SQL – The UNION Statement

JOINs effectively add 'columns' to a data set by joining tables left to right

The UNION Statement adds 'rows' to a data set by joining two tables or data sets that have exactly the same set of columns

```sql
SELECT FIELD_A, FIELD_B, FIELD_C
FROM TABLE_1
UNION
SELECT FIELD_D, FIELD_E, FIELD_F
FROM TABLE_2
```

- The field names in the top and bottom `SELECT` statements do not have to be the same

- However, the data types in them DO have to be the same and in the same order, and there needs to be the same overall number of fields in both sets:

  `FIELD_A ~ FIELD_D`   `FIELD_B ~ FIELD_E`   `FIELD_C ~ FIELD_F`

SQL – The UNION STATEMENT

Transaction_ID	Customer_Id	Channel	Product	Price	Discount
1000123	60067	Web	Book	9.95	
1000124	12345	Store	Book	11.95	
1000125	23451	Store	DVD	14.95	
1000126	70436	Reseller	DVD	19.95	5
1000127	66772	Store	Magazine	3.25	
1000128	60067	Web	Book	29.95	
1000129	72045	Web	DVD	9.95	
1000130	82371	Reseller	Magazine	2.5	0.25
1000131	12345	Store	Book	7.95	

TRANSACTIONS

SQL – The UNION Statement

Suppose my purchase information was actually stored in separate tables for each channel, and I wanted them all in one data set

WEB_PURCHASE

Transaction_ID	Customer_Id	Product	Price	Discount
1000123	60067	Book	9.95	
1000128	60067	Book	29.95	
1000129	72045	DVD	9.95	

STORE_PURCHASE

Transaction_ID	Customer_Id	Product	Price	Discount
1000124	12345	Book	11.95	
1000125	23451	DVD	14.95	
1000127	66772	Magazine	3.25	
1000131	12345	Book	7.95	

RESELLER_PURCHASE

Transaction_ID	Customer_Id	Product	Price	Discount
1000126	70436	DVD	19.95	5
1000130	82371	Magazine	2.5	0.25

Be Boulder.

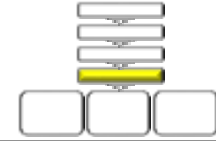University of Colorado **Boulder**

SQL – The UNION Statement

```sql
SELECT *, 'Web' AS Channel
FROM WEB_PURCHASE
UNION
SELECT *, 'Store' AS Channel
FROM STORE_PURCHASE
UNION
SELECT *, 'Reseller' AS Channel
FROM RESELLER_PURCHASE
```

Transaction_ID	Customer_Id	Product	Price	Discount	Channel
1000123	60067	Book	9.95		Web
1000128	60067	Book	29.95		Web
1000129	72045	DVD	9.95		Web
1000124	12345	Book	11.95		Store
1000125	23451	DVD	14.95		Store
1000127	66772	Magazine	3.25		Store
1000131	12345	Book	7.95		Store
1000126	70436	DVD	19.95	5	Reseller
1000130	82371	Magazine	2.5	0.25	Reseller

SQL – The UNION Statement

```sql
SELECT Transaction_ID, Customer_ID, 'Web' AS Channel, Product,
Price, Discount
FROM WEB_PURCHASE
UNION
SELECT SELECT Transaction_ID, Customer_ID, 'Store' AS Channel,
Product, Price, Discount
FROM STORE_PURCHASE
UNION
SELECT SELECT Transaction_ID, Customer_ID, 'Reseller' AS Channel,
Product, Price, Discount
FROM RESELLER_PURCHASE
ORDER BY TRANSACTION_ID
```

Recap

SELECT

FROM

JOIN ... ON

WHERE

GROUP BY

HAVING

ORDER BY

UNION