

**E-COMMERCE PROJECT**  
**HundW Consult MENA**  
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## 1. Rationale

This is the major project for both (Open Source and .NET teams) as an E-Commerce Technology and Website Design which gives students the opportunity to demonstrate all the skills they have developed studying these units. Students will build an **interactive website** that demonstrates the features that would be required in a real e-commerce website. It will be a major challenge, but the resulting website will be an important feature of the student's portfolio. Experience gained in this assignment will also be of considerable benefit in developing the skills needed for the any e-commerce project later on the student's future careers.

## 2. Outcomes

### E-Commerce Project

1. Demonstrate an understanding of the role of **databases** in e-commerce, including their design, creation and manipulation
  - A. Design and create a multimedia database that will support an e-commerce system.
  - B. link Mark-up Language requests to database(s) to provide an interactive service to users
  - C. Implement html5, css3, JavaScript and sql, web services in the project.
2. Be able to identify and apply the main **technical requirements** for an e-commerce business
  - A. use web server technology to provide a service to a range of users
  - B. evaluate web server performance
3. Manage security issues and technologies in e-commerce
  - A. manage the security of data exchanged through an e-commerce service
  - B. manage the security and coherence of files on the server
  - C. manage sessions and cookies security
  - D. evaluate the effectiveness of identification software

## Website Design

1. Develop an integrated set of **web pages/frames**
  - A. produce a complex set of linked interactive pages, using a range of authoring tools, including Mark-up Languages and drawing from existing scripting language resources
  - B. use a range of devices to collect graphical data
  - C. use a range of software tools to manipulate graphical data and incorporate it into linked pages
2. Develop **interactive applications** on a web server
  - A. use a web server to host an e-commerce web site interface
  - B. design, write and test an interactive application in a suitable language
  - C. manage the integrity of files on the server

### 3. Brief

#### Scenario: Website for Sbitany & Sons Co. Ltd. - Official Page



**Sbitany** decided to transform its Web site, which was built by the first function of the old fashion design, the new website should provide a service to the customers for registration a new account includes personal information and the account is password-protected, web site also provides registration ordering of the products (a phone, a tablet, ...) TV's, noting that one customer can register more than one application. As site manager can access to the site and review requests orders and products in wish lists by the customers also add new categories and products and review all the related reviews as you can see in the attached screens of the website base template  
See (• 8. Online Reference)

