**Step 5.1 Update the data dictionary and list of assumptions as needed.  For each table, write the table name and write out the names, data types and sizes of all the data items, and identify any constraints, using the conventions of MySql.**

|  |  |
| --- | --- |
| **DATA DICTIONARY** | |
| **ITEM** | **DEFINITION** |
| albumCover | Material of cover in album |
| albumPages | material of pages in album |
| albumPrice | price of album |
| albumType | type of album (digital, hard copy) |
| amtDue | amount owed from client to business |
| amtPaid | amount client has already paid towards event |
| clientAreaCode | client area code |
| clientCity | current city client lives in |
| clientFirstName | client first name |
| clientId | unique client Id |
| clientLastName | client last name |
| clientPhoneNumber | client 7 digit phone number |
| clientState | current state client lives in |
| clientStreet | current street client lives on |
| clientZip | current zip code client lives in |
| contractNo | uniques contract number |
| dateDelivered | date package was delievered to client |
| datePaid | date client paid full price of event and packages |
| empAreaCode | employee area code |
| empCity | current city employee lives in |
| empFirstName | employee first name |
| empId | unique employee Id |
| empId1 | unique employee Id1 of whom is attending event |
| empId2 | unique employee Id2 of whom is attending event |
| empLastName | employee last name |
| empPhoneNumber | employee phone number |
| empState | current state employee lives in |
| empStreet | current street employee lives on |
| empZip | current zip code employee lives in |
| eventCost | total cost of event |
| eventDate | date of event |
| eventDuration | total time of event in minutes |
| eventLocation | geographic location of event |
| eventName | unique name of event |
| eventTime | time of day event is |
| eventType | what kind of event (wedding, graduation, etc) |
| meetDate | meeting date of when client met with emplyee rep |
| meetTime | meeting time of when client met with emplyee rep |
| num11x14 | number of 11x14 photos ordered |
| num16x20 | number of 16x20 photos ordered |
| num5x7 | number of 5x7 photos ordered |
| numWallet | number of wallet photos ordered |
| payType | payement type (cash, credit, debit) |
| pkgNo | uniques number for client photo package |
| proofNo | unique proof number for photo |
| quality | quality of photo |
| quantity | quantity of each photo |
| repName | representative name who met with client in initial meeting |
| size | size of package needed |

Recall the Relational Schema Submitted in Part D

Client (clientId, clienFirstName, clientLastName), clientStreet, clientCity, clientState, clientZip, clientAreaCode, clientPhoneNumber)

Meeting (*clientId*, meetDate, meetTime, repName)

Photographer (empId, empFirstName, empLastName, empStreet, empCity, empState, empZip, empAreaCode, empNumber)

Booking (*clientId*, bookingDate, bookingTime, duration, type, *empId1, empId2*)

PackageMenu (packageNo, numWallet, num5by7, num8by10, num11by14, num16by20, albumType, albumPages, albumCover, price)

Job (*contractNo*, type, eventName, location, *clientId ,* date, time, duration, cost, *empId1, empId2,* *packageNo*, totalCost, amtPaid, amtDue)

Proof (*contractNo*, proofNo, quality)

Order (orderNo, dateOrdered, totalAmount, *pkgNo, contractNo*)

OrderItem (*orderNo, proofNo*, size, quantity, dateDelivered)

Payment (*contractNo*, datePaid, payType, amount)

TABLE CLIENT

|  |  |  |  |
| --- | --- | --- | --- |
| clientId | VARCHAR2 | 10 | PRIMARY KEY |
| clientFirstName | VARCHAR2 | 20 |  |
| clientLastName | VARCHAR2 | 20 |  |
| clientStreet | VARCHAR2 | 50 |  |
| clientCity | VARCHAR2 | 20 |  |
| clientState | CHAR | 2 |  |
| clientZip | CHAR | 5 |  |
| clientAreaCode | CHAR | 3 |  |
| clientPhone | CHAR | 7 |  |

