

Appendix C: Data Dictionary for Courier Service Management System**Staff Table**

Attribute Name	Description	Data Type, Length	Constraint	Null Value	Remarks
StaffID	A code that identify a staff	int	Primary Key	No	Unique identifier, auto-generated
StaffName	Name of the staff	varchar (50)		No	
LoginID	A unique alpha-numeric code used for logging in to the system	varchar (20)		No	e.g., FrontOffSG1, StationMgrSG, ABC1
Password	Staff's password	varchar (25)		No	Default password: p@55Staff
Appointment	Appointment of a staff in NPCS	varchar (50)		Yes	e.g. Front Office Staff, Station Manager, Delivery Man, Admin Manager
OfficeTelNo	Staff's office phone number, include country and area code	varchar (20)	Always start with a "+", no space or brackets between numbers.	Yes	e.g., +6598765432
Location	Office location - country name or combination of country and city name.	varchar (50)		Yes	e.g., Singapore, China - Beijing

ShippingRateTable

Attribute Name	Description	Length	Constraint	Value	Remarks
ShippingRateID	Identifier of each shipping rate record	int	Primary Key	No	Unique identifier, auto-generated
FromCity	The city where the parcel delivery is started	varchar (50)		No	e.g., Singapore
FromCountry	The country where the parcel delivery is started	varchar (50)		No	e.g., Singapore
ToCity	The destination city for the parcel delivery	varchar (50)		No	e.g., Hong Kong
ToCountry	The destination country for the parcel	varchar (50)		No	e.g., China
ShippingRate	The monetary amount for shipping per kg of parcal's weight.	money		No	Default value: 0
Currency	3-character currency code for the shipping rate	char (3)		No	Default value: SGD
TransitTime	The number day(s) required to ship a parcel from the starting location to the destination location	int		No	Default value: 1
LastUpdatedBy	Identifier of the staff who created or last updated the shipping rate record	int	Foreign Key -> Staff (StaffID)	No	Staff that are autorised to update the shipping rate is the admin manager

Parcel Table

Attribute Name	Description	Data Type, Length	Constraint	Null Value	Remarks
ParcelID	A code that identify a parcel for delivery	int	Primary Key	No	Unique identifier, auto-generated
ItemDescription	A brief description of the item(s) to be delivered in the parcel	varchar (255)		Yes	
SenderName	The name of the customer who send the	varchar (50)		No	
SenderTelNo	The phone number of the sender, include country and area code	varchar (20)	Always start with a "+", no space or brackets between numbers.	No	e.g., +6598765432

ReceiverName	The name of the person who will receive the parcel	varchar (50)		No	
ReceiverTelNo	The phone number of the receiver, include country and area code	varchar (20)	Always start with a "+", no space or brackets between numbers.	No	e.g., +6598765432
DeliveryAddress	The address where the parcel is to be delivered	varchar (255)		No	Can be a local or foreign address
FromCity	The city where the parcel delivery is started	varchar (50)		No	e.g., Singapore
FromCountry	The country where the parcel delivery is started	varchar (50)		No	e.g., Singapore
ToCity	The destination city for the parcel delivery	varchar (50)		No	e.g., Hong Kong
ToCountry	The destination country for the parcel	varchar (50)		No	e.g., China
ParcelWeight	The weight of the parcel after packing, in kg	float		No	Default value: 0.0
DeliveryCharge	The total fee a customer need to pay for the parcel delivery.	money		No	Default value: 0
Currency	3-character currency code for the delivery charge.	char (3)		No	Default value: SGD
TargetDeliveryDate	The date that parcel should reach the receiver's address	datetime		Yes	e.g. 30-Mar-2023
DeliveryStatus	Status of parcel delivery	char (1)	Values: 0 - pending delivery; 1 - delivery to destination in progress; 2 - delivery to airport in progress; 3 - delivery completed; 4 - delivery failed	No	Default value: 0
DeliveryManID	Staff ID of the last delivery man that has been assigned to deliver the parcel	int	Foreign Key -> Staff (StaffID)	Yes	

DeliveryHistory Table

Attribute Name	Description	Data Type, Length	Constraint	Null Value	Remarks
RecordID	History Record Identifier	int	Primary Key	No	Unique identifier, auto-generated
ParcelID	An identifier for the parcel, of which the history of delivery is tracked	int	Foreign Key -> Parcel (ParcelID)	No	
Description	Description of the delivery process, including the login account of staff who act on the process, date and time	varchar (255)		No	

