ISCG 7420   
Web Application Development

PHP Website   
Assignment 2

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I declare that this submission is my own work, except for use of resources supplied with the course, information from the public domain where clearly referenced

The Website URL: http://dochyper.unitec.ac.nz/luoy15/QualityCaps\_PHP

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# 1.Summary

The aim of the application is to create a simple web application (a simple purchase order system) for Quality Caps which sell Caps for men, women and children. It will list all the categories, and the Caps in an online shopping website where you can browse and purchase items.

This project was created with PHP (Hypertext Preprocessor).  
  
For the database, it is using MySQL database which holds all the information required for this application to run.

The website URL is as follows:

http://dochyper.unitec.ac.nz/luoy15/QualityCaps\_PHP

The login information for an admin is:

Username: admin

Password : Admin123@

Please use the registration system to be able to sign in with your credentials so you can browse and add the items to your cart.  
  
A registered customer account is: (if needed)

Username: customer

Password : Customer1@

# 2.Business Specification

**CUSTOMER PROCESSES**

The website allows registered or guest users to browse the contents of the website.

The process is as follows:   
A customer can browse the site and view all Caps listed by category. A customer can click to view more of the product item and view its name, supplier, category and image of the product. Once the customer has chosen his/her choice he can then add it to the cart.

Customer cannot check out until he/she has registered or previously logged into the site.  
  
The checkout button on the page checks to see if the customer is a valid customer or not and directs them to either the login or the registration page. The cart automatically calculates the products added with GST listed on the top right of the screen which will be used to record to the database on checkout.

When the cart clear button has been pressed it will clear the cart completely and kill sessions, and restart up again.

All users have the ability to be able to use the Sign in or Register facilities to log into the system.  
  
The registration system lists out compulsory fields the customer has to fill out to register.

Customer will need to enter in the site login credentials required - Username, Password, Phone, Address, confirm a Password, E-mail which are mandatory fields and then his/her User Details.

The customer can submit and he/she will be taken to a RegistrationSuccess page which will display. An email will be also sent to the customers email with the UserName and Password the customer has entered in so he/she can keep this as a record.

**Administrators**

An administrator can only login with the given administration password and username.

Username: admin   
Password: Admin123@

The admin will be able to check the status of orders and set the order to be waiting/or shipped. No other fields are available for the administrator in the order field except for shipping. Admin cannot delete any record from this table.

Administrator can add or modify products to the system. Admin can browse for a picture on the local PC or insert a new record to add a new Cap to the system. Admin can enter in all values listed on the Products fields. Admin can Edit or Delete a record from the system. The values for the SupplierID, and Category ID will be shown as a drop down list once the admin edits the record. Admin can choose one correct drop down and save it.

Admins can edit the customer table and set the IsAvailable to either Yes or No. An Admin can disable a customer account. Customer cannot login into the system after that. The account disable message will be display if the customer try to log in with a disabled account.

Admin can create or delete a category in the system and save it.

He/she can edit the Supplier table to add more suppliers to the system and save or delete entries.

**Other**  
  
Users who are logged in can use the log off function to log off the system.  
  
When an order item is added to the shopping cart, the Cap item ID, the Cap category, the Cap name, the quantity, the price and the total cost should be displayed. If the same order item in cart has been updated quantity increase the quantity of the order item and adjust the total cost.

When the checkout button is clicked, all the items in the shopping cart are placed in an order and the login page is displayed. If the customer hasn’t registered yet, a user interface for registration should be provided at this stage. The order information should be saved into the database after the login.

When the cart clear button has been pressed it will clear the cart completely and kill sessions, and restart up again.