TABLE MEETING

|  |  |  |  |
| --- | --- | --- | --- |
| clientId | VARCHAR2 | 10 | (clientId, meetDate) PRIMARY KEY |
| meetDate | DATE |  | (clientId, meetDate) PRIMARY KEY |
| meetTime | TIME |  |  |
| repName | VARCHAR2 | 20 |  |

TABLE PHOTOGRAPHER

|  |  |  |  |
| --- | --- | --- | --- |
| empId | VARCHAR2 | 10 | PRIMARY KEY |
| empFirstName | VARCHAR2 | 20 |  |
| empLastName | VARCHAR2 | 20 |  |
| empStreet | VARCHAR2 | 50 |  |
| empCity | VARCHAR2 | 20 |  |
| empState | CHAR | 2 |  |
| empZip | CHAR | 5 |  |
| empAreaCode | CHAR | 3 |  |
| empPhoneNumber | CHAR | 7 |  |

TABLE BOOKING

|  |  |  |  |
| --- | --- | --- | --- |
| clientId | VARCHAR2 | 10 | (*clientId,* bookingDate) PRIMAR KEY |
| bookingDate | DATE |  | (*clientId,* bookingDate) PRIMAR KEY |
| bookingTime | TIME |  |  |
| duration | CHAR | 3 |  |
| type | VARCHAR2 | 20 |  |
| *empId1* | VARCHAR2 | 10 | FOREIGN KEY |
| *empId2* | VARCHAR2 | 10 | FOREIGN KEY |

TABLE PACKAGE

|  |  |  |  |
| --- | --- | --- | --- |
| pkgNo | VARCHAR2 | 10 | PRIMARY KEY |
| numWallet | NUMBER | 8, 2 |  |
| num5x7 | NUMBER | 8, 2 |  |
| num8x10 | NUMBER | 8, 2 |  |
| num11x14 | NUMBER | 8, 2 |  |
| num16x20 | NUMBER | 8, 2 |  |
| albumType | VARCHAR2 | 20 |  |
| albumPages | VARCHAR2 | 20 |  |
| albumCover | VARCHAR2 | 20 |  |
| price | NUMBER | 8, 2 |  |

TABLE JOB

|  |  |  |  |
| --- | --- | --- | --- |
| *contractNo* | VARCHAR2 | 10 | PRIMARY KEY, FORGEIN KEY |
| Type | VARCHAR2 | 20 |  |
| eventName | VARCHAR2 | 20 |  |
| location | VARCHAR2 | 20 |  |
| *clientId* | VARCHAR2 | 10 | FORGIEN KEY |
| date | DATE |  |  |
| time | TIME |  |  |
| duration | NUMBER | 8, 2 |  |
| cost | NUMBER | 8, 2 |  |
| *empId1* | VARCHAR2 | 10 | FORGIEN KEY |
| *empId2* | VARCHAR2 | 10 | FORGIEN KEY |
| *pkgNo* | VARCHAR2 | 10 | FORGIEN KEY |
| totalCost | NUMBER | 8, 2 |  |
| amtPaid | NUMBER | 8, 2 | DEFAULT 0.00 |
| amtDue | NUMBER | 8, 2 |  |

TABLE PROOF

|  |  |  |  |
| --- | --- | --- | --- |
| *contractNo* | VARCHAR2 | 10 | (*contractNo,*proofNo) PRIMARY KEY |
| proofNo | VARCHAR2 | 10 | (*contractNo,*proofNo) PRIMARY KEY |
| quality | VARCHAR2 | 15 |  |

TABLE ORDER

|  |  |  |  |
| --- | --- | --- | --- |
| orderNo | VARCHAR2 | 10 | PRIMARY KEY |
| dateOrdered | DATE |  |  |
| totalAmount | NUMBER | 8, 2 |  |
| *pkgNo* | VARCHAR2 | 10 | FORGEIN KEY |
| *contractNo* | VARCHAR2 | 10 |  |

