**Colloquium Ilyas Karimov**

**Problem statement.**

**GWDeals**: Design a database to support a discount shopping service. GWD provides discounts on items that students like to purchase. These could be special deals on textbooks, school supplies, computers, or even tickets to popular entertainment in town. Each day emails of the day’s deals are sent to subscribers, and subscribers can order online or they can order by telephone. Their orders are delivered by a delivery service such as UPS, or online for items such as tickets.

**Tables**

Items (ItemID, Parent\_ID)  
Tickets (TicketID, Event, Price, Discount, Num\_Available)

Books (BookID, Name, Price, Discount, Num\_Available)

Books\_ISBN(BOOKID, ISBN)

Techs (TechID, Company, Year, Storage, RAM, Price, Discount, Num\_Available)

Stationary (StaID, Name, Price, Discount, Discounted\_Price)

Customers (CustID, First\_Name, Last\_Name, Email, Sub\_Status)

Customers\_Phone\_Number(CustID, Phone\_Number)

Orders (OrderID, CustID, ItemID, EmpID, Received\_Date, Cust\_Address, )

Employees (EmpID, Last\_Name, First\_Name)

Send\_Messages(EmpID, CustID)  
Package (DelID, OrderID, TrackID, Courier\_Company)

**Chen Notation Diagram**

Diagram

Description automatically generated

**Crow’s Foot**

Diagram

Description automatically generated

**SQL Statements**

DROP TABLE BOOKS;

DROP TABLE BOOKS\_ISBN;

DROP TABLE CUSTOMERS;

DROP TABLE CUSTOMERS\_PHONE\_NUMBER;

DROP TABLE EMPLOYEES;

DROP TABLE ITEMS;

DROP TABLE SEND\_MESSAGES;

DROP TABLE STATIONARY;

DROP TABLE TECHS;

DROP TABLE TICKETS;

CREATE TABLE Customers

(

CustID INT NOT NULL,

Email VARCHAR(60) NOT NULL,

Sub\_Status INT NOT NULL,

First\_Name FLOAT NOT NULL,

Last\_Name FLOAT NOT NULL,

PRIMARY KEY (CustID)

);

CREATE TABLE Employees

(

EmpID INT NOT NULL,

First\_Name VARCHAR(60) NOT NULL,

Last\_Name VARCHAR(60) NOT NULL,

PRIMARY KEY (EmpID)

);

CREATE TABLE Package

(

DelID INT NOT NULL,

OrderID INT NOT NULL,

TrackID INT NOT NULL,

Courier\_Company VARCHAR(60) NOT NULL,

PRIMARY KEY (DelID),

UNIQUE (OrderID)

);

CREATE TABLE send\_messages

(

EmpID INT NOT NULL,

CustID INT NOT NULL,

PRIMARY KEY (EmpID, CustID),

FOREIGN KEY (EmpID) REFERENCES Employees(EmpID),

FOREIGN KEY (CustID) REFERENCES Customers(CustID)

);

CREATE TABLE Customers\_Phone\_Number

(

Phone\_Number INT NOT NULL,

CustID INT NOT NULL,

PRIMARY KEY (Phone\_Number, CustID),

FOREIGN KEY (CustID) REFERENCES Customers(CustID)

);

CREATE TABLE Items

(

ItemID INT NOT NULL,

Parent\_ID INT NOT NULL,

Price FLOAT NOT NULL,

Discount\_Percentage INT NOT NULL,

CustID INT,

PRIMARY KEY (ItemID),

FOREIGN KEY (CustID) REFERENCES Customers(CustID)

);

CREATE TABLE Books

(

BookID INT NOT NULL,

Name VARCHAR(60) NOT NULL,

Num\_Available INT NOT NULL,

ItemID INT NOT NULL,

PRIMARY KEY (BookID),

FOREIGN KEY (ItemID) REFERENCES Items(ItemID)

);

CREATE TABLE Techs

(

TechID INT NOT NULL,

Company VARCHAR(60) NOT NULL,

Year INT NOT NULL,

Storage INT NOT NULL,

RAM INT NOT NULL,

Num\_Available INT NOT NULL,

ItemID INT NOT NULL,

PRIMARY KEY (TechID),

FOREIGN KEY (ItemID) REFERENCES Items(ItemID)

);

CREATE TABLE Stationary

(

StatID INT NOT NULL,

Name VARCHAR(60) NOT NULL,

ItemID INT NOT NULL,

PRIMARY KEY (StatID),

FOREIGN KEY (ItemID) REFERENCES Items(ItemID)

);

CREATE TABLE Orders

(

OrderID INT NOT NULL,

CustID INT NOT NULL,

ItemID INT NOT NULL,

EmpID INT NOT NULL,

Received\_Date DATE NOT NULL,

Cust\_Address VARCHAR(60) NOT NULL,

Order\_Price FLOAT NOT NULL,

Delivery\_Status INT NOT NULL,

EmpID INT NOT NULL,

DelID INT NOT NULL,

PRIMARY KEY (OrderID),

FOREIGN KEY (EmpID) REFERENCES Employees(EmpID),

FOREIGN KEY (DelID) REFERENCES Package(DelID)

);

