Chapter6 数据交换

数据交换的管理

游标定义

❑ **declare a cursor**

define the cursor name

```
EXEC SQL DECLARE agent_dollars CURSOR FOR
    select  aid, sum(dollars)
    from    orders
    where  cid = :cust_id
    group by  aid ;
```

means multiple rows in result set

search by customer's id (stored in host variable cust_id) when open the cursor agent_dollars

打开游标

❑ **open the cursor**

before open the cursor, you must place cno value of customer's id in the host variable cust_id using in the declare statement of cursor agent_dollars.

```
......
EXEC  SQL  OPEN  agent_dollars ;
......
```

execute the select statement

after open the cursor, the pointer of the cursor has been placed in the position before the first row in result set.

取数据
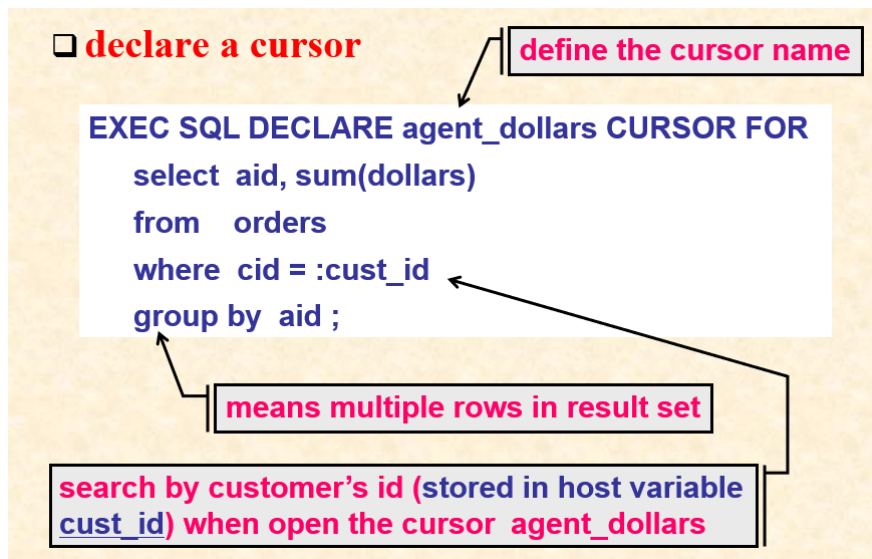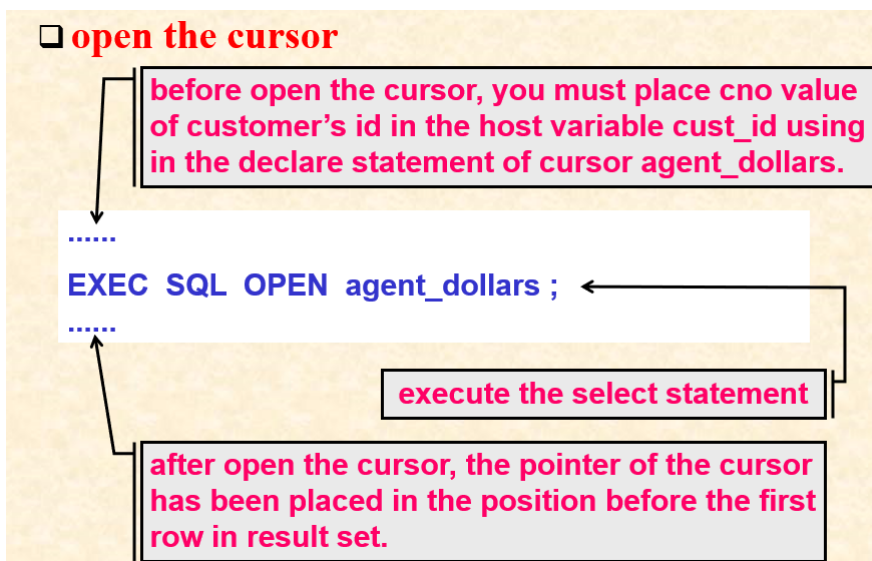
❑ fetch the result rows

```
while (TRUE) {                /* loop to fetch rows */
    exec  sql  fetch agent_dollars
              into :agent_id, :dollar_sum;

    printf("%s %11.2f\n", agent_id, dollar_sum);
}                              /* end fetch loop */
```

1) **move the pointer of cursor to the next row, then the next row is current row**

2) **fetch the current row's value into host variables: agent's id to agent_id, summation of dollars to dollar_sum**

❑ end fetch loop

```
exec  sql  whenever  not  found  goto  finish;
   ......
while (TRUE) {
   exec  sql  fetch ...... into ......;
      ......
}
   ......
finish:   exec  sql  close  agent_dollars;
```

declare 'not found' event processing

execute this statement after fetch loop when 'not found' event is occur

关闭游标

❑ close the cursor

```
   ......
   EXEC  SQL  CLOSE  agent_dollars ;
   ......
```

1) **close the cursor, and release the result set and other resource in DBMS**

2) **after close the cursor, it can be opened again**

动态SQL

什么是动态SQL

在嵌入式SQL编程中，很多时候编程人员无法确定到底应该做什么工作，所使用的SQL语句也不能预先确定，需要根据程序的实际运行情况来决定，也就是根据实际情况来生成并调用SQL语句。这样的SQL语句被称为动态SQL 。

动态SQL语句的可变性

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