TABLE ORDERITEM

|  |  |  |  |
| --- | --- | --- | --- |
| *orderNo* | VARCHAR2 | 10 | (*orderNo, proofNo) FORGEIN KEYS,* (orderNo, proofNo) PRIMARY KEYS |
| *proofNo* | VARCHAR2 | 10 | (*orderNo, proofNo) FORGEIN KEYS,* (orderNo, proofNo) PRIMARY KEYS |
| size | NUMBER | 8, 2 |  |
| quantity | NUMBER | 8, 2 |  |
| dateDelivered | DATE |  |  |

TABLE PAYMENT

|  |  |  |  |
| --- | --- | --- | --- |
| *contractNo* | VARCHAR2 | 10 | (*contractNo,* datePaid*) ContractNo FORGIEN KEY*  datePaid PRIMARY KEY |
| datePaid | DATE |  | datePaid PRIMARY KEY |
| payType | VARCHAR2 | 20 |  |
| amount | NUMBER | 8, 2 |  |

**Step 5.2 Write SQL statements to create all tables needed to implement the design**

CREATE TABLE Client(

clientId VARCHAR2(10),

clientFirstName VARCHAR2(20),

clientLastName VARCHAR2(20),

clientStreet VARCHAR2(50),

clientCity VARCHAR2(20),

clientState CHAR(2),

clientZip CHAR(5),

clientAreaCode CHAR(3),

clientPhone CHAR(7),

CONSTRAINT Client\_clientId\_pk PRIMARY KEY (clientId)

);

CREATE TABLE Meeting(

clientId VARCHAR2(10),

meetDate DATE,

meetTime TIME,

repName VARCHAR2(20),

CONSTRAINT Meeting\_clientId\_meetDate\_pk PRIMARY KEY (clientId, meetDate),

CONSTRAINT Meeting\_clientId\_fk FOREIGN KEY (clientId),

REFERENCES Client(clientId)

);

CREATE TABLE Photographer(

empId VARCHAR2(10),

empFirstName VARCHAR2(20),

empLastName VARCHAR2(20),

empStreet VARCHAR2(50),

empCity VARCHAR2(20),

empState CHAR(2),

empZip CHAR(5),

empAreaCode CHAR(3),

empPhoneNumber CHAR(7),

CONSTRAINT Photographer\_empId\_pk PRIMARY KEY (empId)

);

CREATE TABLE Booking (

clientId VARCHAR2(10),

bookingDate DATE,

bookingTime TIME,

duration CHAR(3),

type VARCHAR2(20),

empId1 VARCHAR2(10),

empId2 VARCHAR2(10),

CONSTRAINT Booking\_clientId\_bookingDate\_pk PRIMARY KEY (clientId, bookingDate),

CONSTRAINT Booking\_empId1\_fk FOREIGN KEY (empId1),

CONSTRAINT Booking\_empId2\_fk FOREIGN KEY (empid2),

REFERENCES Photographer (empId1, empId2)

);

CREATE TABLE Package (

pkgNo VARCHAR2(10),

numWallet NUMBER(8,2),

num5x7 NUMBER(8,2),

num8x10 NUMBER(8,2),

num11x14 NUMBER(8,2),

num16x20 NUMBER(8,2),

albumType VARCHAR2(20),

albumPages VARCHAR2(20),

albumCover VARCHAR2(20),

price NUMBER(8, 2),

CONSTRAINT Package\_pkgNo\_pk PRIMARY KEY (pkgNo)

);

CREATE TABLE Job (

contractNo VARCHAR2(10),

type VARCHAR2(20),

eventName VARCHAR2(20),

location VARCHAR2(20),

clientId VARCHAR2(10),

date DATE,

time TIME,

duration NUMBER(8, 2),

cost NUMBER(8, 2),

empId1 VARCHAR2(10),

empId2 VARCHAR2(10),

pkgNo VARCHAR2(10),

totalCost NUMBER(8, 2),

amtPaid NUMBER(8, 2),

amtDue NUMBER(8, 2),

CONSTRAINT Job\_contractNo\_pk PRIMARY KEY (contractNo),

CONSTRAINT Job\_clientId\_fk FOREIGN KEY (clientId),

CONSTRAINT Job\_empId1\_fk FOREIGN KEY (empId1),

CONSTRAINT Job\_empId2\_fk FOREIGN KEY (empId2),

REFERENCES Client (clientId, empId1, empId2),

CONSTRAINT Job\_pkgNo\_fk FOREIGN KEY (pkgNo),

REFERENCES Order (pkgNo)

