

Databasae

Lesson 5

Creating the Database



Name

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Class

1I

Department

Information Technology

Study Program

D4 Informatics Engineering

Exercise 8

Objectives:

At the end of the activity, the students must be able to:

1. Create tables and name fields appropriately.
2. Define appropriate data type and field properties.
3. Identify Primary Keys.
4. Apply validation rule and text for selected fields.

Instructions:

1. Create the tables below and name fields appropriately using your mysql workbench.
2. Identify appropriate data type and field size of fields.
3. Assign primary keys.

```
1 CREATE DATABASE data_db;
2 USE data_db;
3
4 CREATE TABLE tblCountryName
5 (
6 CountryID          INT          NOT NULL PRIMARY KEY,
7 CountryName        VARCHAR(255) NOT NULL,
8 ExportCoffeeBags    DECIMAL(11, 2) NULL,
9 ExportTeaPounds     DECIMAL(11, 2) NULL
10 );
11
12 CREATE TABLE tblInventory
13 (
14 InventoryID INT          NOT NULL PRIMARY KEY AUTO_INCREMENT,
15 ItemID      INT          NOT NULL,
16 Caffeinated ENUM ('Yes', 'No') NOT NULL,
17 Price       DECIMAL(11, 2) NOT NULL,
18 OnHand      DECIMAL(11, 2) NOT NULL
19 );
20
21 CREATE TABLE tblOrder
22 (
```

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23 OrderNo      INT      NOT NULL PRIMARY KEY AUTO_INCREMENT,
24 OrderDate    DATE      NOT NULL,
25 CustomerNo   INT      NOT NULL,
26 Wholesale    INT      NOT NULL,
27 SalesRepNo   INT      NOT NULL
28 );
29
30 CREATE TABLE tblOrderLine
31 (
32 OrderId      INT          NOT NULL,
33 InventoryId  INT          NOT NULL,
34 Quantity     INT          NOT NULL,
35 UnitPrice    DECIMAL(11, 2) NOT NULL,
36 Discount     DECIMAL(5, 2) NOT NULL
37 );
38
39 CREATE TABLE tblEmployeeTitle
40 (
41 TitleID INT          NOT NULL PRIMARY KEY AUTO_INCREMENT,
42 Title   VARCHAR(255) NOT NULL
43 );
44
45 CREATE TABLE tblSalesTaxRate
46 (
47 StateAbbreviation CHAR(2)          NOT NULL PRIMARY KEY,
48 StateName          VARCHAR(255)    NOT NULL,
49 TaxRate            DECIMAL(5, 2)   NOT NULL,
50 Population          INT            NOT NULL,
51 LandArea           DECIMAL(11, 2)  NOT NULL
52 );
53
54 CREATE TABLE tblCustomer
55 (
56 CustomerID INT          NOT NULL PRIMARY KEY AUTO_INCREMENT,
57 CompanyName VARCHAR(255) NOT NULL,
58 Contact     VARCHAR(255) NOT NULL,
59 Address     VARCHAR(255) NOT NULL,
60 City        VARCHAR(255) NOT NULL,
61 State       CHAR(2)      NOT NULL,
62 ZipCode     CHAR(5)      NOT NULL,
63 PhoneNumber CHAR(14)     NOT NULL,
64 FaxNumber   CHAR(14)     NOT NULL,

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65 CreditLimit DECIMAL(11, 2) NULL
66 );
67
68 CREATE TABLE tblEmployee
69 (
70 EmployeeID      INT                NOT NULL PRIMARY KEY AUTO_INCREMENT,
71 FirstName       VARCHAR(255)       NOT NULL,
72 LastName        VARCHAR(255)       NOT NULL,
73 Phone           CHAR(8)             NOT NULL,
74 TitleID         INT                NOT NULL,
75 CommissionRate  DECIMAL(5, 2)      NOT NULL,
76 HireDate        DATE               NOT NULL,
77 BirthDate       DATE               NOT NULL,
78 Gender          ENUM ('F', 'M')    NOT NULL,
79 Notes           TEXT               NOT NULL
80 );
81
82 CREATE TABLE tblInventoryDescription
83 (
84 ItemID          INT                NOT NULL PRIMARY KEY,
85 Name            VARCHAR(255)       NOT NULL,
86 BeverageType    CHAR(1)           NOT NULL,
87 Flavored        ENUM ('Yes', 'No') NOT NULL,
88 CountryID       INT                NOT NULL,
89 Description     TEXT               NOT NULL
90 );
91
92 ALTER TABLE tblOrderLine
93     ADD FOREIGN KEY (OrderId) REFERENCES tblOrder (OrderNo);
94 ALTER TABLE tblOrderLine
95     ADD FOREIGN KEY (InventoryId) REFERENCES tblInventory
96     ↪ (InventoryID);
97 ALTER TABLE tblEmployee
98     ADD FOREIGN KEY (TitleID) REFERENCES tblEmployeeTitle (TitleID);
99 ALTER TABLE tblInventory
100    ADD FOREIGN KEY (ItemID) REFERENCES tblInventoryDescription
101    ↪ (ItemID);
102 ALTER TABLE tblInventoryDescription
103    ADD FOREIGN KEY (CountryID) REFERENCES tblCountryName (CountryID);
104
105 INSERT INTO tblCountryName(CountryID, CountryName, ExportCoffeeBags,
106     ↪ ExportTeaPounds)