CREATE TABLE Books\_ISBN

(

ISBN INT NOT NULL,

BookID INT NOT NULL,

PRIMARY KEY (ISBN, BookID),

FOREIGN KEY (BookID) REFERENCES Books(BookID)

);

CREATE TABLE Tickets

(

TicketID INT NOT NULL,

Event VARCHAR(60) NOT NULL,

Num\_Available INT NOT NULL,

ItemID INT NOT NULL,

PRIMARY KEY (TicketID),

FOREIGN KEY (ItemID) REFERENCES Items(ItemID)

);

INSERT INTO CUSTOMERS VALUES(1001, 'ILYASKARIMOV.F@GMAIL.COM' ,1, 'ILYAS', 'KARIMOV');

INSERT INTO CUSTOMERS VALUES(1002, 'MS.TAGIYEVA@GMAIL.COM', 0, 'NAZRIN', 'TAGIYEVA');

INSERT INTO CUSTOMERS VALUES(1003, 'TTTLF1982@GMAIL.COM', 1, 'CASANDRA', 'MANAFOVA');

INSERT INTO CUSTOMERS VALUES(1004, 'JAMELEE@GMAIL.COM', 1, 'JAMELEE', 'KARIMOVA');

INSERT INTO CUSTOMERS\_PHONE\_NUMBER VALUES(1001, 994505550298);

INSERT INTO CUSTOMERS\_PHONE\_NUMBER VALUES(1001, 994506220298);

INSERT INTO CUSTOMERS\_PHONE\_NUMBER VALUES(1002, 994501325612);

INSERT INTO CUSTOMERS\_PHONE\_NUMBER VALUES(1003, 994507512314);

INSERT INTO CUSTOMERS\_PHONE\_NUMBER VALUES(1004, 994505729852);

INSERT INTO CUSTOMERS\_PHONE\_NUMBER VALUES(1004, 994555729852);

INSERT INTO ITEMS VALUES(1000001, 110001, 1800, 10);

INSERT INTO ITEMS VALUES(1000002, 120001, 2.5, 0);

INSERT INTO ITEMS VALUES(1000003, 130001, 120, 10);

INSERT INTO ITEMS VALUES(1000004, 130002, 80, 5);

INSERT INTO ITEMS VALUES(1000005, 140001, 1.5, 0);

INSERT INTO ITEMS VALUES(1000006, 110002, 799, 0);

INSERT INTO ITEMS VALUES(1000007, 140002, 15, 12);

SELECT \* FROM ITEMS

ORDER BY ITEMID;

INSERT INTO BOOKS VALUES(140001, 'A NIGHTMARE ON ELM STREET', 12, 1000005);

INSERT INTO BOOKS VALUES(140002, '13 REASONS WHY', 13, 1000007);

INSERT INTO BOOKS\_ISBN VALUES(9789083123145, 140001);

INSERT INTO BOOKS\_ISBN VALUES(9789083123146, 140001);

INSERT INTO BOOKS\_ISBN VALUES(9785120621323, 140002);

SELECT \* FROM BOOKS;

SELECT \* FROM BOOKS\_ISBN

ORDER BY BOOKID;

INSERT INTO TICKETS VALUES (120001, 'BLACK SWAN BALLET', 0, 10000002);

INSERT INTO TECHS VALUES (110001, 'ASUS', 2016, 256, 8, 2, 10000001);

INSERT INTO TECHS VALUES (110002, 'IPAD', 2020, 512 , 6, 5, 10000006);

INSERT INTO STATIONARY VALUES(130001, 'SHARPENER', 10000003 );

INSERT INTO STATIONARY VALUES(130002, 'SHARPENER2', 10000004 );

INSERT INTO EMPLOYEES VALUES(1, 'ORUJOVA', 'SONA');

INSERT INTO EMPLOYEES VALUES(2, 'NURADDINOVA', 'AYTAJ');

INSERT INTO SEND\_MESSAGES VALUES (1,1002);

INSERT INTO SEND\_MESSAGES VALUES (2, 1001);

INSERT INTO ORDERS VALUES (90000002, 1004, 1000002,2, TO\_DATE('2021-03-01','YYYY-MM-DD'), '52 NIZAMI', 2.5\*0, 0);

INSERT INTO ORDERS VALUES (90000003, 1001, 1000003,1, TO\_DATE('2021-02-01','YYYY-MM-DD'), '13 AGHAZADA', 120\*0.9, 1);

INSERT INTO ORDERS VALUES (90000004, 1002, 1000004,1, TO\_DATE('2021-03-02','YYYY-MM-DD'), '42 SAFARLI', 80\*0.85, 1);

INSERT INTO ORDERS VALUES (90000005, 1001, 1000005,2, TO\_DATE('2021-03-03','YYYY-MM-DD'), '66 IBRAHIMOV', 15\*0.88, 1);

INSERT INTO PACKAGE VALUES (99990001, 90000001, 12312351, 'CAMEX');

INSERT INTO PACKAGE VALUES (99990002, 90000002, 51235123, 'FEDEX');

INSERT INTO PACKAGE VALUES (99990003, 90000003, 51252345, 'CANEX');

SELECT \* FROM ORDERS

ORDER BY ORDERID;