);

CREATE TABLE Proof (

contractNo VARCHAR2(10),

proofNo VARCHAR2(10),

quality VARCHAR2(50),

CONSTRAINT Proof\_contractNo\_proofNo\_pk PRIMARY KEY (contractNo, proofNo),

CONSTRAINT Proof\_contractNo\_fk FOREIGN KEY (contractNo),

REFERENCES Job (contractNo)

);

CREATE TABLE Order (

orderNo VARCHAR2(10),

dateOrdered DATE,

totalAmount NUMBER(8, 2),

pkgNo VARCHAR2(10),

contractNo VARCHAR2(10),

CONSTRAINT Order\_orderNo\_pk PRIMARY KEY (orderNo),

CONSTRAINT Order\_pkgNo\_fk FOREIGN KEY (pkgNo),

CONSTRAINT Order\_contractNo\_fk FOREIGN KEY (contractNo),

REFERENCES Job (contractNo),

REFERENCES Order (pkgNo)

);

CREATE TABLE OrderItem (

orderNo VARCHAR2(10),

proofNo VARCHAR2(10),

size NUMBER(8, 2),

quantity NUMBER(8, 2),

dateDelivered DATE,

CONSTRAINT OrderItem\_orderNo\_proofNo\_pk PRIMARY KEY (orderNo, proofNo),

CONSTRAINT OrderItem\_orderNo\_fk FOREIGN KEY (orderNo),

REFERENCES Job (contractNo),

CONSTRAINT OrderItem\_proofNo\_fk FOREIGN KEY (proofNo),

REFERENCES Proof (proofNo)

);

CREATE TABLE Payment (

contractNo VARCHAR2(10),

datePaid DATE,

payType VARCHAR2(10),

amount NUMBER(8, 2),

CONSTRAINT Payment\_contractNo\_datePaid\_pk PRIMARY KEY (contractNo, datePaid),

CONSTRAINT Payment\_contractNo\_fk FOREIGN KEY (contractNo)

REFERENCES Job (contractNo),

);

**Step 5.4  Write at least five Insert statements for  five records in each table, preserving all constraints.  Put in enough data to demonstrate how the database will function**

INSERT INTO Client VALUES('0001234531', 'Alejandro', 'Rodriguez’, '1102 Beech Street', 'San Diego', 'CA','11675','457', '5757677');

INSERT INTO Client VALUES('0001249076', 'Mariam', 'Choudhry’, '565 Main Street', 'San Francisco’, 'CA','11676','457', '5767667');

INSERT INTO Client VALUES('0001251437', 'Barry', 'Berkeley’, '75 Hampton Drive', 'Sacramento', 'CA','11774','457', '5784457');

INSERT INTO Client VALUES('0001260037', 'Christina', 'Jones’, '102 Delhigh Court', 'San Diego', 'CA','11675','457', '5737097');

INSERT INTO Client VALUES('0001271430', 'Jacob', 'Smith’, '62 Elm Street', 'Palm Springs', 'CA','11723','457', '4657637');

INSERT INTO Meeting VALUES(‘0001234531’, ’10-Jun-2015’, ’13:30:00’, ‘John Hamm’);

INSERT INTO Meeting VALUES(‘0001249076’, ’19-Jun-2015’, ’15:40:00’, ‘John Hamm’);

INSERT INTO Meeting VALUES(‘0001251437’, ’10-Jul-2015’, ’10:30:00’, ‘Stacy Jolene’);

INSERT INTO Meeting VALUES(‘0001260037’, ’16-Aug-2015’, ’12:30:00’, ‘John Hamm’);

