

SQL

Class 11 – March 6, 2013

SQL

- Select
- Join
- Group By
- Functions
 - Count
 - Sum
 - Max
 - Min
- Alter Table

Join- Two Tables

- Syntax to join more than one table
- Need common attributes

```
SELECT c1, c2, c3
```

```
FROM table1, table2
```

```
WHERE table1.pk = table2.fk
```

Join- Three Tables

- Syntax to join more than two table
- Need common attributes

```
SELECT c1, c2, c3
```

```
FROM table1, table2, table3
```

```
WHERE    table1.pk = table2.fk AND  
         table2.pk = table3.fk
```

Join – Two Tables

Customer (cid , cfirst, clast, ccity)

Account(acct_num, balance, acct_open, acct_close)

Customer_Accounts(cid, acct_num)

*Question 1: Identify customers and their account numbers.
Display the customer name and account number.*

```
SELECT cfirst, clast, acct_num  
FROM customer, customer_accounts  
WHERE customer.cid = customer_accounts.cid;
```

Join – Two Tables Using an Alias

Customer (cid , cfirst, clast, ccity)

Account(acct_num, balance, acct_open, acct_close)

Customer_Accounts(cid, acct_num)

*Question 1: Identify customers and their account numbers.
Display the customer name and account number.*

```
SELECT cfirst, clast, acct_num  
FROM customer C, customer_accounts CA  
WHERE C.cid = CA.cid;
```

Join – Two Tables Using an Alias

Customer (cid, cfirst, clast, ccity)

Account(acct_num, balance, acct_open, acct_close)

Customer_Accounts(cid, acct_num)

Question 2: Identify customers and their account numbers. Display the customer ID, customer name and account number.

```
SELECT cid, cfirst, clast, acct_num  
FROM customer C, customer_accounts CA  
WHERE C.cid = CA.cid;
```

This will result in a syntax error since CID appears in both the Customer and Customer_Account tables. Need to identify the correct table.

Join – Two Tables Using an Alias

Customer (cid, cfirst, clast, ccity)

Account(acct_num, balance, acct_open, acct_close)

Customer_Accounts(cid, acct_num)

*Question 2: Identify customers and their account numbers.
Display the customer ID, customer name and account number.*

```
SELECT c.cid, cfirst, clast, acct_num  
FROM customer C, customer_accounts CA  
WHERE C.cid = CA.cid;
```


Join – Three Tables

Customer (cid, cfirst, clast, ccity)

Account(acct num, balance, acct_open, acct_close)

Customer_Accounts(cid, acct num)

Question 3: *Identify customers and their balance.*

Display the customer ID, customer name, account number and balance.

Join – Three Tables

Customer (cid, cfirst, clast, ccity)

Account(acct num, balance, acct_open, acct_close)

Customer_Accounts(cid, acct num)

*Question 4: Identify customers with closed accounts.
Display the customer ID, customer name, account
number and balance.*

GROUP BY

- Identify break points and sub-totals
- Identify column(s) to break

Questions

- Identify number of customers in each city
- Identify number of accounts for each customer.

Functions

- Count
- Sum
- Min
- Max