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104 VALUES (0, 'n/a or unknown', NULL, NULL),
105         (1, 'Afghanistan', NULL, NULL),
106         (2, 'Albania', NULL, NULL),
107         (3, 'Algeria', NULL, NULL),
108         (4, 'American Samoa', NULL, NULL),
109         (5, 'Andorra', NULL, NULL),
110         (6, 'Angola', 3500000, NULL),
111         (7, 'Anguilla', NULL, NULL),
112         (8, 'Antarctica', NULL, NULL),
113         (9, 'Antigua and Barbuda', NULL, NULL),
114         (10, 'Argentina', NULL, NULL);
115
116 INSERT INTO tblOrder(OrderNo, OrderDate, CustomerNo, Wholesale,
    ↪ SalesRepNo)
117 VALUES (14606, '2000-12-10', 30473, 1, 1695),
118         (14607, '2000-12-16', 30581, 1, 1528),
119         (14608, '2000-12-17', 35249, 1, 1528),
120         (14609, '2000-12-18', 33974, 2, 3700),
121         (14610, '2000-12-19', 35201, 1, 4112),
122         (14611, '2000-12-21', 32350, 2, 4029),
123         (14612, '2000-12-21', 34666, 2, 4058),
124         (14613, '2000-12-22', 34458, 2, 4012),
125         (14614, '2000-12-22', 31932, 2, 3692),
126         (14615, '2000-12-22', 30744, 2, 3700);
127
128 INSERT INTO tblEmployeeTitle(TitleID, Title)
129 VALUES (1, 'Sales Trainee'),
130         (2, 'Sales Associate'),
131         (3, 'Senior Sales Associate'),
132         (4, 'Sales Manager'),
133         (5, 'Senior Sales Manager'),
134         (6, 'Division Sales Manager'),
135         (7, 'Regional Manager'),
136         (8, 'Division Manager'),
137         (9, 'National Sales Manager');
138
139 INSERT INTO tblSalesTaxRate(StateAbbreviation, StateName, TaxRate,
    ↪ Population, LandArea)
140 VALUES ('AK', 'Alaska', 0.00, 524000.00, 589757.00),
141         ('AL', 'Alabama', 4.00, 4102000.00, 51609.00),
142         ('AR', 'Arkansas', 4.50, 2395000.00, 53104.00),
143         ('AZ', 'Arizona', 5.00, 3489000.00, 113909.00),

