



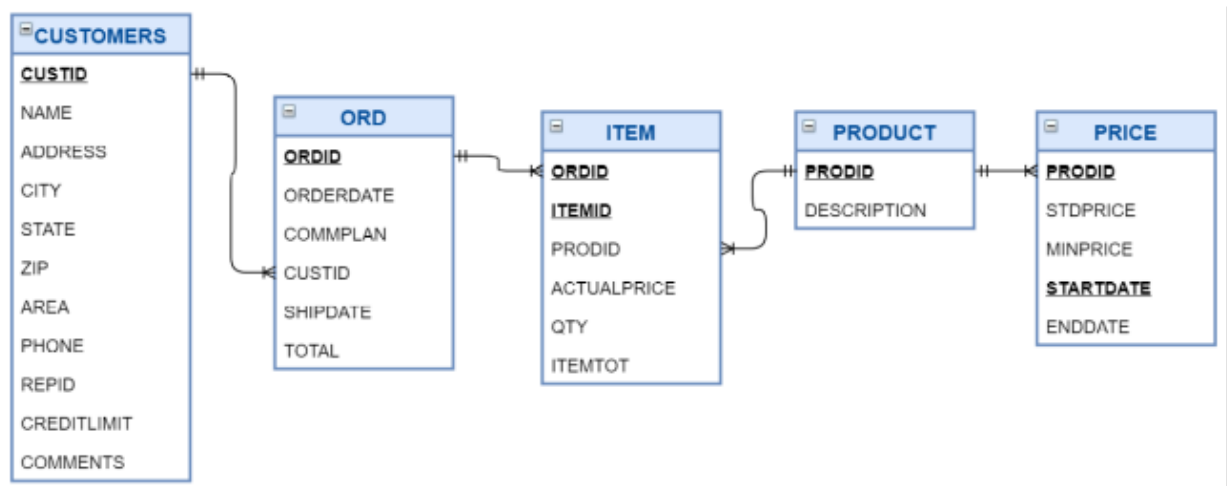
Exercici 4. Més JOIN's

Recorda:

SELECT **taula1.columnaX**, **taula2.columnaY**, ... (obligatori)
FROM **taula1** [**INNER | LEFT | RIGHT | FULL**] JOIN **taula2** (obligatori)
ON **taula1.columnaZ** [Operador] **taula2.columnaZ** (obligatori casi sempre)
WHERE per filtrar files/registres abans d'agrupar (si cal)
GROUP BY per agrupar (si cal)
HAVING per filtrar després d'agrupar (si cal)
ORDER BY per ordenar files/registres (si cal)

Exemple de lligar diverses taules:

FROM **taula2** INNER JOIN **taula1** ON **taula1.campX** = **taula2.campY**
INNER JOIN **taula 3** ON **taula 2.campZ** = **taula3.campW**



FE DE ERRATA: El camp de la taula ORD a la BBDD es diu **COSTID** enlloc de **CUSTID**.

Utilitzant la BBDD **companyCSV** fes les següents consultes per línia de comandes. Adjunta captura i SQL en text:

1. Vull veure les comandes que s'ha tardat menys de 3 dies en enviar (comptant a partir de la data de la comanda). Vull veure el número de comanda i la descripció dels



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productes enviats.

```
MariaDB [companycsv]> SELECT ORD.ORDID AS 'Numero de comanda', PRODUCT.DESCRPTION AS 'Descripcio del producte' FROM ORD
-> INNER JOIN ITEM ON ORD.ORDID = ITEM.ORDID
-> INNER JOIN PRODUCT ON ITEM.PRODID = PRODUCT.PRODID
-> WHERE DATEDIFF (ORD.SHIPDATE, ORD.ORDERDATE) < 3 ;
```

Numero de comanda	Descripcio del producte
611	ACE TENNIS RACKET II
603	ACE TENNIS RACKET I
613	SB ENERGY BAR-6 PACK
620	ACE TENNIS RACKET I
620	SB ENERGY BAR-6 PACK
620	RH: "GUIDE TO TENNIS"
613	ACE TENNIS BALLS-6 PACK
613	SP TENNIS RACKET
613	SB VITA SNACK-6 PACK
619	RH: "GUIDE TO TENNIS"
617	ACE TENNIS RACKET I
617	ACE TENNIS RACKET II

12 rows in set (0.001 sec)

SELECT ORD.ORDID AS 'Numero de comanda', PRODUCT.DESCRPTION AS 'Descripcio del producte'