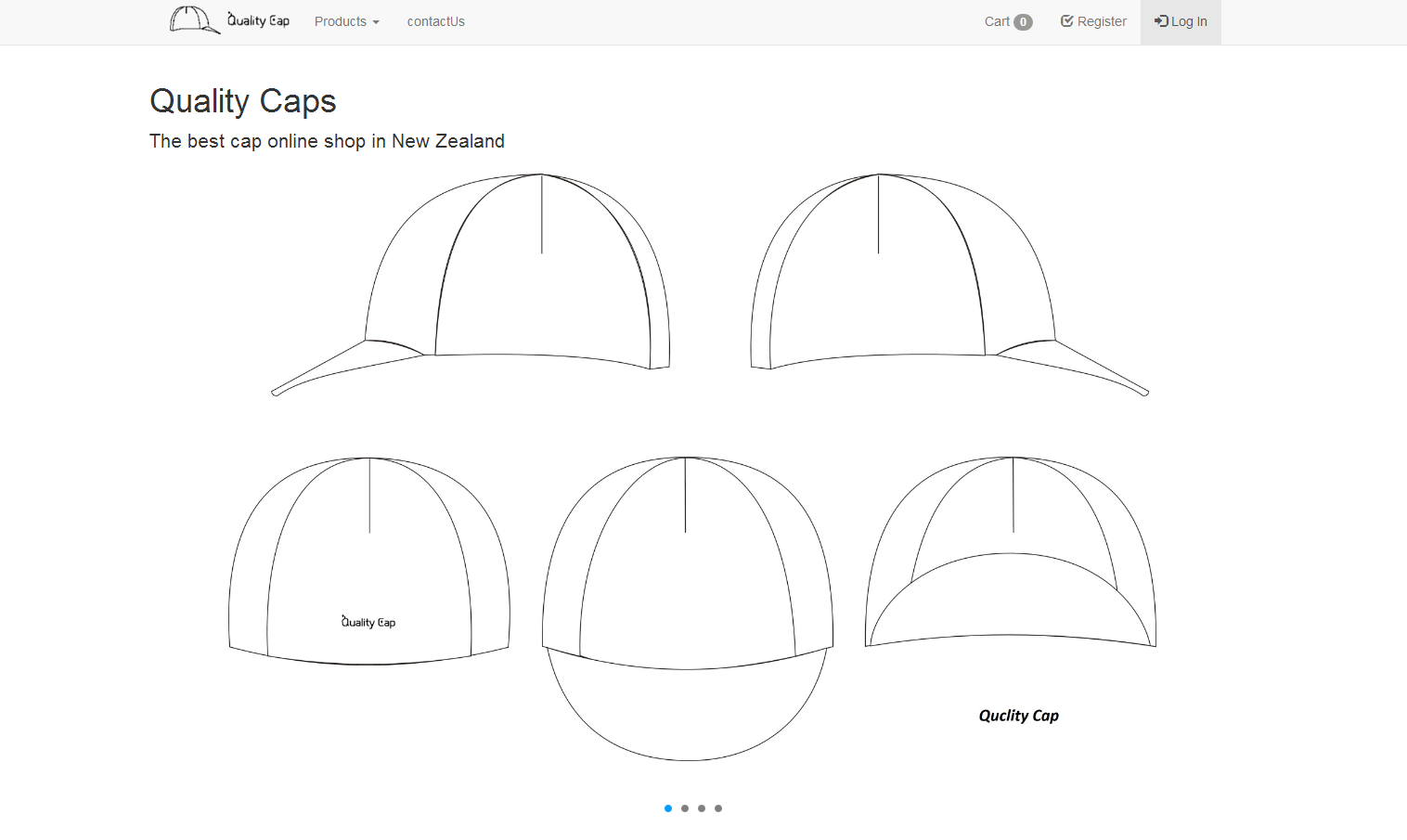
# 3.User Interface Design

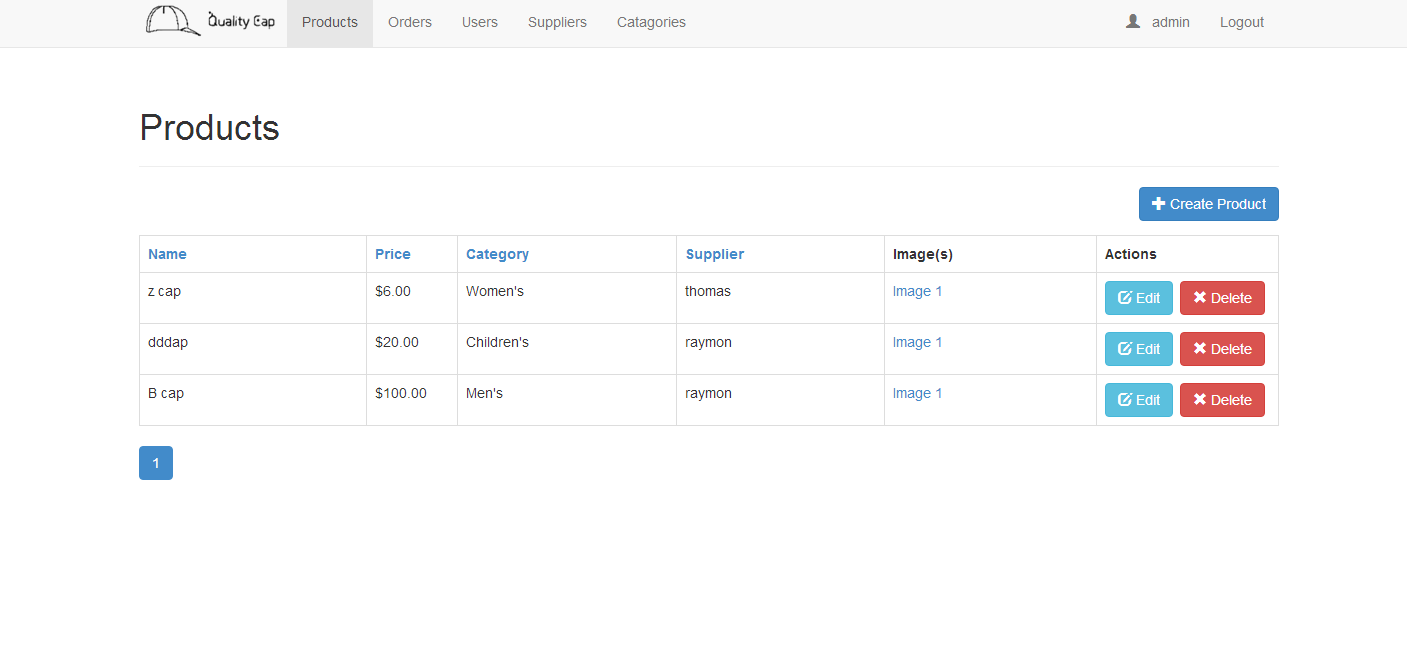
There are two master page in the website, one is for user interface, and another is for admin system. The layout is mainly divided into three parts, including top, middle and bottom. The very top contains navigating links, logo and banner. The navigation bar contains products’ categories, while the right side of navigation there are shopping cart, register/view my order and log in/ log out. Obviously, product list is placed in the middle.

