

You are to write SQL scripts and PHP programs for a software inventory system based on the following sample data.

### Software Database Table

id	Title	Vendor	Version	Purchase Date	Unit Cost (\$)	# of Licenses
1	MAC OS	Apple	10.12.6	8/27/2017	0	32
2	Xcode	Apple	9.1 (9B55)	10/31/2017	0	24
3	Android Studio	Google	3.0	10/25/2017	0	28
4	Oracle Database	Oracle	12c	07/22/2014	500	18
5	Visual Studio	Microsoft	2017	3/7/2017	99.99	100

**Part 1.** Write SQL commands to do the following ...

- Create a table called software in your database (`ca86_??`) on MySQL server based on the sample data.
- Insert the above sample data into the table.
- Save the SQL commands and the putty output to a file named `softwaredata.txt`.

**Part 2.** Write a PHP program called `list.php` to display software inventory information in a table format.

**Part 3.** Create a new software entry form `newsoftware.html` for user to enter new software information. Call `insert.php` when the form is submitted.

**Part 4.** Write a PHP program called `insert.php` to retrieve the new software information from the form and add it into the database. (Validation code is not required.)

### Submission:

- Please test** your program and **upload these files ...**
  - `newsoftware.html`,
  - `list.php`,
  - `insert.php` and
  - `softwaredata.txt`

... to the server's "**Final**" folder (you may need to create the folder).
- Then provide a link to run your program from your home page.
- Last, **send me a message** in Final Exam assignment on Canvas.

## Screen Shots

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**Software Inventory - New Entry**

Title

Vendor

Version

Purchase Date  (YYYY-MM-DD format)

Unit Cost \$

Number of Licenses

[Add New Software](#)

NewSoftware.html screen shot

**Software Inventory - Entry Results**

Visual Studio software has been added to the inventory.

[→ View Inventory List](#)

Insert.php screen shot

### Software Inventory List

id	Title	Vendor	Version	Purchase Date	Price	Number of Licenses
1	MAC OS	Apple	10.12.6	2017-08-27	0.00	32
2	Xcode	Apple	9.1 (9B55)	2017-10-31	0.00	24
2	Creative Suite	Adobe	CC 2017	2016-11-02	360.00	24
3	Android Studio	Google	3.0	2017-10-25	0.00	28
4	Oracle Database	Oracle	12c	2014-07-22	500.00	18
6	Visual Studio	Microsoft	2017	2017-03-07	99.99	100
7	Eclipse Oxygen	Eclipse Foundation	4.7	2017-06-28	0.00	10

List.php screen shot

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## Hints and Suggestions

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### ID

Let MySQL assign the ID automatically by using the AUTO\_INCREMENT feature. When you enter the initial data, you can assign the first few IDs manually if loading from a file, or you can leave them blank (or NULL) if you are using INSERT INTO TABLE from the MySQL command line.

### Purchase Date

Ideally, you would store the Purchase Date in the MySQL database as a DATE type. We have not discussed the DATE type. You can research it on your own for more information. The bottom line is that if you use the DATE type, you must enter each date in the format YYYY-MM-DD. In your form, you may include a note that the user must enter the date in this format. (See the screen shot above.)

I will test your program while entering dates in this format.

If you don't put such a note on your program, then the user will not know how to enter the date. I will mark you down a point for having an unfriendly form. You could use the placeholder attribute.

An alternative, which I **do not** suggest you do, is to have separate fields for year, month, and day. Then you'll put them together into a string joined with hyphens. You have to make sure the day and month have leading zeros if necessary (that is, January is 01, not just 1). This is time consuming and **not necessary** if you put the note indicating how the date is formatted.

### Versions

Note that the versions might have multiple periods (dots), letters, spaces, and other non-numeric characters. So, the versions **should not** be stored as a numeric type and there should not be any restrictions on what the user can enter as a version identifier.

### Title and Vendor

Note that the title, vendor, and version can all have spaces. **Do not** add any validation that prevents the user from entering a vendor that has a space in it.

### Price and number of licenses

Note that the price can have dollars and cents. Use an appropriate numeric type. We always print prices with two numbers after the decimal point. Never print a price like 22.50 as 22.5. Note that the two numeric fields are displayed **right justified**. The purpose is to align the decimal points and align all the numbers. Definitely check that your chosen font **keeps the numbers lined up** (some fonts do not). When in doubt, use a monospace font like Courier, Courier New, Lucida Console, Monaco, or Consolas.

### Validation

I highly suggest you do not add any validation at all to this project. If you add any validation that prevents me from entering valid data, I will mark you down severely. Valid actions include: leaving the price, version, purchase date, or number of licenses blank; putting spaces in the vendor or title name; entering a price as a whole number or with only one number after the decimal point; entering a price of zero (0); entering a number of licenses as zero (0). Do not prevent me from doing any of these things.