checks whether the product already exists in "mas_product".
- If it doesn't exist,then it adds the product details(length, width, height, package_type, stackable, hazardous, PCF, class, value_per_unit) to the "mas_product" table.