SITE ELEMENTS  
Nearly all site elements are built with Bootstap CSS elements for form/function and aesthetically pleasing layouts. The page load times will be much faster as pictures will be the only small files sizes when loading into the site.

SITE START PAGE

The default page is index.php but it will not show that extension if you load http://dochyper.unitec.ac.nz/luoy15/QualityCaps\_PHP/

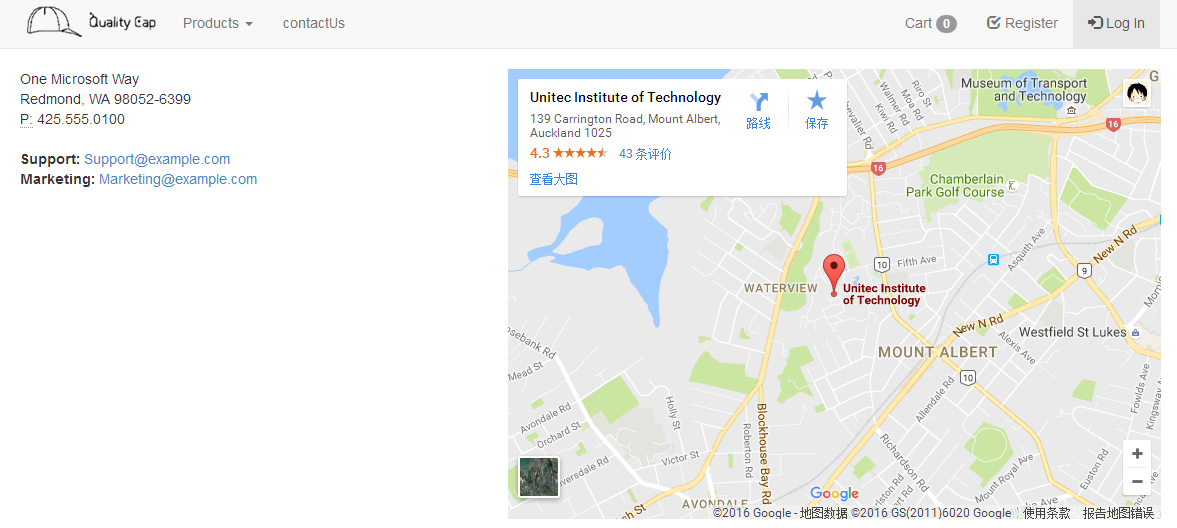
Similarly, backend system has the same layout. The differences are the navigation bar being changed by text.