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144      ('CA', 'California', 7.25, 28314000.00, 158693.00),
145      ('CO', 'Colorado', 3.00, 3301000.00, 104247.00),
146      ('CT', 'Connecticut', 6.00, 3233000.00, 5009.00),
147      ('DE', 'Delaware', 0.00, 660000.00, 2057.00),
148      ('FL', 'Florida', 6.00, 12335000.00, 58560.00),
149      ('GA', 'Georgia', 4.00, 6342105.00, 58876.00),
150      ('HI', 'Hawaii', 4.00, 1098000.00, 6450.00),
151      ('IA', 'Iowa', 5.00, 2834000.00, 56290.00),
152      ('ID', 'Idaho', 5.00, 1003000.00, 83557.00),
153      ('IL', 'Illinois', 6.25, 11614000.00, 56400.00);
154
155  INSERT INTO tblCustomer(CustomerID, CompanyName, Contact, Address,
    ↪ City, State, ZipCode, PhoneNumber, FaxNumber,
156                          CreditLimit)
157  VALUES (30121, 'Fairfield Communities Inc.', 'Best, F. Stanley', '2800
    ↪ Cantrell Road', 'Little Rock', 'AR', '72202',
158          '(501) 555-6079', '(501) 555-6111', NULL),
159  (30125, 'Alamo Group Inc.', 'Maul, Duane A.', '1502 East Walnut',
    ↪ 'Seguin', 'TX', '78155', '(210) 555-1483',
160          '(210) 555-1539', 15600),
161  (30129, 'Kiwi International Air Lines Inc.', 'Rigas, Alan J.',
    ↪ 'Demishphere Center', 'Newark', 'NJ', '07114',
162          '(201) 555-1311', '(201) 555-1395', NULL),
163  (30132, 'Republic Bancorp Inc.', 'Murray, T. Peter', '1070 East
    ↪ Main Street', 'Owosso', 'MI', '48867',
164          '(517) 555-7364', '(517) 555-7430', NULL),
165  (30136, 'Browne Bottling Co.', 'Shelton, Carl E.', '411 First
    ↪ Avenue South', 'Oklahoma City', 'OK', '73102',
166          '(405) 555-1168', '(405) 555-1228', NULL),
167  (30139, 'Cavco Industries Inc.', 'Golkin, David', '422 Wards
    ↪ Corner Road', 'Phoenix', 'AZ', '85012',
168          '(602) 555-6141', '(602) 555-6232', 41200),
169  (35494, 'National Intergroup Inc.', 'Jones, Richard A.', '1220
    ↪ Senlac Drive', 'Carrolton', 'TX', '75006',
170          '(214) 555-4810', '(214) 555-4900', NULL);
171
172  INSERT INTO tblEmployee(EmployeeID, FirstName, LastName, Phone,
    ↪ TitleID, CommissionRate, HireDate, BirthDate, Gender,
173                          Notes)
174  VALUES (1301, 'Patti', 'Stonesifer', '555-5193', 2, 5.00,
    ↪ '1996-07-06', '1966-03-10', 'F',

