1.
```
product
  id
  name
  price
```

3.
```
order
  id
  uid ————— userid
  createDate
```

2.
```
user
  id
  name
  password
```

orderitems consist of one order

4.
```
orderitem
  id
  pid ————— productid
  oid ————— orderid
  number ————— how many
```

```
        1   m
  ┌─────(       )─────┐          m      1      m       1
[product]      [orderitem]          [order]        [user]
```

① one orderitem
means one product

② but user create another order
with this product means another orderitem

1. product. {
product class
product DAO
product ListServlet
listproduct.jsp ← display all product.
web.xml.
( add servlet.jar / mysql···.jar / jstl.jar )

① class product
   package bean
   {
   int id { get id / set id
   string name { get name / set name
   float price { get price / set price
   }

② product DAO
   package dao
   (provide data query
   and connection between
   mysql and product)
   select × from product (display all product)

③ product ListServlet
   package servlet
   (use productDao to find product
   and use listproduct.jsp to show)

2. user
{
user class
userDAO
login.jsp
userLoginServlet
Listproduct.jsp

before shopping, let the user login at first,
cause every order need to know that belong
to who.

① userDAO          select * from user
                   where uname = ? and upassword = ?

use user name / password to search in table user
if find out means password is correct.

② login.jsp    in xml (connect / login and
                        loginServlet )

③ userLoginServlet
    get name / password from login.jsp
    check use UserDAO().getUser(name, password)

if use == null means incorrect password
login again
else go shopping

3. order item (don't need to create a table, still in session)

1) We can treat purchase action is to create orderitem one by one

2) We try to display shopping cart means display these orderitems in a list.

3) at this stage, orderitem kept in session until the order is finally generated and stored in database

{
orderitem class
productDAO
orderItemAddServlet
orderItemListServlet    >
 ListOrderItem.jsp
orderItemDeleteServlet
}

① orderitem class
{
private int id; (not pid)
private product product⭐;
private int num;
}

② productDAO
1) [product] getproduct (int id) ⭐
select * from product where id = "?"
2) List<product> ListProduct.

on web page, when we shopping and the submission to the server is PID, so we need this function to return the accurate product

④ orderitemAddServlet
① got pid/num of the product (want to buy)
② use id to get the object of product
③ use information from ①②, set a new orderitem object.
④ save these orderitems in a (Array)list in session

⑤ exist in the

※ (if this orderitem already exist in u
    Arraylist, just modify it's number)
    (if not add at the end of the list)

③ jump to page listorderitem

④ orderitemListServlet
    data has been saved and already prepare
in session, just jump to page ↓ .jsp is
enough.

⑤ ListOrderitem.jsp

⑥ orderitemDeleteServlet

# 4. order

1) in orderItemList.jsp page create a link means create order

2) create order will update the data in session to sql table