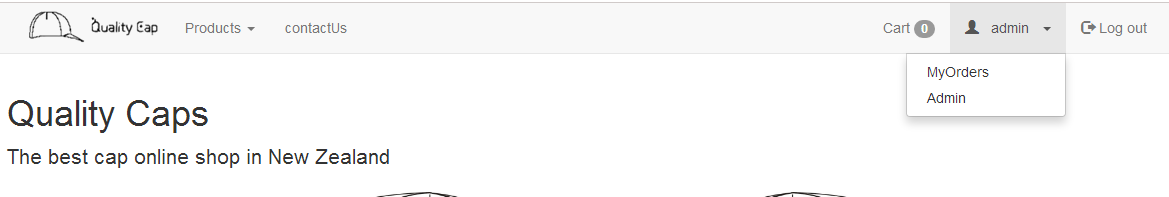
**SITE MAP**



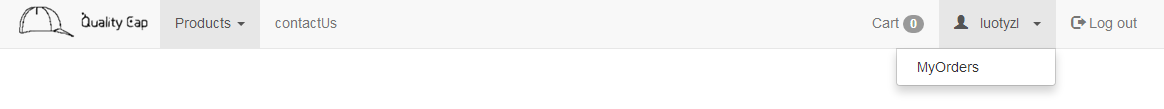
As shown by the sitemap. Admin can access all pages while customers can only access white pages. The cart will be shown on the right.  
  
Cart have the Check out which linked to the Login and Register pages, according to the business rules if the customer is an existing or not an existing. They work together as a model.  
The Admin use the same page to login where customer logs in, but admin can see an admin page under the username, admin page can control all 5 pages to manage his website for suppliers, categories, users, products and Orders which extend to OrderList so admin can view the individual orders.

Lastly contactUs is on its own as its own page.

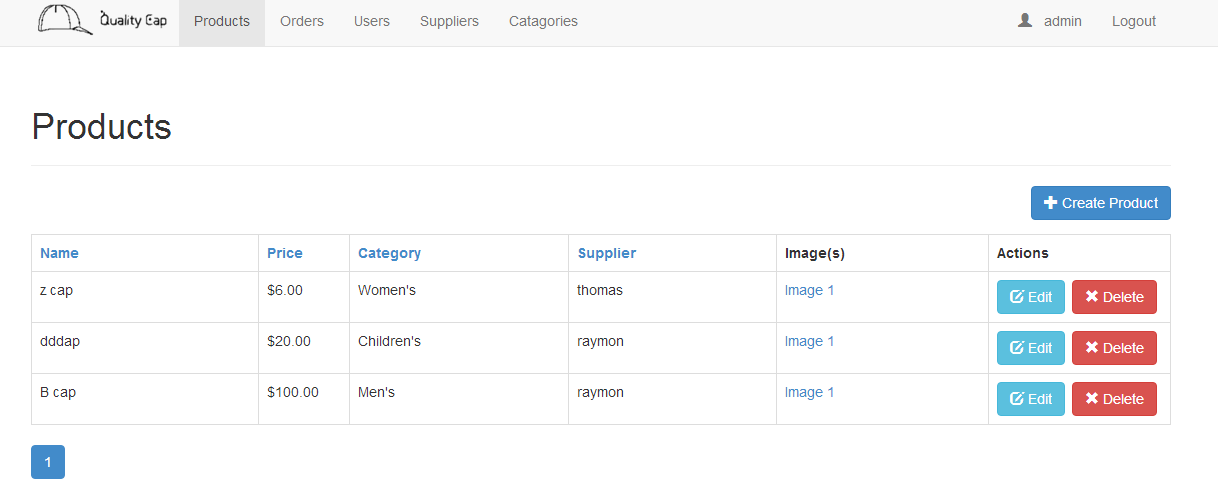
  
  
  
As you can see there is a header with Quality Caps, and 3 links on the right. Cart, Register and Log in.   
  
