# CCINFOM

Module 2 Lesson 02: Characteristics of most information requirements.

Estimated Time to consume material – 1.0 Hour

## Requirements for this lesson

1. Installed MYSQL and MYSQL Workbench
2. Downloaded MYSQL Script File (ccinfomdemo.sql and dbworld.sql)

## Characteristics of most information requirements

In the previous lesson in SQL, we write SQL statements coming from a single table to fulfill the information requirements. Even if some information requirements can be addressed by only using one table, majority of information requirements can only be fulfilled by getting data from multiple tables. Let's take a look back at our database describe by the data model and its content below:

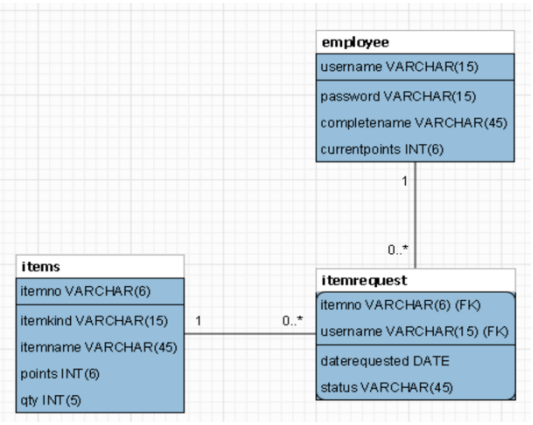


Figure 2.1 – Example of a Data

```
SELECT * FROM ccinfomdemo.employee;
```

| username | password | completename | currentpoints |
|---|---|---|---|
| user01 | 8889900 | Terrence Tang | 400 |
| user02 | 54321 | KATH YUNG | 5000 |
| user03 | 12345 | GINA LAW | 1200 |

```
SELECT * FROM ccinfomdemo.items;
```

| itemno | itemkind | itemname | points | qty |
|---|---|---|---|---|
| GAD001 | Gadget | Voice Recorder | 2000 | 49 |
| GAD002 | Gadget | Bluetooth Mouse | 1000 | 43 |
| GAD003 | Gadget | Basic Phone | 300 | 76 |
| GAD004 | Gadget | Label Maker | 900 | 83 |
| KIT001 | Kitchen | Black Plate Set | 1000 | 95 |
| KIT002 | Kitchen | Black Utensils Set | 950 | 38 |
| KIT003 | Kitchen | Elegant Knife Set | 890 | 21 |
| KIT004 | Kitchen | Juicer | 3000 | 5 |
| OFC001 | Office Supply | Notebook A5 3-Set | 250 | 720 |
| OFC002 | Office Supply | Marker 3-Color Set | 200 | 63 |
| OFC003 | Office Supply | Folder Multicolor 25pcs Set | 100 | 182 |
| OFC004 | Office Supply | National Bookstore 100 GC | 130 | 82 |

```
SELECT * FROM ccinfomdemo.itemrequest;
```

| itemno | username | daterequested | status |
|---|---|---|---|
| GAD001 | USER01 | 2019-11-07 | in process |
| GAD001 | USER02 | 2019-11-08 | in process |
| GAD002 | USER03 | 2019-11-08 | in process |
| GAD004 | USER01 | 2019-11-08 | in process |
| KIT002 | USER01 | 2019-11-09 | in process |
| KIT002 | USER03 | 2019-11-10 | in process |
| KIT003 | USER01 | 2019-11-09 | in process |
| KIT003 | USER02 | 2019-11-09 | in process |
| OFC001 | USER01 | 2019-12-01 | in process |
| OFC002 | USER01 | 2019-12-02 | in process |
| OFC003 | USER01 | 2019-12-02 | in process |

Information Requirements such as (a) Get the username of employees with more than 1,000 points or (b) Get the itemno and name of items with less than 10 pieces can be fulfilled by writing an SQL statement on a single table, as shown below:

(a)
```
SELECT   username
FROM     employee
WHERE    currentpoints > 1000;
```

(b)
```
SELECT   itemno, itemname
FROM     items
WHERE    qty < 10;
```

There may be requirements such as (c) Get the item no and name of items requested by USER01, or (d) Get the username and complete name of employees, that requested for kitchen items, include the name of the item requested. In requirement C, to get the items requested by USER01, we have to look at records in ITEMREQUEST, but also need records in ITEMS to get the name of the items. In this example, we cannot fulfill the requirement by just using one table, but two (2) tables.

In requirement D, we need records in EMPLOYEE since the username and complete name is there, but we also need records in ITEMREQUEST since that contains the items requested by the employee, and further need the records in ITEMS because that is where the item name and kind of item is recorded. In this example, we are not just using two (2) tables, but three (3) tables in order to fulfill the requirements.

We can fulfill requirements C and D by writing and executing the following SQL Statements:

(c)
```
SELECT   I.itemno, I.itemname
FROM     items I    JOIN     itemrequest IR    ON     I.itemno = IR.itemno
WHERE    IR.username = 'USER01';
```

(d)
```
SELECT   E.username, E.completename, I.itemname
FROM     employee E      JOIN     itemrequest IR    ON     E.username=IR.username
         Items I         JOIN     itemrequest IR    ON     IR.itemno=I.itemno
WHERE    I.itemkind='KITCHEN'
```

**EXERCISE:**
Given the data model of DBWorld below, can you think of three (3) information requirements that will be needing more than 1 table to be fulfilled? You may want to write your answer in a text file and save it using <section>-<lastname>-<firstname>-M2L03.txt. Just be ready with the file, in case your teacher will collect it for formative assessment. Prepare your questions and clarifications as these are important indicators that you went through this exercise.