# **Schema**

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| **Document Intention:** | The current SQL schema conforming to the ER Diagram. |
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| **Document Version Date-Stamp:** | 04/03/2023 |
| **Document Version:** | 2 |
| **Document Version History:** | |
| 1. Document Created. 2. Fixed issues. | |

/\* Complete set of DDL statements (CREATE TABLE statements) \*/

CREATE TABLE Staff (

StaffID int(10) NOT NULL AUTO\_INCREMENT,

StaffRole varchar(20) NOT NULL,

ComissionRate decimal(4, 2),

CurrencyName varchar(10),

Firstname varchar(15) NOT NULL,

Surname varchar(15) NOT NULL,

PhoneNumber varchar(15) NOT NULL,

EmailAddress varchar(25) NOT NULL,

DateOfBirth date NOT NULL,

Postcode varchar(7) NOT NULL,

HouseNumber varchar(4) NOT NULL,

StreetName varchar(20) NOT NULL,

HashedPassword varchar(255) NOT NULL,

PasswordSalt varchar(255) NOT NULL,

PRIMARY KEY (StaffID)

);

CREATE TABLE BlankType (

TypeNumber int(10) NOT NULL,

TypeDescription varchar(255) NOT NULL,

PRIMARY KEY (TypeNumber)

);

CREATE TABLE Blank (

BlankNumber varchar(10) NOT NULL,

StaffID int(10) NOT NULL,

BlankDescription varchar(255) NOT NULL,

Returned int(1) NOT NULL,

Blacklisted int(1) NOT NULL,

Void int(1) NOT NULL,

TypeNumber int(10) NOT NULL,

PRIMARY KEY (TypeNumber),

FOREIGN KEY (StaffID) REFERENCES Staff(StaffID),

FOREIGN KEY (TypeNumber) REFERENCES BlankType(TypeNumber)

);

CREATE TABLE DiscountPlan (

DiscountPlanID int(10) NOT NULL AUTO\_INCREMENT,

DiscountType varchar(8) NOT NULL,

DiscountPercentage decimal(4, 2) NOT NULL,

PRIMARY KEY (DiscountPlanID)

);

CREATE TABLE Customer (

CustomerID int(10) NOT NULL AUTO\_INCREMENT,

DiscountPlanID int(10),

CurrencyName varchar(10) NOT NULL,

DiscountAccumulation decimal(10, 2) NOT NULL,

Firstname varchar(15) NOT NULL,

Surname varchar(15) NOT NULL,

PhoneNumber varchar(15) NOT NULL,

EmailAddress varchar(25),

DateOfBirth date NOT NULL,

Postcode varchar(7) NOT NULL,

HouseNumber varchar(4) NOT NULL,

StreetName varchar(20) NOT NULL,

PRIMARY KEY (CustomerID),

FOREIGN KEY (DiscountPlanID) REFERENCES DiscountPlan(DiscountPlanID)

);

CREATE TABLE Sale (

BlankNumber varchar(10) NOT NULL,

CustomerID int(10) NOT NULL,

SaleType varchar(10) NOT NULL,

CommissonRate decimal(4, 2) NOT NULL,

SaleDate date NOT NULL,

DueDate date NOT NULL,

Cost decimal(7, 2) NOT NULL,

Tax decimal(6, 2) NOT NULL,

AdditionalTax decimal(6, 2),

PRIMARY KEY (BlankNumber),

FOREIGN KEY (BlankNumber) REFERENCES Blank(BlankNumber),

FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID)

);

CREATE TABLE ExchangeRate (

CurrencyName varchar(10) NOT NULL,

USDConversionRate decimal(8, 6) NOT NULL,

PRIMARY KEY (CurrencyName)

);

CREATE TABLE Transcation (

TranscationID int(10) NOT NULL AUTO\_INCREMENT,

BlankNumber varchar(10) NOT NULL,

CurrencyName varchar(10) NOT NULL,

AmountPaid decimal(11, 2) NOT NULL,

AmountPaidInUSD decimal(7, 2),

TransactionDate date NOT NULL,

PaymentType varchar(6) NOT NULL,

CardNumber int(19),

ChequeNumber int(6),

PRIMARY KEY (TranscationID),

FOREIGN KEY (BlankNumber) REFERENCES Sale(BlankNumber),

FOREIGN KEY (CurrencyName) REFERENCES ExchangeRate(CurrencyName)