**Admin Page**



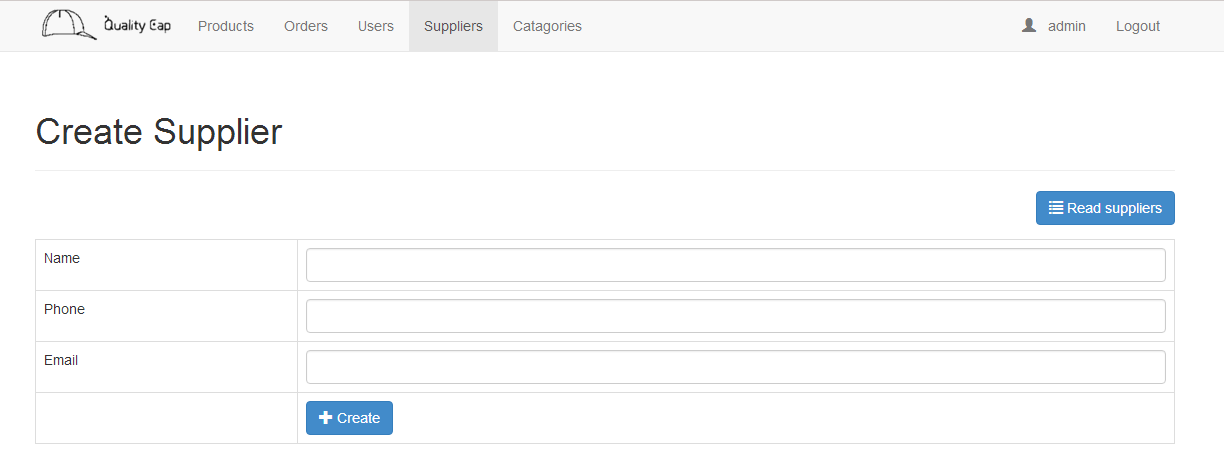
If use an admin account to login, then user can find there is a link under the user name, called Admin, click the link will jump into admin page. Meanwhile, if user uses a customer account to login, he cannot see that link