#### Tasks

1. Design a Website for **Sbitany** that provides a range of services for the administrator and customers.

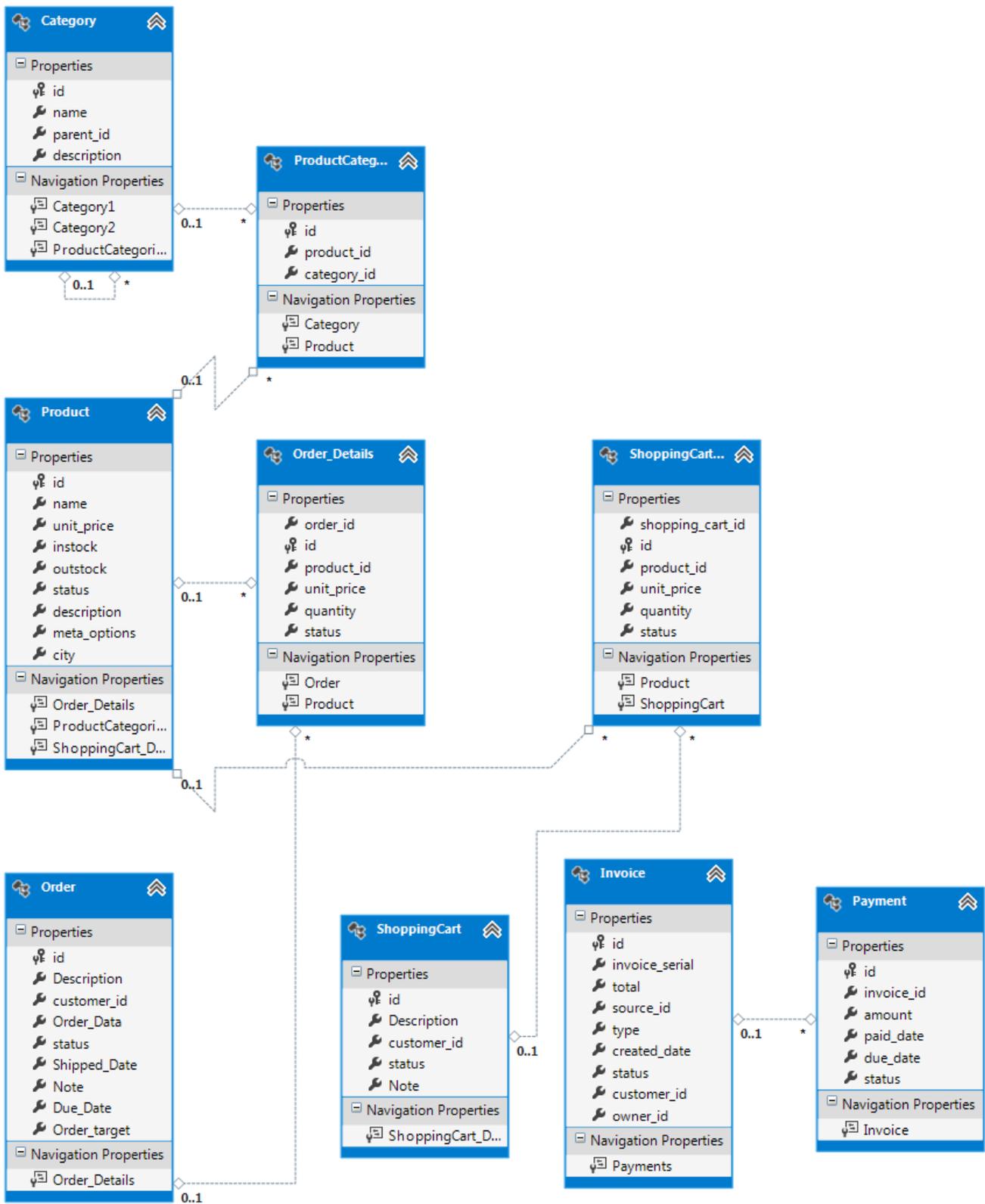
Where administrator can:

- Log in.
- Maintain of orders.
- Browse requests of products in customer wishlists
- Maintain Products
- Maintain Customers
- Maintain Reviews
- Maintain Categories

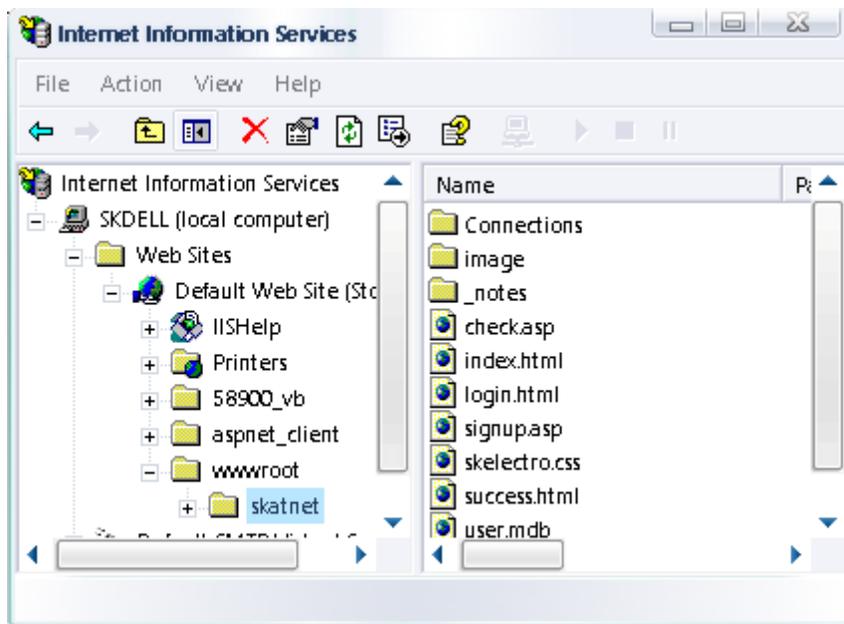
Where customers can:

- Log in
- Create new account.