);

CREATE TABLE Refund (

RefundID int(10) NOT NULL AUTO\_INCREMENT,

TranscationID int(10) NOT NULL,

RefudDate date NOT NULL,

LocalCurrencyRefundAmount decimal(11, 2) NOT NULL,

PRIMARY KEY (RefundID),

FOREIGN KEY (TranscationID) REFERENCES Transcation(TranscationID)

);

/\* 2 INSERT Statements \*/

INSERT INTO DiscountPlan VALUES (

DEFAULT,

"FIXED",

4.5

);

INSERT INTO Customer VALUES (

DEFAULT,

NULL,

"USD",

0,

"John",

"Doe",

"03648318215",

"JohnDoe@gmail.com",

"1965-05-12",

"RG3 2IK",

"233",

"Albert Road"

);

/\* 2 UPDATE STATEMENTS \*/

UPDATE Customer

SET DiscountPlanID = 1

WHERE CustomerID = 1;

UPDATE Customer

SET Postcode = "PG4 4JK", HouseNumber = "5A", StreetName = "St. Johns Street"

WHERE CustomerID = 1;

/\* 2 SELECT STATEMENTS \*/

SELECT Postcode, HouseNumber, StreetName

FROM Customer

WHERE DateOfBirth BETWEEN "1960-01-01" AND "1975-01-01";

SELECT COUNT(CustomerID) AS CustomersWithoutDiscountPlans

FROM Customer

WHERE DiscountPlanID IS NULL;

/\* 2 DELETE STATEMENTS \*/

DELETE FROM Customer

WHERE CustomerID = 1;

DELETE FROM DiscountPlan

WHERE DiscountPlanID = 1;

/\* SQL DML statements which are needed to create 2 non-trivial reports pertaining to the case-study \*/

/\* Report 1 would be an Interline Sales Report an Report 2 would be a Domestic Sales Report \*/

INSERT INTO Staff VALUES (

DEFAULT,

"Travel Agent",

3.50,

"GDP",

"Percy",

"Benedict",

"0421135672",

"Percy.Benedict@ATS.com",

"1997-03-21",

"AA1 1BV",

"120A",

"St. Peter Street",

"!'@DHsdHFeS2!",

"DD$%FdsNC2!Dnd"

);

INSERT INTO BlankType VALUES

(444, "Two leg interline journey."),

(101, "Single leg domestic journey.");

INSERT INTO Blank VALUES

("4441003489", 1, "London to Seoul, Seoul to Manila", 0, 0, 0, 444),

("4444343235", 1, "London to Tokoyo, Tokoyo to Dublin", 0, 0, 0, 444),

("4401344491", 1, "London to Pairs, Paris to Lyon", 0, 0, 0, 444),

("1015003455", 1, "Liverpool to London", 0, 0, 0, 101),

("1014044431", 1, "Manchester to Luton", 0, 0, 0, 101);

INSERT INTO Sale VALUES

("4441023489", 1, "INTERLINE", 3.50, "2023-02-01", "2023-03-02", 1000.50, 200.00, 30.00),

("4444343235", 1, "INTERLINE", 3.50, "2023-02-04", "2023-03-05", 500.00, 100.00, 56.00),

("4401343491", 1, "INTERLINE", 3.50, "2023-02-05", "2023-03-06", 350.50, 50.00, 20.00),

("1015023455", 1, "DOMESTIC", 3.50, "2023-02-25", "2023-03-26", 187.40, 65.00, NULL),

("1014054431", 1, "DOMESTIC", 3.50, "2023-02-25", "2023-03-26", 187.00, 75.00, NULL);

INSERT INTO Transcation VALUES

(1, "4441023489", "USD", 1230.50, NULL, "2023-02-04", "CASH", NULL, NULL),

(2, "4444332435", "USD", 656.00, NULL, "2023-02-06", "CARD", 353435218, NULL),

(3, "4401344491", "USD", 420.00, NULL, "2023-02-08", "CASH", NULL, NULL),

(4, "1015002455", "GDP", 252.40, 302.52, "2023-02-25", "CASH", NULL, NULL),

(5, "1014045431", "GDP", 262.00, 314.04, "2023-02-27", "CHEQUE", NULL, 978424910);