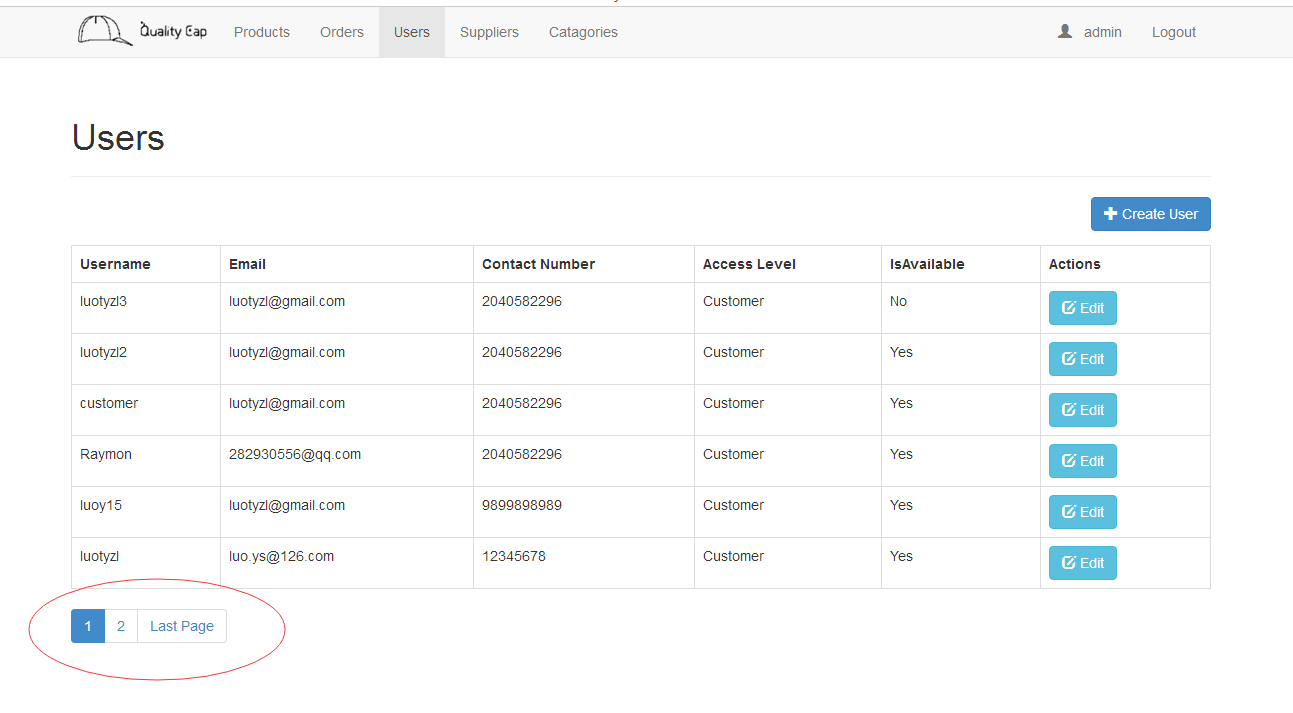
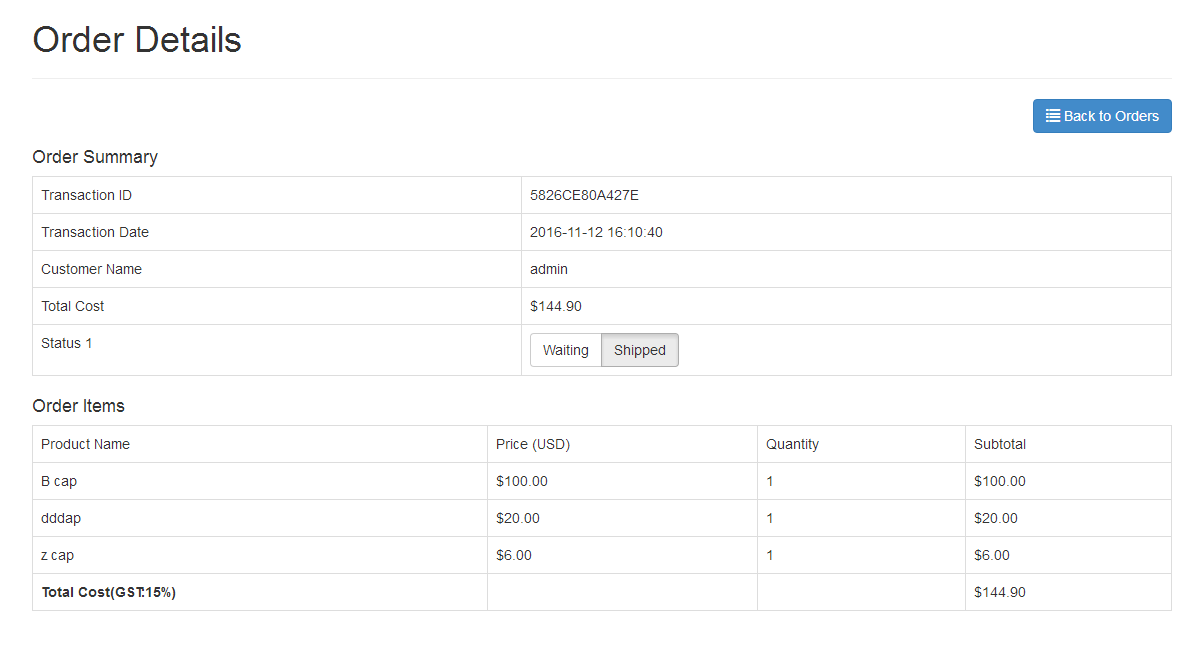
The admin is able to choose any option from the top, and the admin can see statistics about his site, referring to how many customers are and be able to disable them. How many suppliers, and Caps currently logged. Orders are displayed to let the admin know if any are. A screenshot shown below.



The admin is able to choose any option from the top and for example as shown in the above image we are looking at the Supplier table. Admin can choose to Create or DELETE a supplier. The same will go for all options but dependent on whether the field is able to be inputted or not.  
  
For example adding a new record in the Supplier table we see and these are fields which the admin can enter in values and add a new supplier. The rest of these are followed in other tables in a similar fashion.

   
  
If we press submit, we see below the validation checking kicks in and each field is checked before it can add it. The same applies for Categories, Colours, Caps and so on.

Pagination is in effect for the all tables so it can fit on the screen and easier for the admin to use.

  
   
The image below shows that the admin can set shipped and the date allowing him to set whether the order is to be shipped.

