

DESIGN SPECIFICATION

For Music Zone – Online CD Store

Group: VAHAM

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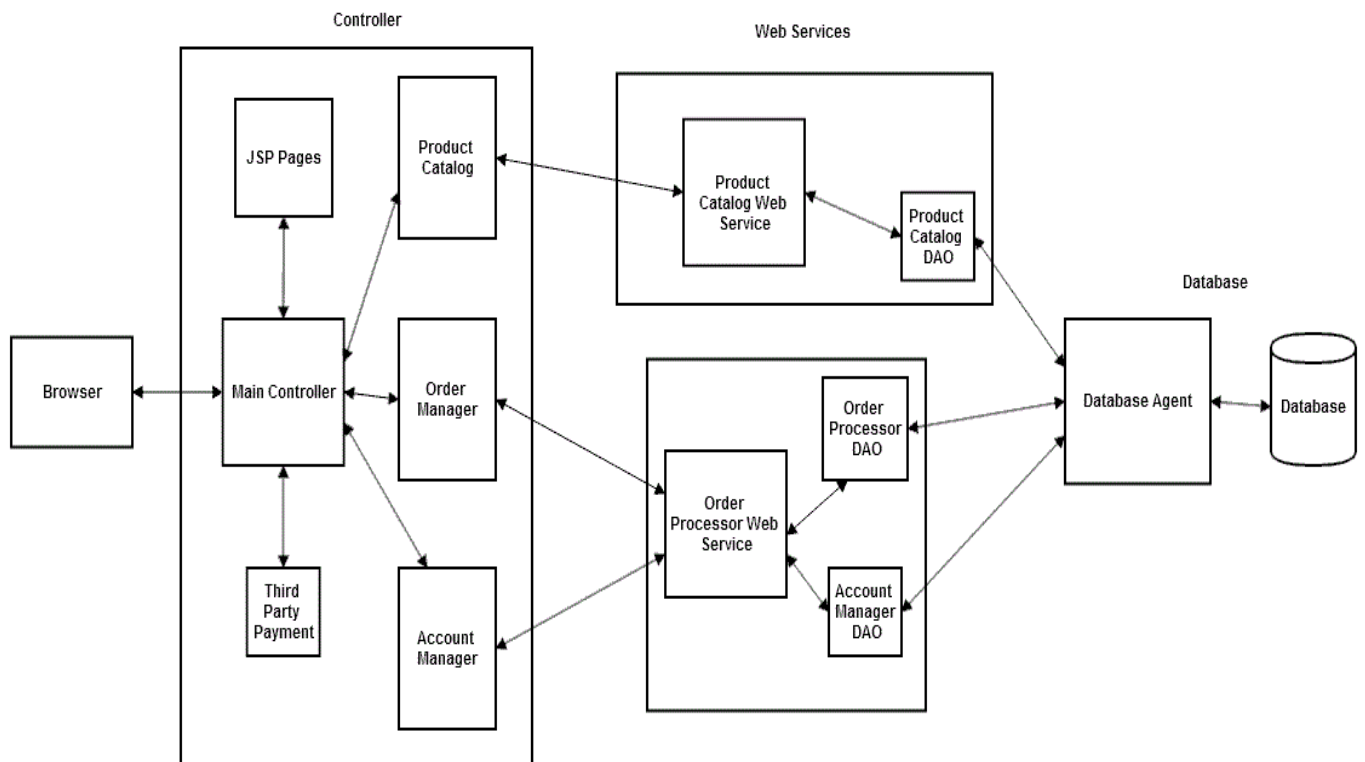
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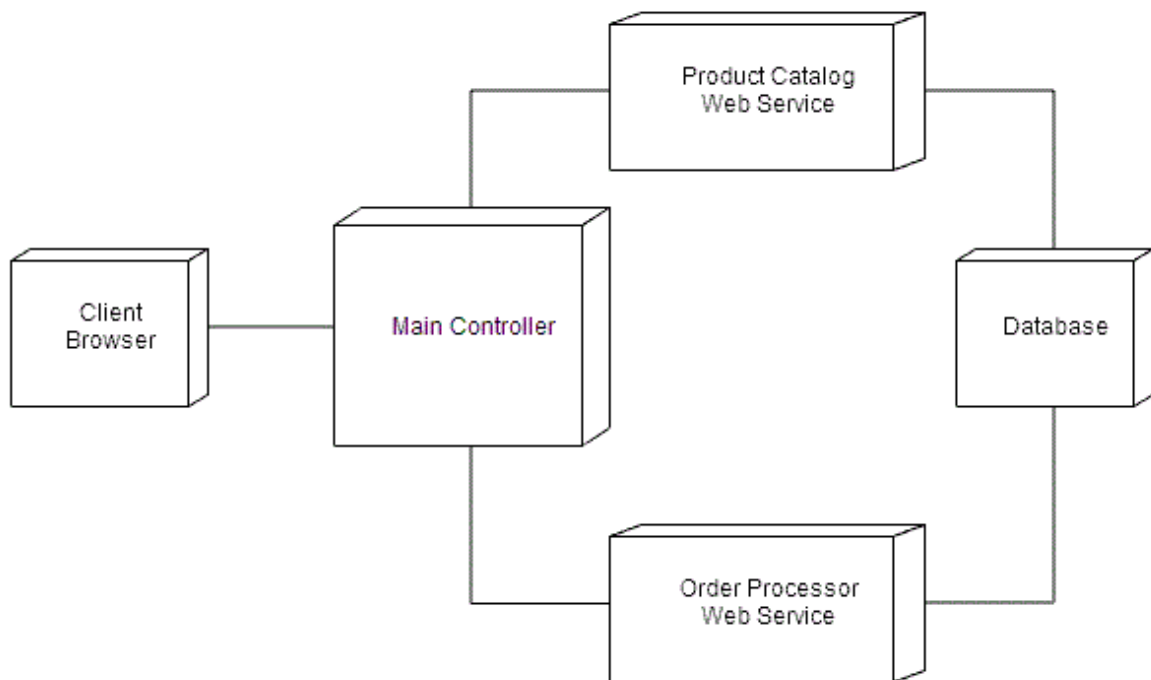
• Project Description:

