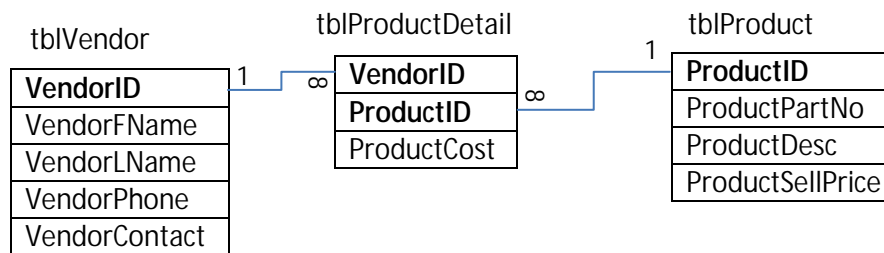DML – Data Manipulation Language
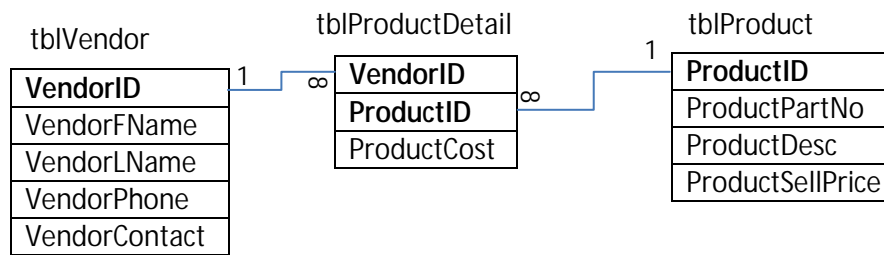
SELECT INSERT UPDATE DELETE	**Data Manipulation Language (DML)** Retrieves data from the database, enters new rows, changes existing data, removes unwanted rows, inserts or changes rows based on a conditional match.

Examples for the <u>INSERT</u> statement:

tblVendor   tblProductDetail   tblProduct

tblVendor		tblProductDetail		tblProduct
VendorID	1 ∞	**VendorID**	∞ 1	**ProductID**
VendorFName		**ProductID**		ProductPartNo
VendorLName		ProductCost		ProductDesc
VendorPhone				ProductSellPrice
VendorContact				

Insert a row into a table.	**INSERT INTO** *tblProduct* **(** *ProductID, ProductPartNo, ProductDesc, ProductSellPrice* **)** **VALUES (***6, 'A101', 'Acme Road Runner Catcher', 10.50***);**
Insert Row – same as above but without the column names – use only if you are populating all columns.	**INSERT INTO** *tblProduct* **VALUES (***6, 'A101', 'Acme Road Runner Catcher', 10.50***);**
Insert with NULLs	**INSERT INTO** *tblVendor* **(** *VendorID, VendorFName, VendorLName, VendorPhone,VendorContact* **)** **VALUES (***10, NULL, NULL, '416-555-1234','Acme'***);**
Insert a single quote ('). Notice I used 2 single quotes after O to get O'Malley	**INSERT INTO** *tblVendor* **VALUES (***9, 'Kyle', 'O''Malley', NULL,NULL***);**
Insert a double quote (").	**INSERT INTO** *tblProduct* **VALUES (***13, 'B234','The "BEST" Product',24.99***);**

Using an insert with a select statement – This example creates a backup of the Product table.	**INSERT INTO** *tblProduct_BKP*
	  SELECT * **FROM** *tblProduct*
	  WHERE *ID* **IN (SELECT** *ID*
	  FROM *tblProduct***)** ;

Examples for the UPDATE statement:

tblVendor

tblVendor
VendorID
VendorFName
VendorLName
VendorPhone
VendorContact

tblProductDetail

tblProductDetail
VendorID
ProductID
ProductCost

tblProduct

tblProduct
ProductID
ProductPartNo
ProductDesc
ProductSellPrice

1   ∞   ∞   1

Change the data in a single row.	**UPDATE** *tblProduct* **SET** *ProductSellPrice = 20.99* **WHERE** *ProductID = 2;*
Change data in more than one row using a WHERE clause and updated data using a formula.	**UPDATE** *tblProduct* **SET** *ProductSellPrice = ProductSellPrice * 1.20* **WHERE** *ProductSellPrice >= 20;*
Change more than one column of data.	**UPDATE** *tblProduct* **SET** *ProductSellPrice = 20.99, ProductPartNo='A102', ProductDesc='Laptop'* **WHERE** *ProductID = 2;*

Examples for the DELETE statement:

tblVendor

VendorID
VendorFName
VendorLName
VendorPhone
VendorContact

tblProductDetail

VendorID
ProductID
ProductCost

tblProduct

ProductID
ProductPartNo
ProductDesc
ProductSellPrice
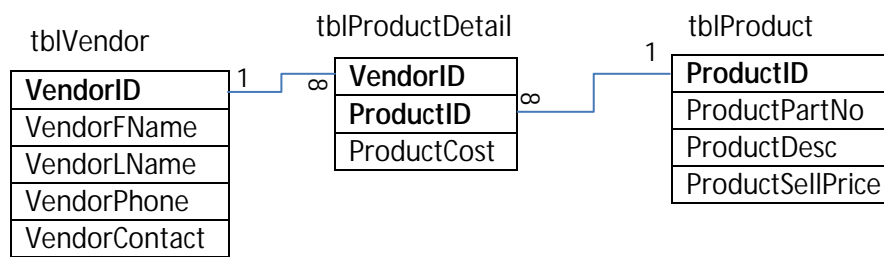
Delete a single record	**DELETE FROM** *tblProduct* **WHERE** *ProductID = 10*;
Delete more than one record	**DELETE FROM** *tblProduct* **WHERE** *ProductSellPrice* **Between** *10* **AND** *20* ;