# 4.Database Design

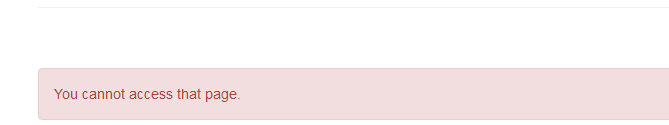


As shown by the database diagram there are eight tables that work together with relationship rules except for the Admin table.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Product TABLE  PK - Id  FK - SupplierID to Supplier table  FK – CategoryID to Category table. |  | SUPPLIER TABLE  PK –Id |
|  | CATEGORY TABLE  PK –Id |  | CUSTOMER TABLE  PK –Id |
|  | ORDERS TABLE  constraint PK –Id  constraint PK -TransactionId |  | ORDERITEMS TABLE  PK –Id  FK – ProductId to Product Table  FK – TransactionId to Order table |
|  | Cart TABLE  PK –Id  FK – ProductId to Product Table  FK – UserId to User Table |  | Product\_image TABLE  PK – Id  FK – ProductId to Product Table |

# 5.Design Rationale

The entire site is based on SESSIONS and has rules in place – for if you logged in as a user you can view your order, if you not logged in you can only browse and add to cart.

  
  
  
  
What is happening is the $\_SESSION[“Access\_Level”] is not equal to “Admin” so it cannot show the pages. Once you log in you will be able to see it.

# 6.Test Plan

**Sign in and Sign Out**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Input | Expected outcome | Actual Outcome |
| 1 | Sign In and Sign Out | | |
| 1.1 | Click Sign in link | Login page shows |  |
| 1.2 | Click Admin login button Enter username with ‘admin’ and password ‘Admin123@’  Click Admin button which under Username | The backend management system occurs |  |
| 1.3 | Click Sign Out | Logout the system and login page shows |  |
| 1.4 | Enter username with ‘customer’ and password ‘Customer1@’, Click Sign In. | The product list page shows and the Welcome message displays. |  |
| 1.5 | Click Sign Out | Logout the system and product list page shows | yes |

**Backend Management  
Administration**

|  |  |  |  |
| --- | --- | --- | --- |
| 2 | Orders management | | |
| 2.1 | Change order information | | |
| 2.1.1 | Click Orders button. Choose an Order and Click Edit on right. | Change the order to Shipped |  |
| 3 | Products management | | |
| 3.1 | Add Tshirts product | | |
| 3.1.1 | Click the Products page, and then click ‘create product’ | A new record displayed for input. |  |
| 3.1.2 | Enter in information to record field | Enter information and Add the field: TshirtName: New cap Price: 35 Image:a yellow cap  Supplier: raymon Category: Men’s |  |
| 3.2 | Delete Product | | |
| 3.2.1 | Click ‘delete’ link | The Cap product is deleted | yes |
| 4 | User management | | |
| 4.1 | Disable customer account | | |
| 4.1.1 | Click on Edit where Username = Customer | Set the customer to Disabled |  |
| 4.1.2 | Use Username = Customer  Password = Customer1@ to login | customer cannot login |  |
| 5 | Category management | | |
| 5.1 | Add a category record | | |
| 5.1.2 | Click on ‘create category’ | Enter in: CategoryName: Teens and update. |  |
| 5.2 | Delete a category record | | |
| 5.2.1 | Click on ‘delete’ | Choose Teens and press Delete. |  |
| 6 | Supplier Management | | |
| 6.1 | Add a supplier record | | |
| 6.1.1 | Click on ‘Create Supplier’ | Enter in the details  SupplierName: Wear SupplierPhone: 095555555 Email:  [info@womenwear.com](mailto:info@womenwear.com)  press Create |  |
| 6.2 | Delete a supplier record | | |
| 6.2.1 | Click ‘delete’ link | Click the Wear and press delete |  |

# 7. Critique - Comparison between PHP and ASP.NET

**Definitions of PHP:**

PHP is a server-side scripting language created in 1995 and designed for web development but also used as a general-purpose programming language (PHP, 2015).

PHP is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. It can have three main areas where the scripts are used. Server side scripting, command line scripting and writing desktop applications but highly unadvisable as it is not the best language for this.   
  
