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| --- |
|  |
|  |
|  | /\*A customer has a unique customer identifier, a name, a billing address (street, city, state, and zip), |
|  | and a collection of submitted work orders. |
|  | \*/ |
|  |  |
|  | CREATE TABLE Customer ( |
|  | customerId CHAR(8) PRIMARY KEY, |
|  | name VARCHAR(45), |
|  | billAddress VARCHAR(45), |
|  | collectionId CHAR(8) |
|  | ); |
|  |  |
|  | /\*\* |
|  | A work order has a unique work order number, a creation date, a date required, a completion date, a customer, an optional supervising employee, |
|  | a work address (street, city, state, zip), and a set of tasks. |
|  | \*/ |
|  |  |
|  | CREATE TABLE WorkOrder ( |
|  | orderId CHAR(8) PRIMARY KEY, |
|  | createDate DATE, |
|  | complDate DATE, |
|  | workAddress VARCHAR(45), |
|  | customerId CHAR(8) NOT NULL, |
|  | colTaskId CHAR(8) NOT NULL, |
|  | FOREIGN KEY (customerId) REFERENCES Customer (customerId) |
|  |  |
|  |  |
|  | ); |
|  |  |
|  | /\*\* |
|  | Each task has a unique task identifier, a task name, an hourly rate, and estimated hours. |
|  | Tasks are standardized across work orders so that the same task can be performed on many work orders. |
|  | \*/ |
|  |  |
|  | CREATE TABLE Task ( |
|  | taskId CHAR(8) PRIMARY KEY, |
|  | name VARCHAR(45), |
|  | rate INT, |
|  | estHours INT |
|  | ); |
|  |  |
|  | /\*\* |
|  | Each task on a work order has a status (not started, in progress, or completed), actual hours, and a completion date. |
|  | The completion date is not entered until the status changes to complete. |
|  | \*/ |
|  |  |
|  | CREATE TABLE WorkTasksCollection ( |
|  |  |
|  | wtId CHAR(8) PRIMARY KEY, |
|  | orderId CHAR(8) NOT NULL, |
|  | taskId CHAR(8) NOT NULL, |
|  | status SET('not started', 'in progress', 'completed'), |
|  | actualHours INT, |
|  | completionDate DATE, |
|  |  |
|  | FOREIGN KEY (orderId) REFERENCES WorkOrder (orderId), |
|  | FOREIGN KEY (taskId) REFERENCES Task (taskId) |
|  |  |
|  | ); |
|  |  |
|  | /\*\* |
|  | The data about materials include a unique material identifier, a name, and an estimated cost. |
|  | A material can appear on multiple work orders. |
|  | \*/ |
|  |  |
|  | CREATE TABLE Material ( |
|  | mtId CHAR(8) PRIMARY KEY, |
|  | name VARCHAR(45), |
|  | cost INT |
|  | ); |
|  |  |
|  | /\*\* |
|  | Each work order uses a collection of materials. A material used on a work order includes |
|  | the estimated quantity of the material and the actual quantity of the material used. |
|  | \*/ |
|  |  |
|  | CREATE TABLE MaterialsCollection ( |
|  | collId CHAR(8) PRIMARY KEY, |
|  | mtId CHAR(8) NOT NULL, |
|  | orderId CHAR(8) NOT NULL, |
|  | estQuantity INT, |
|  | actQuantity INT, |
|  | FOREIGN KEY (orderId) REFERENCES WorkOrder (orderId), |
|  | FOREIGN KEY (mtId) REFERENCES Material (mtId) |
|  | ); |
|  |  |