FROM ORD

INNER JOIN ITEM ON ORD.ORDID = ITEM.ORDID

INNER JOIN PRODUCT ON ITEM.PRODID = PRODUCT.PRODID

WHERE DATEDIFF (ORD.SHIPDATE, ORD.ORDERDATE) < 3 ;

2. Vull veure cada comanda amb la llista de productes comprats. Mostra el número de comanda la descripció del producte i la quantitat comprada (Qty). Només vull veure les comandes 601 a la 605. Ordena per número de comanda.

```
MariaDB [companycsv]> SELECT ORD.ORDID AS 'Numero de comanda', PRODUCT.DESCRPTION AS 'Descripcio del producte', ITEM.QTY AS 'Quantitat comprada' FROM ORD
INNER JOIN ITEM ON ORD.ORDID = ITEM.ORDID INNER JOIN PRODUCT ON ITEM.PRODID = PRODUCT.PRODID WHERE ORD.ORDID BETWEEN 601 AND 605 ORDER BY ORD.ORDID;
```

Numero de comanda	Descripcio del producte	Quantitat comprada
601	SB ENERGY BAR-6 PACK	1
602	ACE TENNIS BALLS-3 PACK	20
603	ACE TENNIS RACKET I	4
604	ACE TENNIS NET	3
604	ACE TENNIS RACKET II	2
604	ACE TENNIS RACKET I	10

6 rows in set (0.001 sec)

SELECT ORD.ORDID AS 'Numero de comanda', PRODUCT.DESCRPTION AS 'Descripcio del producte', ITEM.QTY AS 'Quantitat comprada'

FROM ORD

INNER JOIN ITEM ON ORD.ORDID = ITEM.ORDID



INNER JOIN PRODUCT ON ITEM.PRODID = PRODUCT.PRODID

WHERE ORD.ORDID BETWEEN 601 AND 605

ORDER BY ORD.ORDID;

3. Vull veure per cada item de la taula items quin és el preu actual i el preu mínim. Mostra 3 columnes: Numero de comanda(ORD.ORDID) seguit d'un guionet seguit del Número de item(ITEMID), el preu estàndard i el preu mínim.

```
MariaDB [companycsv]> SELECT CONCAT(ORD.ORDID, '-', ITEM.ITEMID) AS 'Numero de comanda - Número de item', ITEM.ACTUALPRICE AS 'Preu estandard', PRICE.MINPRICE AS 'Preu minim' FROM ITEM INNER JOIN ORD ON ITEM.ORDID = ORD.ORDID INNER JOIN PRODUCT ON ITEM.PRODID = PRODUCT.PRODID INNER JOIN PRICE ON PRODUCT.PRODID = PRICE.PRODID;
```

Numero de comanda - Número de item	Preu estandard	Preu minim
610-3	58.0	9.99
610-3	58.0	9.99
611-1	45.0	9.99
611-1	45.0	9.99
611-1	45.0	9.99
612-1	30.0	9.99
612-1	30.0	9.99
612-1	30.0	9.99
601-1	2.4	1.75
602-1	2.8	2.40
602-1	2.8	1.90
604-1	58.0	9.99
604-1	58.0	9.99
604-2	42.0	9.99
604-2	42.0	9.99
604-2	42.0	9.99
604-3	44.0	9.99
604-3	44.0	9.99
604-3	44.0	9.99
603-2	56.0	9.99
603-2	56.0	9.99
603-2	56.0	9.99
610-1	35.0	9.99
610-1	35.0	9.99
610-1	35.0	9.99

SELECT CONCAT(ORD.ORDID, '-', ITEM.ITEMID) AS 'Numero de comanda - Número de item', ITEM.ACTUALPRICE AS 'Preu estandard', PRICE.MINPRICE AS 'Preu minim'

FROM ITEM

INNER JOIN ORD ON ITEM.ORDID = ORD.ORDID

INNER JOIN PRODUCT ON ITEM.PRODID = PRODUCT.PRODID

INNER JOIN PRICE ON PRODUCT.PRODID = PRICE.PRODID;

4. Vull veure el total de comandes per cada client. Mostra Nom del client (Només les 14 primeres lletres), el total de comandes. Només vull veure les comandes que tinguin més de 1 item.