An HTML page that includes a PHP script is typically given a file name suffix of ".php" ".php3," or ".phtml". Like ASP, PHP can be thought of as "dynamic HTML pages," since content will vary based on the results of interpreting the script.

PHP is free and offered under an open source license.

**Definitions of ASP.net:**

ASP.Net is an open source server-side Web application framework designed for Web development to produce dynamic Web pages. It was developed by Microsoft to allow programmers to build dynamic web sites, web applications and web services (ASP.NET, 2015).

ASP.NET is a set of Web development tools offered by Microsoft. Programs like Visual Studio .NET and Visual Web Developer allow Web developers to create dynamic websites using a visual interface. Of course, programmers can write their own code and scripts and incorporate it into ASP.NET websites as well. Though it often seen as a successor to Microsoft's ASP programming technology, ASP.NET also supports Visual Basic.NET, JScript .NET and open-source languages like Python and Perl.

ASP.NET is built on the .NET framework, which provides an application program interface (API) for software programmers. The .NET development tools can be used to create applications for both the Windows operating system and the Web. Programs like Visual Studio .NET provide a visual interface for developers to create their applications, which makes .NET a reasonable choice for designing Web-based interfaces as well.

In order for an ASP.NET website to function correctly, it must be published to a Web server that supports ASP.NET applications. Microsoft's Internet Information Services (IIS) Web server is by far the most common platform for ASP.NET websites. While there are some open-source options available for Linux-based systems, these alternatives often provide less than full support for ASP.NET applications.

**PHP Techniques, code sharing and software architecture:**

I used MySQL as the primary database, and set up the tables and constraints. Using the Designer to be able to set up the foreign keys following my SQL database that I had done for the ASP.net site. Code sharing and reuse by use<?php include?>. Software architecture I built objects as model to connect database, used “post” method to call methods and built simple pages to get information from objects

**ASP.net Techniques, code sharing and software architecture:**

I used SQL service as the primary database with tables set up and constraints. Foreign keys were set up in the Relationship view, and all data types set according to what they were.

ASP.net assignment I used MVC architecture. ASP.NET MVC is part of the ASP.NET framework. Developing an ASP.NET MVC application is an alternative to developing ASP.NET Web Forms pages; it does not replace Web Forms.

**Advantages and Disadvantages  
  
PHP**

**Advantages：**

1.Open Source.

PHP is very cost effective for developers, not only PHP itself, but also free database and server. On top of that, rich resources, libraries and extensions are available for free. It is possible to customize the source code for specific business requirements.

2.Easy to learn.

PHP is easy to learn. Developers would not take long time to adapt in PHP application. PHP is also easy to code, it can be written within html files.

3.Cross Platform.

PHP can be run on multiple OS, such as Linux, Windows, Solaris, OpenBSD and Mac OSX. It also indicates that more hosting companies can provide hosting server with PHP environment.

**Disadvantages:**

1.Error handling.

Compare to Java and C#, the error handling in PHP is poor. PHP developers have to pay more **attention** to the code to deal with potential errors.

2.Unclear data type.

Although data types in PHP do not need to define, it sometimes makes developers confusing and itwould cause many mistakes which only can be found during execution.

**ASP.NET**

**Advantages：**

1.Rapid development.

Both server and user controls make the development more easily than writing code. Developers just need to adjust properties for each control and write simple code in code behind file to deal with event handler and other business logic.

1. Easy to debug

code-behind model separate asp.net code from html code, it makes structure and logic of projects more clear.

**Disadvantages:**

Higher budget

although asp.net is free to use, some related tools such as the visual studio, SQL server, windows server and IIS are not free. Therefore, it will increase the developing cost. In addition, the services are not free, for example, when you want to optimize asp.net, you have to pay extra money to get this service.

2.Dependency on Microsoft

asp.net is not an open source language and you cannot see the source code, so if some problems happen within .net framework, you cannot do nothing, only can wait a solution from Microsoft Company.

**ASP.NET or PHP?**

If I were given to choose for this assignment, I would use asp.net. Reasons are:

1. I am working at a software company as a developer, which is using C# to build its own products. So I am more familiar with C#, I understand C# much better than php language.
2. In my experience, a lot of performance can be gained by using parallel processing (aka threading). Parallel processing allows multiple chunks of code to run at the same time in parallel. PHP does NOT support threading. C# not only supports it but makes it so simple that in most cases it only requires you to add the keyword async/await to a function

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