PaymentTransaction Table

Attribute Name	Description	Data Type, Length	Constraint	Null Value	Remarks
TransactionID	Payment Transaction Identifier	int	Primary Key	No	Unique identifier, auto-generated
ParcelID	An identifier for the parcel, of which payment for delivery is made for	int	Foreign Key -> Parcel (ParcelID)	No	
AmtTran	Amount of payment transaction	money		No	
Currency	3-character currency code for the delivery charge.	char (3)		No	Default value: SGD

TranType	Transaction Type Code, payment can be made in cash or cash voucher	char (4)	CASH - cash payment VOUC - cash voucher payment	No	Default value: CASH
TranDate	Date of transaction	datetime		No	Date of transaction created. Auto-generated

DeliveryFailure Table

Attribute Name	Description	Data Type, Length	Constraint	Null Value	Remarks
ReportID	Delivery Failure Report Identifier	int	Primary Key	No	Unique identifier, auto-generated
ParcelID	An identifier for the parcel, of which failure in delivery is to be reported	int	Foreign Key -> Parcel (ParcelID)	No	
DeliveryManID	Staff ID of the delivery man who initiated the delivery failure report	int	Foreign Key -> Staff (StaffID)	No	
FailureType	A code that identify the delivery failure type	char (1)	Values: 1 - receiver not found; 2 - wrong delivery address; 3 - parcel damaged; 4 - other	No	
Description	Explanation for delivery failure	varchar (255)		No	
StationMgrID	Staff ID of the station manager who will follow up with the parcel sender for reconciliation	int	Foreign Key -> Staff (StaffID)	Yes	
FollowUpAction	Brief description of the follow up action after contacting the parcel sender	varchar (255)		Yes	
DateCreated	Date and time the delivery failure report is created	datetime		No	Auto-generated by database server

Member Table

Attribute Name	Description	Data Type, Length	Constraint	Null Value	Remarks
MemberID	A code that identify a registered customer (member)	int	Primary Key	No	Unique identifier, auto-generated
Name	Name of the member	varchar (50)		No	
Salutation	Member's salutation	varchar (5)		No	e.g., Ms, Mdm, Mr, Dr
TelNo	Member's phone number, include country and area code	varchar (20)	Always start with a "+", no space or brackets between numbers.	No	e.g., +6598765432
EmailAddr	Member's eMail address, used as login account	varchar (50)		No	
Password	Password for logging into the system	varchar (25)		No	
BirthDate	Member's date of birth	datetime		Yes	
City	Name of residential city	varchar (50)		Yes	e.g. Singapore, Beijing
Country	Name of residential country	varchar (50)		No	e.g. Singapore, China

FeedbackEnquiry Table

Attribute Name	Description	Data Type, Length	Constraint	Null Value	Remarks
FeedbackEnquiryID	Identifier of each feedback/enquiry record	int	Primary Key	No	Unique identifier, auto-generated

MemberID	A code that identify the member who give a feedback or make an enquiry	int	Foreign Key -> Member (MemberID)	No	
Content	Text entry for the feedback/enquiry	varchar (255)		No	
DateTimePosted	Date and time when the feedback/enquiry is posted	datetime		No	Auto-generated by database server
StaffID	Identifier of the staff who response to the feedback/enquiry	int	Foreign Key -> Staff (StaffID)	Yes	In this assignment, assume the station manager will response to feedback/enquiry
Response	Text entry from staff in response to the feedback/enquiry made by member	varchar (255)		Yes	
Status	Status of the feedback/enquiry record	char (1)	Values: 0 - pending response; 1 - closed	No	Default value: 0

CashVoucher Table

Attribute Name	Description	Data Type, Length	Constraint	Null Value	Remarks
CashVoucherID	Identifier of each voucher issued	int	Primary Key	No	Unique identifier, auto-generated
StaffID	Identifier of the staff who issue the cash voucher	int	Foreign Key -> Staff (StaffID)	No	Staff that are autorised to issue cash vouchers are the station manager and admin manager
Amount	Cash voucher monetary amount	money		No	
Currency	3-character currency code for the monetary amount of cash voucher	char (3)		No	Default value: SGD
IssuingCode	A code indicating the reason of issuing cash voucher	char (1)	Values: 1 - birthday celebration; 2 - compensation for failed delivery; 3 - other	No	
ReceiverName	Name of the receiver of the cash voucher	varchar (50)		No	
ReceiverTelNo	Phone number of the receiver of the cash voucher, include country and area code	varchar (20)	Always start with a "+", no space or brackets between numbers.	No	e.g., +6598765432
DateTimeIssued	Date and time when the cash voucher was issued	datetime		No	Auto-generated by database server
Status	Status of cash voucher collection	char (1)	Values: 0 - pending collection; 1 - collected	No	Default value: 0

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