- Do shopping and Make New Orders
  - View WishList
  - View Purchased Products
  - View Order Status
  - Add product to their shopping cart
  - Check out to submit the orders
2. Design and create a database that contains tables with necessary fields to hold information of customers, products, and orders, users, categories, shopping carts.  
Suggested tables and fields are (those are only suggested fields and tables, you might need extra fields and tables for a more functional solution), some suggested tables in the next page.



3. Design table relations and queries needed for database administration.
4. Design, write and tests using (ASP.NET or PHP), you are expected to address issues of design and functionality that have been identified during the WD course.
5. Designed pages must include:
  - Login page.
  - Create an account page.
  - Making Order and shopping cart , and checkout
  - Browse requests for the orders and process them by admin
  - All Customer related views, view orders history, view wish list, view purchased products...
6. In order to develop and test your (ASP.NET or PHP) site you have to install and activate IIS on you test machine for ASP.NET or WAMP SERVER for PHP. A snapshot of IIS management on your PC containing files that you have developed is required, example:



7. Many of factors might play role in changing the developed application performance. Search the Internet for (at least) three factors that might affect the performance of your application (no more than 250 word) and add them to your report.
8. Suggest modification on database where personal information of customer can be added.
9. What are the security related precautions that can be taken to protect your application (server, files, data...)
10. Your solution should be uploaded to SVU server (call IT support team to provide you with necessary information to complete this task)
11. Documentation is required for the database; however this can be a simple list of fields and their types.

12. A full code listing and explanation is not required but some sample code should be selected which demonstrates the range of techniques used. Some attempt should be made to ensure coding is clear and accessible (i.e. layout, helpful comments, etc.)
13. The report should include a table that indicates any aspects of the website that are not working as required. This will demonstrate that the student understands the need for testing. Hence, the documentation needs to be accurate and no attempt should be made to “hide” any remaining bugs. This table or record should also include an outline description of how the bug would be removed if more time was available. A layout example is shown in Appendix B but you may design your own.
14. When the website is complete, it must be made available on the designated web server.
15. Guidance for your table of contents is provided in Appendix A. It is intended only to be an example; you should **adapt it or create your own**.

#### 4. Assessment Details

Full documentation for the solution must be submitted for assessment. This must include design documents (hierarchy charts and annotated screen layouts) the table of remaining bugs together with the suggested solution.

The quality of the solution will be assessed in terms of its appeal and how well it addresses the user’s needs but also in terms of the technical skills underlying the solution and how robust it is.

The range of web techniques and the use of graphics to improve usability and maintenance of the solution will be assessed.

Top marks will be achieved for a professional-looking solution that meets the needs of the business and has been well engineered and documented.

Tutors will monitor the student’s use of the web server on submission in order to assess how effectively they manage the integrity of files etc.

#### 5. Links to Developing Personal Skills

Skills which you will develop during the completion of this assignment include:

- Problem solving
- A good quality website will be a useful addition to your CV

## 6. Grading Criteria

### Pass

- Cover all outcomes and provide a functional solution (even partially) with simple documentation

### Merit

- Satisfy pass criteria and improve the robustness of the solution.
- Suggest (only suggest) on database where personal information of customer can be added.
- High quality documentation is produced throughout
- Good skills shown in the management of a web server

### Distinction

- A high quality website is produced, which a business would be happy to have paid for as it offers a realistic solution to their problem (website can be used in production with no problem)
- All elements show an excellent grasp of the issues, design and construction.
- Software engineering skills of a high standard for this stage of the course are demonstrated throughout
- Discuss other alternatives and amendment to the suggested solution.

## 7. Submission Details

Assignment issue date: 9/1/2013

Assignment submission date: 20/1/2014

This assignment is weighted at 100% of E-Commerce Technology, Website Design and as analytical and programming skills covered (HTML5, CSS3, Javascript, JQuery,SQL and most of the given courses for the dot net and open source technologies.