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175         'She has worked hard the whole career. She embodies a true
        ↪ type A personality. Part of the promotion \'97 team!'),
176 (1364, 'Kevin', 'Pruski', '555-5645', 1, 4.00, '2000-12-01',
        ↪ '1979-01-26', 'M',
177         'New to the organization but is showing promise. Kevin has
        ↪ made several new contacts.'),
178 (1528, 'Luca', 'Pacioli', '555-5876', 2, 6.00, '1995-08-26',
        ↪ '1950-05-06', 'M',
179         'Talkative and a bit slow at times. He shows great potential.
        ↪ However, he insists on using old fashioned methods, and I
        ↪ think he would be happier as an accountant!'),
180 (1695, 'Ted', 'Nagasaki', '555-5021', 1, 4.00, '2000-01-28',
        ↪ '1977-04-10', 'M',
181         'Ted can be molded into a fine salesperson if closely
        ↪ supervised.'),
182 (2240, 'Sharon', 'Stonely', '555-5602', 3, 15.00, '1988-11-05',
        ↪ '1961-05-03', 'F',
183         'Acting department head for a number of quarters, Sharon shows
        ↪ initiative and is a sure bet for making salesperson of the
        ↪ year!'),
184 (2318, 'Helen', 'Hunter', '555-5018', 2, 8.00, '1993-11-16',
        ↪ '1954-01-26', 'F',
185         'Witty and fun, Helen always makes her clients feel
        ↪ comfortable.');
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186
187 INSERT INTO tblInventoryDescription(ItemID, Name, BeverageType,
        ↪ Flavored, CountryID, Description)
188 VALUES (134, 'China Yunnan', 't', 'No', 2,
189         'Black tea; tea from this province in southwestern China was
        ↪ first exported over 1,000 years ago. Originally a source
        ↪ of green tea, Yunnan in recent years has developed a black
        ↪ tea that is lighter and more delicately flavored than some
        ↪ of the traditional South China Congous.'),
190 (137, 'Darjeeling Namring', 't', 'No', 3,
191         'Black tea; Assam, known as Darjeeling. Darjeeling is grown in
        ↪ the foothills of the Himalayas at elevations of 1,000 to
        ↪ 6,000 feet. It has a complex aroma with a clear, brisk,
        ↪ and penetrating flavor. Darjeeling is truly one of the
        ↪ finest teas in the world!'),
192 (140, 'Kalgar-India', 't', 'No', 1, 'Black tea;'),
193 (146, 'Mocha', 'c', 'No', 0, 'Bold, earthy, mild acidity. One of
        ↪ Arabia's oldest and best known coffees.');
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194      (176, 'New Zealand Sunnyslopes', 't', 'No', 4, 'Fruit blend
      ↪ Tisanes;'),
195      (179, 'Passionfruit Fruit Blend', 't', 'No', 0, 'Fruit blend
      ↪ Tisanes;'),
196      (182, 'Columbia Bucaramanga Especial', 'c', 'Yes', 2,
197          'Full bodied, medium acidity, nutty undertones; a soft-bean
      ↪ coffee with some of the character of fine Sumatran
      ↪ coffees.'),
198      (185, 'Columbia Supremo', 'c', 'No', 2,
199          'Full bodied; walnutty flavor. The top of the line for
      ↪ Colombian arabicas.'),
200      (212, 'Pan Fired Green', 't', 'No', 0, 'Green tea;'),
201      (251, 'Lemon Grass', 't', 'No', 4, 'Herbal Tisanes; cut, sifted'),
202      (254, 'Chamomile Blossom', 't', 'No', 2,
203          'Herbal Tisanes; whole flowers. Sweet and complex. Grown on
      ↪ the plains of the Nile valley. The world\'s best
      ↪ Chamomile!'),
204      (257, 'Hibiscus', 't', 'No', 7, 'Herbal Tisanes; whole flowers'),
205      (260, 'Espresso Roast', 'c', 'No', 0, 'Intense, hearty,
      ↪ satisfying.'),
206      (263, 'Mexican Coatepec', 'c', 'No', 8,
207          'It has a fine acidity, delicate body, and pleasantly mellow
      ↪ flavor. Fine Mexican coffees such as Coatepec now compare
      ↪ well with those from Central America.'),
208      (266, 'Kona Extra Fancy', 'c', 'No', 6,
209          'Mild, smooth, and delicately aromatic. A mellow roast. This
      ↪ coffee is processed using the wet method to separate the
      ↪ cherry from the bean. Doing so produces a bright, lively
      ↪ acidity. Grown on the slopes of Mauna Loa on the Kona
      ↪ district of the island of H'),
210      (269, 'Passionfruit with Flowers', 't', 'Yes', 7, 'Natural
      ↪ flavored tea;');
211
212
213      INSERT INTO tblInventory(InventoryID, ItemID, Caffeinated, Price,
      ↪ OnHand)
214      VALUES (1101, 134, 'Yes', 8.10, 512.00),
215              (1102, 137, 'No', 5.30, 3190.00),
216              (1103, 140, 'No', 7.70, -130.00),
217              (1104, 176, 'No', 5.30, 3380.00),
218              (1105, 179, 'No', 7.60, 3300.00),
219              (1106, 182, 'Yes', 7.40, 1130.00),

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220      (1107, 185, 'Yes', 8.80, 315.00),
221      (1108, 212, 'Yes', 10.30, 443.00),
222      (1109, 251, 'Yes', 8.00, 354.00),
223      (1110, 254, 'No', 13.70, 354.00);
224
225  INSERT INTO tblOrderLine(OrderId, InventoryId, Quantity, UnitPrice,
    ↪  Discount)
226  VALUES (14606, 1101, 7, 8.00, 0.00),
227          (14607, 1102, 16, 8.10, 5.00),
228          (14608, 1103, 8, 3.80, 0.00),
229          (14608, 1104, 19, 8.40, 5.00),
230          (14608, 1105, 6, 5.60, 0.00),
231          (14609, 1106, 18, 8.90, 5.00),
232          (14609, 1107, 3, 5.30, 0.00),
233          (14609, 1108, 15, 4.70, 15.00),
234          (14609, 1109, 2, 5.60, 0.00),
235          (14610, 1110, 17, 7.90, 5.00),
236          (14610, 1103, 14, 6.40, 15.00),
237          (14610, 1104, 15, 7.20, 15.00),
238          (14610, 1105, 3, 5.30, 0.00),
239          (14610, 1106, 18, 7.40, 5.00),
240          (14611, 1108, 18, 13.70, 10.00),
241          (14611, 1109, 2, 325.00, 0.00);
```