- Music Zone is an Online CD Store Web Application.
- The Web application provides the visiting customers with the ability to browse through all the products on the site either as a complete list or as per the category.
- Once a customer decides to buy a CD, he can add the CD to a shopping cart.
- Existing customers need to login into their respect accounts before being able to buy the CD.
- New customers will have to create their Login accounts on the website and login before being able to buy a CD.
- Once the customer is done with adding CDs to the shopping cart, customer can view his shopping cart that lists all the CD he has chosen. The customer also has the ability to add or remove more items from the shopping cart.
- The customer can then checkout and after providing the payment details, the order will be registered.

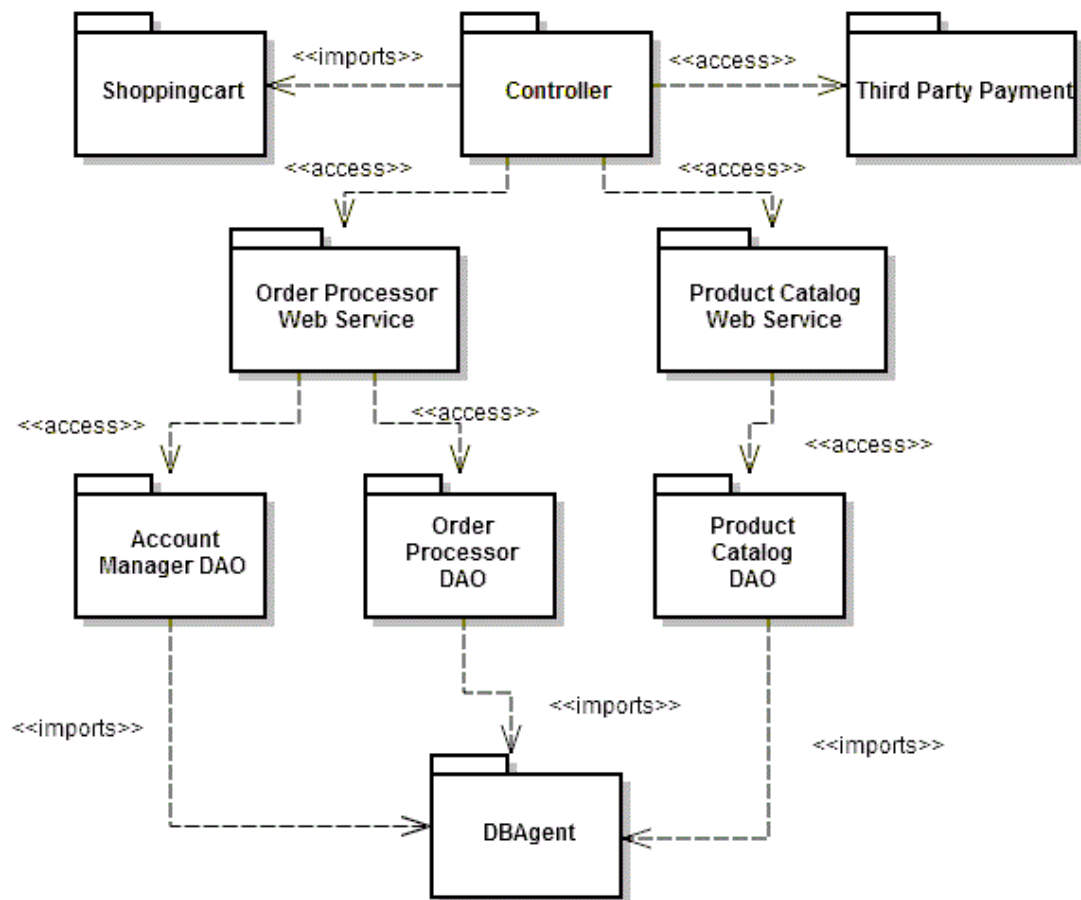
• Architecture :



