You are to create a web-application that consists of the following pages: Main, Inventory, Shopping, Login, and Report. All will be JSPs and all will be called using the MVC pattern where one of two servlets uses the RequestDispatcher to call the appropriate JSP. This uses server-side forwarding and not redirection.

You will need to create a database (MySQL or Oracle) containing user information, inventory items, and logging information. These are detailed below under the database section.

When a user “surfs” into your site, you should log statistics for your site. These stats will be keeping in a database and will be retrieved from the Reports page. If a user clicks on the Reports, Shopping Cart, or Login page they will be asked to login first. If they fail to log in they will be sent back to the main page after three attempts. You will need to log successful logins and unsuccessful attempts. I will talk about what exactly needs to be recorded in another section below. Once the user is logged in the navigation will have a “Log out” link instead of a “Log in” link.

There should be a way (probably check box) for the user to remain logged in after a session is over. In other words, when a user logs in there should be a check box that allows the user to remain logged in for 30 days. Use cookies to make this happen. When a user comes back to the website, a welcome message will greet them on all pages; otherwise, no message will be shown.

After a user has added items to their cart and they have not logged in, the cart contents will be stored as cookies. If the user adds items to their cart and they have logged in, the cart items are then stored in the database. When a user leaves the site and the browser has been “killed,” then the user returns in a different session, if they have an anonymous cart (cookie based) then that cart will be available as that anonymous user for 30 days. If the user has a cart that was stored in the database, then that cart will not be available unless the user logs in.

When showing the inventory, if an item has a zero inventory count, do not show that item. A user can add an inventory item to the shopping cart but it should be treated in two ways, one as a validated user and one as an anonymous user. When the user adds an item to the shopping cart, that item(s) can be “purchased” but only by a legitimate user that has logged in. When clicking on the purchase button that is on the shopping cart page the cart is emptied and the user is forwarded to the main page and the inventory count should be updated.
There will be a single “ad” on the main page that is a GSU image. The image will be a link to GSU’s home page but you will log the Total number of hits and redirect to GSU.

Database Information

- **User information**
  - Username - String
  - Password - String
  - Admin or Client - boolean
  - Last login – Date/Time
- **LogItem**
  - typeLogItem – String (Page name?)
  - hitCount – int
- **View**
  - PageURL
  - UserID
- **Transaction**
  - User – String
  - DateTimeStamp
  - SKU – int
  - Purchase-boolean
  - TransactionID-int
- **Inventory information**
  - Sku number - int
  - Item description - String
  - Price to customer - double
  - Count - int

Main Page (Non-portal JSP)
- GSU logo that links to http://www.gsu.edu
- Left Navigation

Inventory Page (Non-portal JSP)
- List of all inventory
- Left Navigation

Shopping Cart (Portal JSP)
- List contents of shopping cart
- Left Navigation
- Purchase Cart

Login Page (Non-portal JSP)
- Username/Password fields
- Submit button
- Listing of all previous user purchases
Report Page (Portal JSP – Admin user only)

- Links to show: anonymous
  - Total number of hits on all pages
  - Total unique hits on all pages (what’s difference between total number and unique hits)
  - Total number of hits per page
  - Total unique hits per page
  - Total number of hits on an Icon Ad (GSU images)
  - Number of login tries (per user? How do I know who want to login in) (Probably think each time user enter correct user name)

getPageMgr (servlet)
- Displays all none-portal JSP pages

portalPageMgr (servlet)
- Displays all portal pages

Design Notes:
- Home.jsp, Inventory.jsp, Login.jsp may be called from getPageMgr servlet using MVC framework.
- ShoppingCart.jsp, Login.jsp and Reports.jsp may be called from portalPageMgr servlet. (you could call Login from either page you think is best)
- Hit and Page Logging is done using MySQL or Oracle database and includes all items listed under “Report Page” above.
- Each log item should include a data/time stamp, page (URL), user (if logged in or anonymous if not), and count.
- Navigation should display “log out” if the user is logged in
- The user should have to “log in” before being able to “purchase” items in the shopping cart and/or view the Reports.
- Some users (admin) have the “rights” to view reports and some don’t
- Users are not allowed to create their own account
- All accounts are created using a SQL script
- System will allow user to remain logged in by using cookies
- Limit for logged in status using cookies is 30 days (use cookies to store login users)
- If a user returns, give a personal welcome message on all pages
- If a user is anonymous, do not show a welcome message
- Design and Implement your own database

Deliverables:
- The link of this project
- All source code
- All database scripts (so I can rebuild your database)
- WAR file so I can publish your work to WebSphere or Tomcat
- Document stating details about what each person worked on
Starting point for a possible ER Diagram

- User
  - username
  - password
  - userLevel
  - lastLogin

- Transaction
  - transactionID
  - dateTimeStamp
  - username
  - SKU
  - purchase

- View
  - pageURL
  - userId

- Item
  - SKU
  - description
  - count
  - cost

- Log Item
  - typeLogItem
  - hitCount
Bonus Requirements (20% of the project 1)
Create an administration page that satisfies the following requirements:

- The JSP page can be displayed by portalPageMgr (servlet) only.
- Only allow administrators to visit it. If not administrators or anonymous, forward the requests to login page.
- Left navigation.
- Administrators can create normal users accounts (not administrators) in the page.
- Administrators may insert new products into database, so they need to specify product sku, description, quantity, and price.

Submission:
Send your project with .zip or .rar format to email: gsucsc4370@gmail.com