Assessment criteria

You will be assessed on:

- The design, implementation and valid functionalities of project requirements
- The extent of web-related skills
- The standard of documentation
- The understanding of security issues
- The Quality of code and complexity of functionalities as real world functioning.

## 8. Online Reference

- <http://ahmadnaser.com/?p=453>

**TABLE OF CONTENTS**

**(Sample)**

- 1. Introduction .....
  - 1.1 Purpose and Scope.....
  - 1.2 About the solution .....
  
- 2. Design.....
  - 2.1 General Design of the Application .....
  - 2.2 Hierarchy Diagram(s) .....
  
- 3. Technologies Used.....
  - 3.1 Server - Side Scripting Language.....
  - 3.2 Client - Side Scripting Language .....
  - 3.3 Database .....
  - 3.4 HTML.....
  
- 4. Web Solution.....
  - 4.1 Directory Structure .....
  - 4.2 Naming Conventions.....
  - 4.3 Screen -Wise Functionality.....
    - 4.3.1 Annotated Screen Layout .....
    - 4.3.2 Description of HTML files.....
    - 4.3.3 Description of ASP files .....
    - 4.3.4 <Any other pages> .....
  - 4.4 Database .....
  - 4.4.1 Simple Database Design .....
  - 4.4.2 Queries Used .....
  - 4.5 Quality Assurance .....
  - 4.5.1 Input Validation Checks Performed .....
  - 4.5.2 Outstanding Problems .....
  
- 5. Sample Code .....
  
- 6. Discussing security issue .....



## Assessment Marking Grid

<b>Student Name:</b>						
<b>Unit:</b> E-Commerce Technology & Website Design (HTML,CSS,JS,SQL,Jquery....)						
<b>Assignment:</b> 30 Hour Project						
<b>Title:</b> Website of Sbitany & Sons Co. ltd						
<b>Center:</b> Galaxy Information system						
<b>Instructor Name:</b> Ahmad Hammad From HundW CONSULT MENA						
<b>Date Submitted:</b>						
`Learning outcomes:	Assessment Components	Marks Avail			Marks Given	
		grades				
Demonstrate an understanding of the role of <b>databases</b> in e-commerce, including their creation and manipulation	For: Design and creation of simple database	15	PASS	PASS		
	For: Linking database to website and creation of interactive application	50				
Develop <b>interactive applications</b> on a web server	Complexity of interaction					
Identify and apply the <b>technical requirements</b> for an e-commerce business	For: Effective use of web server	3				
	For: Management of files on web server	2				
Develop <b>interactive applications</b> on a web server						
Manage <b>security issue</b> and technology in e-commerce	For: Understanding of security issues and description of current solutions	5				

Develop an integrated set of <b>web pages/frames</b>	For: <b>Design</b> Application of accepted design rules for website design. Use of graphics to enhance the website and improve usability	0				
	For: <b>Implementation</b> Quality of code Range of web techniques	0				
	For: <b>Documentation and Reporting</b> Quality and completeness of documentation Realistic solutions suggested for outstanding problems	0				
	<ul style="list-style-type: none"> <li>Satisfy pass criteria and improve the robustness of the solution.</li> </ul>	3				
	<ul style="list-style-type: none"> <li>Suggest (only suggest) modification on database where personal information of volunteer can be added.</li> </ul>	2	MERIT			
	<ul style="list-style-type: none"> <li>High quality documentation is produced.</li> </ul>	5				
	<ul style="list-style-type: none"> <li>Team Work</li> </ul>	5				
	<ul style="list-style-type: none"> <li>A high quality website is produced, which a business would be happy to have paid for as it offers a realistic solution to their problem</li> </ul>	4				
	<ul style="list-style-type: none"> <li>All elements show an excellent grasp of the issues.</li> </ul>	2				

	<ul style="list-style-type: none"><li>• Discuss other alternative amendment to allow quality control staff access to unpublished data</li></ul>	4	Distinction				
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<b>Comments:</b>	Total Given		Total	
	<b>grade</b>			
	/100			
<b>Marker:</b>	<b>Assessment Date:</b>			
<b>Verifier:</b>	<b>Date:</b>			

Marks in this assignment are calculated as percentage.

**GOOD LUCK in this project and your future careers.**

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