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```
MariaDB [companycsv]> SELECT LEFT(CUSTOMER.NAME, 14) AS 'Nom del client', COUNT(DISTINCT ORD.ORDID) AS 'Total de comandes'
-> FROM CUSTOMER
-> INNER JOIN ORD ON CUSTOMER.CUSTID = ORD.CUSTOD
-> INNER JOIN (SELECT ORDID FROM ITEM GROUP BY ORDID HAVING COUNT(ITEMID) > 1) AS multi_item_orders ON ORD.ORDID = multi_item_orders.ORDID
-> GROUP BY CUSTOMER.NAME
-> ;
```

Nom del client	Total de comandes
EVERY MOUNTAIN	1
JOCKSPORTS	1
K + T SPORTS	1
NORTH WOODS HE	1
SHAPE UP	1
TKB SPORT SHOP	1
VOLLYRITE	1

7 rows in set (0.002 sec)

SELECT LEFT(CUSTOMER.NAME, 14) AS 'Nom del client', COUNT(DISTINCT ORD.ORDID)
AS 'Total de comandes'

FROM CUSTOMER

INNER JOIN ORD ON CUSTOMER.CUSTID = ORD.CUSTOD

INNER JOIN (SELECT ORDID FROM ITEM

GROUP BY ORDID

HAVING COUNT(ITEMID) > 1) AS multi_item_orders ON ORD.ORDID =
multi_item_orders.ORDID

GROUP BY CUSTOMER.NAME;

5. Idem que la 4 però ara només vull veure els clients anomenats VOLLYRITE i JOKSPORTS.

```
MariaDB [companycsv]> SELECT LEFT(CUSTOMER.NAME, 14) AS 'Nom del client', COUNT(DISTINCT ORD.ORDID) AS 'Total de comand  
es' FROM CUSTOMER INNER JOIN ORD ON CUSTOMER.CUSTID = ORD.CUSTOD INNER JOIN (SELECT ORDID FROM ITEM GROUP BY ORDID HAVIN  
G COUNT(ITEMID) > 1) AS multi_item_orders ON ORD.ORDID = multi_item_orders.ORDID WHERE CUSTOMER.NAME IN ('VOLLYRITE',  
'JOCKSPORTS') GROUP BY CUSTOMER.NAME;
```

Nom del client	Total de comandes
JOCKSPORTS	1
VOLLYRITE	1

2 rows in set (0.001 sec)

SELECT LEFT(CUSTOMER.NAME, 14) AS 'Nom del client', COUNT(DISTINCT ORD.ORDID)
AS 'Total de comandes'

FROM CUSTOMER



INNER JOIN ORD ON CUSTOMER.CUSTID = ORD.CUSTOD

INNER JOIN (SELECT ORCID FROM ITEM

GROUP BY ORCID

HAVING COUNT(ITEMID) > 1) AS multi_item_orders ON ORD.ORCID =
multi_item_orders.ORCID

WHERE CUSTOMER.NAME IN ('VOLLYRITE', 'JOCKSPORTS')

GROUP BY CUSTOMER.NAME;

6. Vull veure el total que ha facturat cada client per cada mes. Mostra el nom del client (només les 14 primeres lletres), el mes/any 4xifres (09/2006) i el total facturat , i total facturat 2. El total facturat serà el TOTAL que hi ha a la taula Comandes, i el total facturat 2 el calcularem a partir de la taula item (sumant tots els itemtot. Les 2 columnes haurien de ser iguals (Fixa't que la suma de itemtot de cada comanda coincideix amb el valor total de ord → Sino és així vol dir que la BBDD és incoherent (tenim camps calculats no actualitzats), i per tant hauríem de fer una operació de recalcul aquests camps (ja veurem més endavant com fer-ho).

