Name: Please put Last name (Lastname, Firstname)____Eng, Chris_____

Download this Word file, edit it, upload this document with answers typed in this document. I like PDF files the best, but if you have problems with creating PDF's then submit a Word Document to the assignment box.

Notice the functional dependencies are provided for you in each question. Study the functional dependencies provided before you attempt your answer for each question.

For each problem below, normalize the relations into the second Normal Form 2nf.

Be sure to use proper relational notation (relational scema):

RELATION(pkattr, attribute1, attribute2, attribute3, *fkattr*)

Include reference statements for foreign keys (Must Exist In or M.E.I.) statements

Problem #1

EMPLOYEE2

Emp_ID	Name	Dept_Name	Salary	Course_Title	Date_Completed
100	Margaret Simpson	Marketing	48,000	SPSS	6/19/200X
100	Margaret Simpson	Marketing	48,000	Surveys	10/7/200X
140	Alan Beeton	Accounting	52,000	Tax Acc	12/8/200X
110	Chris Lucero	Info Systems	43,000	SPSS	1/12/200X
110	Chris Lucero	Info Systems	43,000	C++	4/22/200X
190	Lorenzo Davis	Finance	55,000		
150	Susan Martin	Marketing	42,000	SPSS	6/19/200X
150	Susan Martin	Marketing	42,000	Java	8/12/200X

EMPLOYEE2(Emp_ID, Name, Dept_Name, Salary, Course_Title, Date_Completed)

Functional Dependencies:

Emp_ID, Course_Title ➜ Name, Dept_Name, Salary, Date_Completed

EmpID ➜ Name, Dept_Name, Salary

YOUR ANSWER (in relationa scema format) is?   What is your M.E.I. statement ?

Employee(EmpID, Name, Dept_Name, Salary)

Course(Emp_ID, Course_title, Date_completed)

      - - - - - -

Employee.EmpID == Course.EmpID

Employee.EmpID M.E.I. Course.EmpID

Problem #2

ENGINEER-SERVICE(<u>empID</u>, firstname, lastname, email, <u>serviceID</u>, servicename)

Functional Dependencies:

empID, serviceID ➜ firstname, lastname, email, servicename

empID ➜ firstname, lastname, email

email ➜ empID, firstname, lastname

serviceID ➜ servicename

YOUR ANSWER (in relationa scema format) is? **What is your M.E.I. statement**

Engineer(<u>empID,</u> firstname, lastname, email)
Service(<u>serviceID</u>, <u>empID</u> ,servicename)
       - - -

Engineer.empID = service.empID
Engineer.empID MEI service.empID

Problem #3

Movie

Title	Year	Length	Type	Studio	Star
Star Wars	1977	124	Color	Fox	C. Fisher
Star Wars	1977	124	Color	Fox	M. Hamil
Star Wars	1977	124	Color	Fox	H. Ford
Alien	1979	117	Color	Paramount	S. Weaver
Aliens	1986	137	Color	Paramount	S. Weaver
Alien3	1992	113	Color	Paramount	S. Weaver
Annie Hall	1977	93	Color	Warner Bros	W. Allen
Annie Hall	1977	93	Color	Warner Bros	D. Keaton
Chaplin	1992	124	B&W	MGM	R. Downey
Dr. Strangelove	1964	93	B&W	Paramount	R. Torn
Restoration	1995	117	Color	Miramax	R. Downey

MOVIE(Title, Year, Length, Type, Studio, Star)

Functional Dependencies:

Title, Star ➔ Year, Length, Type Studio

Title ➔ Year, Length, Type, Studio

YOUR ANSWER (in relationa scema format) is? **What is your M.E.I. statement?**

Movies(Title, year, length, type, studio)

StarsIN(Star, Title)

       - - -

Movies.Title MEI starsIN.Title

Problem #4

Is This a relation?_____YES

What is/are the Primary key? ___Supplier ID ProductName_____ It appears to have 2 fields (COMPOSTE KEY)

Normalize the folling table. Use Relational Schema! Please include a proper M.E.I.

```
+-----------+------------------------+---------------+------------------------+-----------+------------------+-----------+
| SupplierID | SupplierName          | Phone         | Email                  | ProductID | ProductName      | UnitPrice |
+-----------+------------------------+---------------+------------------------+-----------+------------------+-----------+
|     00001 | Acme Corporation       | (585)475-6369 | sales@acme.com         |         1 | Chocolates       |     10.50 |
|     00001 | Acme Corporation       | (585)475-6369 | sales@acme.com         |         2 | Iphone           |   1000.50 |
|     00001 | Acme Corporation       | (585)475-6369 | sales@acme.com         |         3 | Toy rockets      |    975.50 |
|     00001 | Acme Corporation       | (585)475-6369 | sales@acme.com         |         4 | Basketball       |     22.99 |
|     00002 | Hobby Lobby            | (555)233-5555 | sales@hobby_lobby.com  |         1 | Cricut Explore Air |  250.00 |
|     00002 | Hobby Lobby            | (555)233-5555 | sales@hobby_lobby.com  |         2 | Chalk Paint      |      9.95 |
|     00002 | Hobby Lobby            | (555)233-5555 | sales@hobby_lobby.com  |         3 | Ink Pad          |      4.50 |
|     00010 | Dicks Sporting Goods   | (585)555-1234 | sales@sporting_goods.com |       1 | Baseball Glove   |     42.00 |
|     00010 | Dicks Sporting Goods   | (585)555-1234 | sales@sporting_goods.com |       2 | Baseball HAT     |     22.99 |
|     00010 | Dicks Sporting Goods   | (585)555-1234 | sales@sporting_goods.com |       3 | Baseball Bat     |     31.99 |
+-----------+------------------------+---------------+------------------------+-----------+------------------+-----------+
10 rows in set (0.00 sec)

mysql>
```

Hobby(SupplierID, SupplierName, phone, email, ProductID, ProductName, unitPrice)

Supplier(SupplierID, SupplierName, phone email)

Product(ProductID, SupplierID, ProductName, UnitPrice)

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Extra Work Space if needed on page 5 of 5

Extra Work Space if needed below