INSERT INTO Meeting VALUES(‘0001271430’, ’24-Aug-2015’, ’09:40:00’, ‘Stacy Jolene’);

INSERT INTO Photographer VALUES(‘1110001234’, ‘Heather’, ‘Khalifa’, ‘17 High Hedges Street’, ‘Saint James’, ‘CA’, ‘11459’, ‘566’, ‘6783476’);

INSERT INTO Photographer VALUES(‘1110001235’, ‘Chelsea’, ‘Kats’, ’88 Ninth Street’, ‘Sacramento’, ‘CA’, ‘11774’, ‘457’, ‘6459468’);

INSERT INTO Photographer VALUES(‘1110001236’, ‘Terry’, ‘Richardson’, ’63 Bonds Drive’, ‘San Diego’, ‘CA’, ‘11675’, ‘457’, ‘6783476’);

INSERT INTO Photographer VALUES(‘1110001237’, ‘Louie’, ‘Olivier’, ‘345 Ludlow Court’, ‘Palm Springs’, ‘CA’, ‘11723’, ‘457’, ‘8738646’);

INSERT INTO Photographer VALUES(‘1110001238’, ‘Hugo’, ‘Johnson’, ‘412 Joplin Boulevard’, ‘Sacramento’, ‘CA’, ‘11774’, ‘457’, ‘7583385’);

INSERT INTO Booking VALUES ('0001234531', ‘04-Jan-2016’, ‘16:15:00’, ‘5Hr’, ‘wedding’, ‘1110001234’, ‘1110001235’);

INSERT INTO Booking VALUES ('0001249076', ‘07-Jul-2015’, ‘18:30:00’, ‘1Hr’, ‘portrait’, ‘1110001234’, null);

INSERT INTO Booking VALUES ('0001251437', ‘07-Jul-2015’, ‘12:00:00’, ‘2Hr’, ‘graduation’, ‘1110001236’, ‘1110001238’);

INSERT INTO Booking VALUES ('0001260037', ‘10-Aug-2015’, ‘15:00:00’, ‘2Hr’, ‘birthday, ‘1110001234’, ‘1110001236’);

INSERT INTO Booking VALUES ('0001271430', ‘17-Nov-2015’, ‘9:30:00’, ‘1Hr’, ‘portrait’, ‘1110001235’, null);

INSERT INTO Package VALUES (‘9090677700’, ‘1.00’, ‘4.00’, ‘2.00’, ‘5.00’, ‘1.00’, ‘Classic 3-Ring’, ‘10’, ‘leather’, ‘105.00’);

INSERT INTO Package VALUES (‘9090677711’, ‘2.00’, ‘2.00’, ‘2.00’, ‘2.00’, ‘2.00’, ‘Memo, ‘15’, ‘Croc’, ‘120.00’);

INSERT INTO Package VALUES (‘9090677712’, ‘1.00’, ‘8.00’, ‘2.00’, ‘1.00’, ‘2.00’, ‘Scrapbook’, ‘11’, ‘Linen’, ‘50.00’);

INSERT INTO Package VALUES (‘9090677732’, ‘4.00’, ‘4.00’, ‘1.00’, ‘5.00’, ‘4.00’, ‘4-Ring’, ‘20’, ‘leather’, ‘112.00’);

INSERT INTO Package VALUES (‘9090677755’, ‘3.00’, ‘4.00’, ‘5.00’, ‘3.00’, ‘2.00’, ‘Specialty, ‘40’, ‘Croc’, ‘200.00’);

INSERT INTO Job VALUES (‘4546708865’, ‘wedding’, ‘JeraiWed’, ‘Venetian’, ‘0001234531’, ‘04-Jan-2016’, ‘16:15:00’, ‘5Hr’, ‘400.00’, ‘1110001234’, ‘1110001235’, ‘9090677700’, ‘505.00’, ‘205.00’, ‘300.00’);