```
MariaDB [companycsv]> SELECT LEFT(CUSTOMER.NAME, 14) AS 'Nom del client', DATE_FORMAT(ORD.ORDERDATE, '%m/%Y') AS 'Mes/Any', SUM(ORD.TOTAL) AS 'Total  
facturat', SUM(ITEM.ITEMTOT) AS 'Total facturat 2'  
-> FROM CUSTOMER  
-> INNER JOIN ORD ON CUSTOMER.CUSTID = ORD.CUSTOD  
-> INNER JOIN ITEM ON ORD.ORCID = ITEM.ORCID  
-> GROUP BY CUSTOMER.NAME, DATE_FORMAT(ORD.ORDERDATE, '%m/%Y')  
-> ;
```

Nom del client	Mes/Any	Total facturat	Total facturat 2
EVERY MOUNTAIN	01/2015	17580.0	5310.0
EVERY MOUNTAIN	02/2022	1260.0	340.0
JOCKSPORTS	03/2012	13350.0	4450.0
K + T SPORTS	02/2005	92740.0	6250.0
NORTH WOODS HE	02/2001	25600.0	6400.0
SHAPE UP	05/2001	2.4	2.4
SHAPE UP	06/2015	2094.0	698.0
TKB SPORT SHOP	01/2007	304.2	101.4
VOLLYRITE	01/2011	45.0	45.0
VOLLYRITE	02/2001	71820.0	23940.0
VOLLYRITE	06/2005	280.0	280.0

11 rows in set (0.001 sec)

SELECT LEFT(CUSTOMER.NAME, 14) AS 'Nom del client',
DATE_FORMAT(ORD.ORDERDATE, '%m/%Y') AS 'Mes/Any', SUM(ORD.TOTAL) AS 'Total
facturat', SUM(ITEM.ITEMTOT) AS 'Total facturat 2'

FROM CUSTOMER

INNER JOIN ORD ON CUSTOMER.CUSTID = ORD.CUSTOD



INNER JOIN ITEM ON ORD.ORDID = ITEM.ORDID

GROUP BY CUSTOMER.NAME, DATE_FORMAT(ORD.ORDERDATE, '%m/%Y');

7. 4 taules: Vull veure els productes comprats per cada client. Mostra el nom del client (només les 14 primeres lletres), la descripció del producte i la quantitat que n'ha comprat. Ordena-ho alfabèticament per client.

```
MariaDB [companycsv]> SELECT LEFT(CUSTOMER.NAME, 14) AS 'Nom del client', PRODUCT.DESCRPTION AS 'Descripcio del producte', SUM(ITEM.QTY) AS 'Quantitat comprada' FROM CUSTOMER INNER JOIN ORD ON CUSTOMER.CUSTID = ORD.CUSTOD INNER JOIN ITEM ON ORD.ORDID = ITEM.ORDID INNER JOIN PRODUCT ON ITEM.PRODID = PRODUCT.PRODID GROUP BY CUSTOMER.NAME, PRODUCT.DESCRPTION ORDER BY CUSTOMER.NAME;
```

Nom del client	Descripcio del producte	Quantitat comprada
EVERY MOUNTAIN	ACE TENNIS RACKET I	100
EVERY MOUNTAIN	ACE TENNIS RACKET II	20
EVERY MOUNTAIN	RH: "GUIDE TO TENNIS"	100
EVERY MOUNTAIN	SP JUNIOR RACKET	150
JOCKSPORTS	ACE TENNIS RACKET I	10
JOCKSPORTS	RH: "GUIDE TO TENNIS"	500
JOCKSPORTS	SB ENERGY BAR-6 PACK	1000
K + T SPORTS	ACE TENNIS RACKET I	50
K + T SPORTS	ACE TENNIS RACKET II	100
NORTH WOODS HE	ACE TENNIS BALLS-6 PACK	100
NORTH WOODS HE	SB ENERGY BAR-6 PACK	200
NORTH WOODS HE	SB VITA SNACK-6 PACK	150
NORTH WOODS HE	SP TENNIS RACKET	200
SHAPE UP	ACE TENNIS NET	3
SHAPE UP	ACE TENNIS RACKET I	10
SHAPE UP	ACE TENNIS RACKET II	2
SHAPE UP	SB ENERGY BAR-6 PACK	1
TKB SPORT SHOP	ACE TENNIS BALLS-3 PACK	3
TKB SPORT SHOP	ACE TENNIS NET	1
TKB SPORT SHOP	ACE TENNIS RACKET I	1
VOLLYRITE	ACE TENNIS BALLS-3 PACK	1020
VOLLYRITE	ACE TENNIS BALLS-6 PACK	1000
VOLLYRITE	ACE TENNIS RACKET I	448
VOLLYRITE	ACE TENNIS RACKET II	1

24 rows in set (0.002 sec)

SELECT LEFT(CUSTOMER.NAME, 14) AS 'Nom del client', PRODUCT.DESCRPTION AS 'Descripcio del producte', SUM(ITEM.QTY) AS 'Quantitat comprada'

FROM CUSTOMER

INNER JOIN ORD ON CUSTOMER.CUSTID = ORD.CUSTOD

INNER JOIN ITEM ON ORD.ORDID = ITEM.ORDID

INNER JOIN PRODUCT ON ITEM.PRODID = PRODUCT.PRODID

GROUP BY CUSTOMER.NAME, PRODUCT.DESCRPTION

ORDER BY CUSTOMER.NAME;