- **Deployment Diagram**

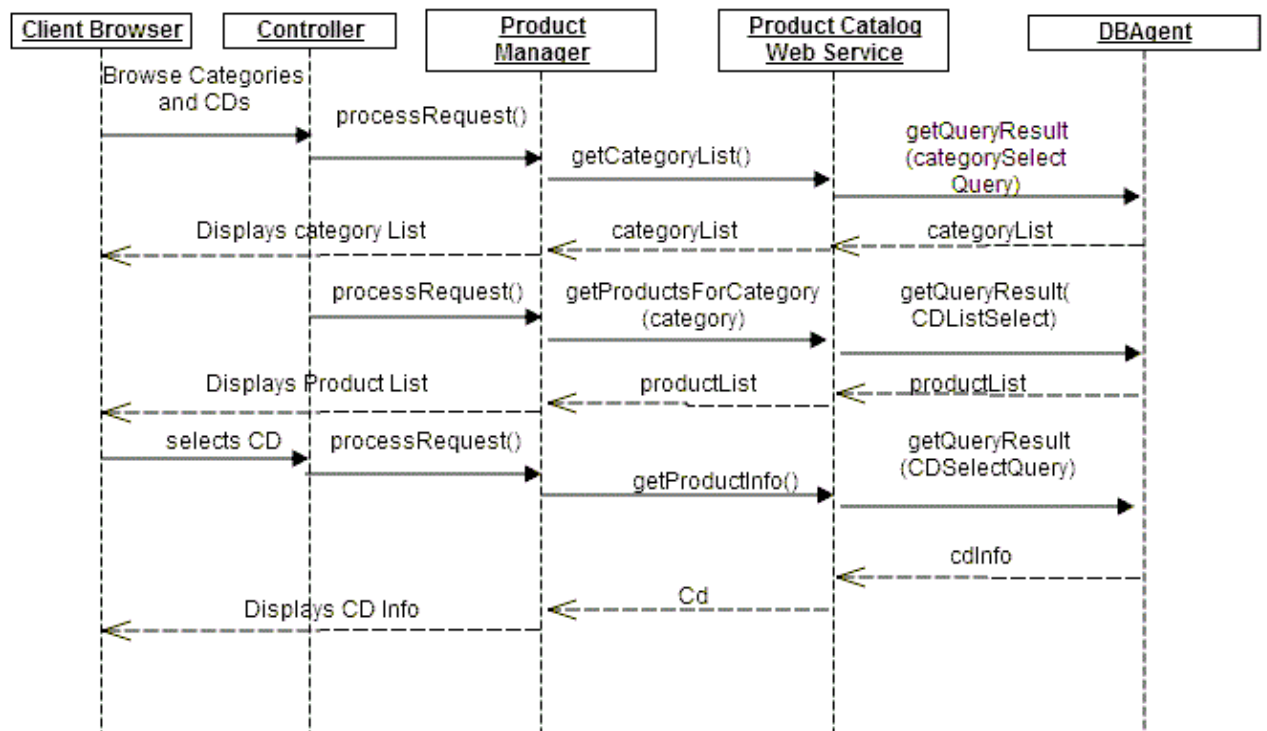


- **Package Diagram**

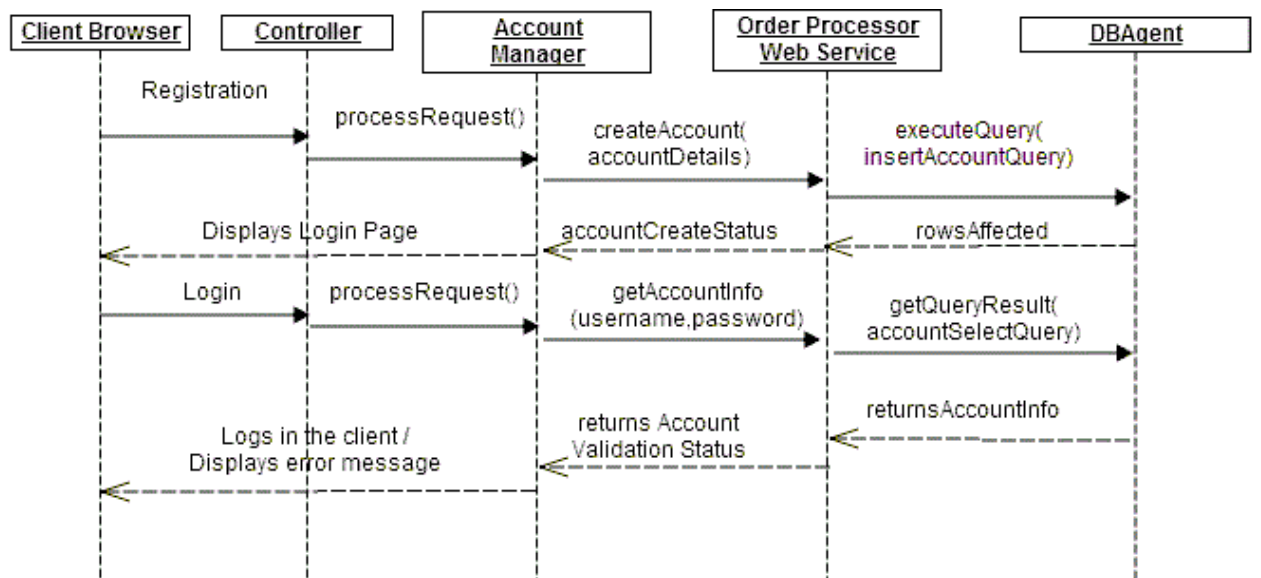


- **Interaction Diagrams**

- Browse Products



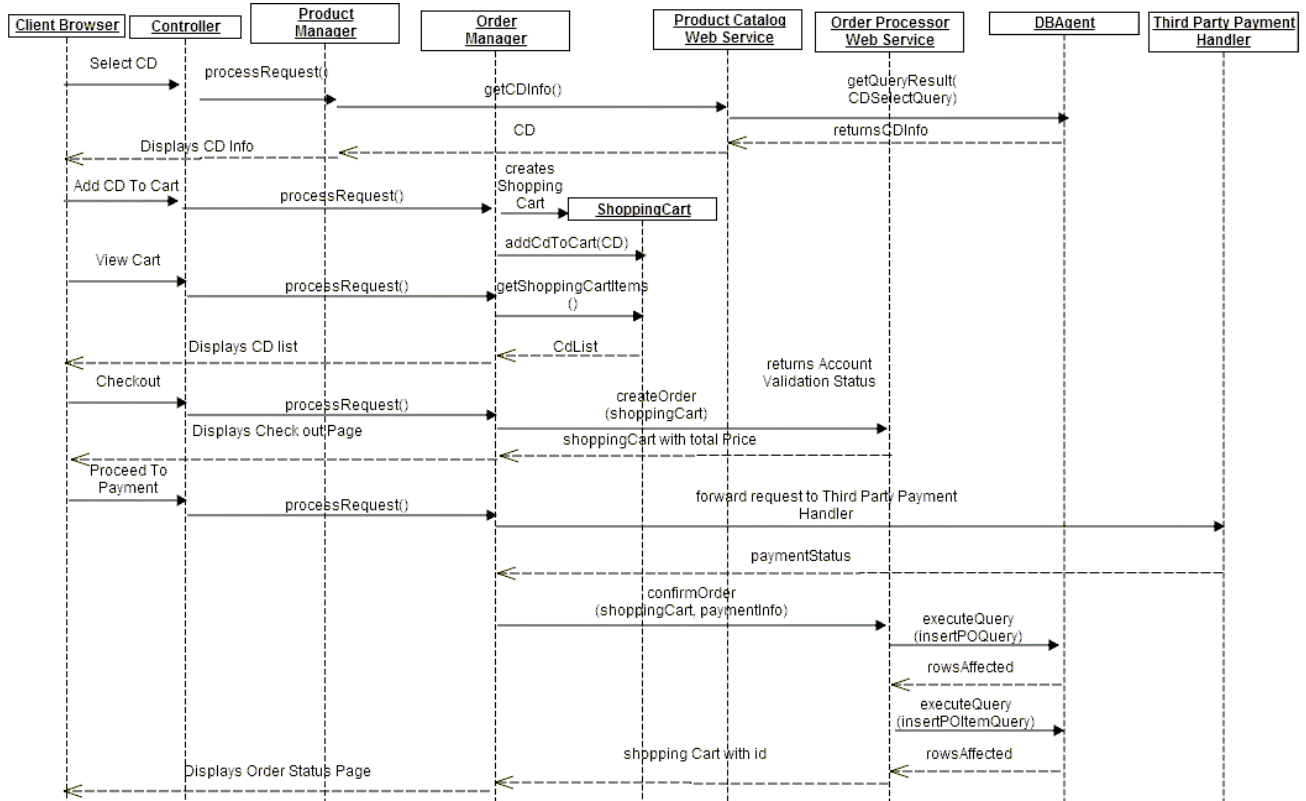
- Account Registration and Login



- Order and Payment:

If the customer is not logged in, on trying to add CD to cart, the customer will be asked to login or register and login.

Below sequence diagram shows the sequence for buying a CD for a logged in customer.



• Design Patterns:

- Transfer Object Pattern:

To facilitate the transfer of data between the Main Controller and the Webservices, transfer objects were used to transfer across SOAP.

Some of the transfer objects used :

- Account
- Cd
- Shopping Cart
- Address
- PaymentInfo

- Data Access Object Pattern

For interaction between the webservice and database and insulating the web service from the DB access logic, Data Access Object Patterns are used –