INSERT INTO Job VALUES (‘4546708866’, ‘portrait’, ‘HyattPort’, ‘Office’, '0001249076', ‘07-Jul-2015’, ‘18:30:00’, ‘1Hr’, ‘200.00’, ‘1110001234’, null, ‘9090677711’, ‘320.00’, ‘100.00’, ‘220.00’);

INSERT INTO Job VALUES (‘4546708867’, ‘graduation’, ‘LawGrad’, ‘Touro’, '0001251437', ‘07-Jul-2015’, ‘12:00:00’, ‘2Hr’, ‘500.00’, ‘1110001236’, ‘1110001238’, ‘9090677712’, ‘550.00’, ‘150.00’, ‘400.00’);

INSERT INTO Job VALUES (‘4546708868’, ‘birthday’, ‘WoodBirth’, ‘Prime’, '0001260037', ‘10-Aug-2015’, ‘15:00:00’, ‘2Hr’, ‘100.00’, ‘1110001234’, ‘1110001236’, ‘9090677732’, ‘212.00’, ‘62’, ‘150.00’);

INSERT INTO Job VALUES (‘4546708869’, ‘portrait’, ‘GoldPort’, ‘Office’, '0001271430', ‘17-Nov-2015’, ‘9:30:00’, ‘1Hr’, ‘200.00’, ‘1110001235’, null, ‘9090677755’, ‘400.00’, ‘50.00’, ‘350.00’);

INSERT INTO Proof VALUES (‘4546708865’, ‘1112225656’, ‘Good’);

INSERT INTO Proof VALUES (‘4546708866’, ‘1112225767’, ‘Excellent’);

INSERT INTO Proof VALUES (‘4546708867’, ‘1112225858’, ‘Excellent’);

INSERT INTO Proof VALUES (‘4546708868’, ‘1112225959’, ‘Good’);

INSERT INTO Proof VALUES (‘4546708869’, ‘1112221010’, ‘Fair’);

INSERT INTO Order VALUES (‘2324252627’, ’14-Feb-2016’, ‘505.00’, ‘9090677700’, ‘4546708865’);

INSERT INTO Order VALUES (‘2323267600’, ’10-Aug-2015’, ‘320.00’, ‘9090677711’, ‘4546708866’);

INSERT INTO Order VALUES (‘2324200451’, ’02-Sept-2015’, ‘550.00’, ‘9090677712’, ‘4546708867’);

INSERT INTO Order VALUES (‘2324233990’, ’20-Oct-2015’, ‘212.00’, ‘9090677732’, ‘4546708868’);

INSERT INTO Order VALUES (‘2324256349’, ’09-Jan-2016’, ‘400.00’, ‘9090677755’, ‘4546708869’);

INSERT INTO OrderItem VALUES (‘2324252627’, ‘4546708865’, ‘8x10’, ‘2.00’, ’01-Mar-2016’);

INSERT INTO OrderItem VALUES (‘2323267600’, ‘4546708866’, ‘5x7’, ‘2.00’, ’11-Sept-2015’);

INSERT INTO OrderItem VALUES (‘2324200451’, ‘4546708867’, ‘8x10’, ‘2.00’, ’28-Sept-2015’);

INSERT INTO OrderItem VALUES (‘2324233990’, ‘4546708868’, 11x14’, ‘5.00’, ’05-Nov-2015’);

INSERT INTO OrderItem VALUES (‘2324256349’, ‘4546708869’, ‘16x20’, ‘2.00’, ’10-Feb-2016’);

INSERT INTO Payment VALUES (‘4546708865’, ’14-Feb-2016’, ‘Cash’, ‘200’.00);

INSERT INTO Payment VALUES (‘4546708866’, ’10-Aug-2015’, ‘Check’, ‘50’.00);

INSERT INTO Payment VALUES (‘4546708867’, ’02-Sept-2015’, ‘Visa’, ‘100’.00);

INSERT INTO Payment VALUES (‘4546708868’, ’20-Oct-2015’, ‘Visa’, ‘110’.00);

INSERT INTO Payment VALUES (‘4546708869’, ’09-Jan-2016’, ‘Cash’, ‘70’.00);