- Product Catalog DAO
- Order Processor DAO
- Account Manager DAO

These object patterns work closely with the DB agent and are concerned with creating class objects from DB queries and vice versa.

- **Assumptions:**

- Customer can buy multiple quantities of the same product in the same order. For this client will have to add the CD to cart the required number of times.
- The default Shipping address displayed on checking out of an order will be the address of the client provided at the time of registration. However, client can change the shipping address.

- **Code Organization**

The Web Application comprises of two projects:

- Music_Zone_Controller_View
 - ♦ src : This contains the Main controller servlet, client stub of webservices and the dummy Third party payment handler servlet organized as follows:
 - com.vaham.controller:
Contains the Main controller servlet and the helper classes- Account Manager, Product Manager and Order Manager.
 - com.vaham.shoppingcart:
Class for managing the shopping cart.
 - com.vaham.util:
Reusable utility classes for storing constant values.
 - com.vaham.ws.orderprocessor:
Client stub for Order Processor Web Service
 - com.vaham.ws.productcatalog:
Client stub for Product Catalog Web Service
 - ♦ WebContent:
This contains:
 - JSP Files.
 - CSS Files.
 - Web config files.
- MusicZoneBackend
 - ♦ src : This contains the java files for webservices, data access objects, DBAgent organized as follows:
 - com.vaham.dao:
Contains DAO classes for accountmanager, productmanager and order processor)
 - com.vaham.dbagent
 - com.vaham.dto:
Transfer object classes.
 - com.vaham.ws.orderprocessor:
Order Processor Webservice
 - com.vaham.ws.productcatalog:
Product Catalog Webservice.
 - ♦ WebContent:
 - Contains the DB and Web service config files.

- DB Schema

