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| MIT Award smal(bw) | School of Digital Technologies Manukau Campus  BDT - Bachelor of Digital Technologies  502.632  “Full-Stack Web Development”  PROJECT Q1 2019 |
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| Due Date: | Scenario: Midnight, Thu, 21 Mar 2019 Project: Midnight, Tue, 16 Apr 2019 |
| Assess. Weighting | 50 marks contributing 50% towards course total. |
| Statement of Original Authorship I hereby confirm that this assignment is my own work, or in the case of team work it is the team work done for this assignment. In addition, the assignment has not previously been submitted for assessment, either in whole or in part, by either myself or any other student at either Manukau Institute of Technology or at any other tertiary institution. To the best of my knowledge and belief, the assignment contains no material which has been previously published or written by another person **except where due reference has been made**. All unpublished sources of information have been acknowledged. I make this statement in full knowledge and understanding that, should it be found false, I will, in most circumstances, receive zero marks for this assignment.  Note that agreement with this statement is a condition of handing in electronically and therefore that act of hand-in becomes your act of agreement.  For hand-ins on paper:  Signed by student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_  Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| This assignment is relevant to all 4 course Learning OutcomesDemonstrate an understanding of the architecture of web applications including the roles of clients and servers and the use of protocols for interaction.Learn and apply a server-side programming platform and/or language.  1. Implement dynamic web user interfaces using HTML, CSS, JavaScript, and AJAX.  Implement and publish web-based software solutions that interact with a variety of data sources and public APIs. | |

The Task is to create:   
A dynamic data-driven website for a business or organization scenario

with online sales and customer paid "gold", "silver" and bronze memberships.

You can choose to do this as an individual assignment.  
OR you can form teams of 2 or 3 students. Teams need lecturer approval.  
There are 3 x "web app areas" specified below as A, B and C.  
Each student selects or negotiates one of these to work on.  
  
From now on in this document, the word "team" includes the case of an individual student   
managed as a "team of one".  
Teams of one (individual) may need a little work on the other areas to support the selected area.

Each team proposes a website scenario for lecturer approval. In 2 or 3 sentences, state the business or organizational activity e.g. "Shoe Sales" and how this website will brand or distinguish itself in its area and for its target market. e.g. what kind of shoes and marketing to who?   
Record this into Canvas by midnight, Thu, 21 Mar

There are common requirements for a Team Mark.  
Each team member has individual requirements for an Individual Mark

Teams of 2 or 3 need to select 1 member to control "merging of branches into the master" - the main task is checking that new code (a "branch") is working before it gets copied into the combined project (the "master branch").

Common Requirements:

1. Your programming editor and environment is   
   Microsoft Visual Studio Team Services Option GIT with the lecturer added to your team.
2. Hand-ins are by file uploads to Canvas team area.  
   This includes individual projects which will operate as a Canvas team of one.  
   You also need to publish the website into our "hybrid cloud" environment.   
   as a Microsoft Azure Web App connecting to a database hosted on manukautech.info
3. Use the APA referencing style for all referencing in your bibliographies.
4. Use technologies specified by the lecturer or negotiated with the lecturer.  
   For Q1 2019 the specified standard is: Microsoft ASP.NET Core 2.2 MVC.  
   The database standard is: Microsoft SQL Server 2016 as provided at manukautech.info  
   You can negotiate variations on this eg:  
   - Microsoft ASP.NET Core 2.2 Razor Pages (new alternative to MVC)  
   - Microsoft ASP.NET Core 3.0 pre-release  
   - Microsoft ASP.NET Core API with loosely coupled Client(s) eg "Blazor", "React"
5. Record help given to or received from others in your Work diary.  
   Individual student areas need connections to each other.   
   e.g. The payment gateway for items for sale and memberships needs to be the same.   
   Recommendation: Membership is best managed as an item for sale.

Individual Requirements

"Work Diary" - this is a website that your lecturer provides.   
Your data entry there effectively hands itself in as you save.

"Comments" - comment your coding work with comments starting with date and initials.

"Development" - in a team, each student is individually responsible   
for one of these web app areas A, B or C:

1. **Web App Area A**  
   Online shop – catalogue, shopping cart and checkout.  
   Create test data for your database table of products and/or services for sale so that there are 15 or more items. You then demonstrate displaying them with a maximum of 6 on a page.  
   eg If you have 17 items, then Page 1 shows the first 6, Page 2 shows the second 6,   
   and Page 3 shows the leftover 5.  
     
   Replace the supplied "Bank of Fiction" payment gateway with "Paypal Sandbox"
2. **Web App Area B**  
   Sell Memberships: "Gold", "Silver" and "Bronze". You set the prices.   
   "Gold" members get 15% discount in the online shop. "Silver" members get 10% discount. "Bronze" members get 7% discount. Memberships expire after 1 year.   
   Make the expiry time configurable in the database so we can test this with shorter periods like 2 minutes instead of 1 year.  
     
   If a member with an expired annual subscription tries to login, then give polite feedback of the expiry and display the forms to renew the subscription by credit card.
3. **Web App Area C**  
   You need to provide website administrators with content management tools built into the website, eg "TinyMCE", "CKEditor", for doing their own editing of wording and images for at least 2 panels on 2 different pages.  
     
   Add role management capability to the app including a user-friendly GUI interface.

Submit these items. More detailed descriptions are in the marksheet below:

1. [Team] Business or Organisational Scenario   
   - Requirement to proceed - by midnight, Thu, 21 Mar 2019
2. [Team] Planning documents.
3. [Team] Requirements Checklist document - template supplied
4. [Team] Bibliography with Bibliography Added Notes
5. [Team] Web Application [Individual] Work Diary Timesheet using supplied Web App. No separate hand-in needed.
6. [Individual] Metrics Report - "MS Word" document.

**Your production needs to have appropriate COPYRIGHT CLEAR assets**.

**Work according to Professional Practice regarding copyright**.

All music, sounds, images and video needs to be material that you would be allowed to use in a business project which **could be accessible to the public**.

Where you copy or adapt you must include your sources in your Bibliography.

**Actors need to sign permission forms**  
IF you have people who appear in your project THEN they need to sign permission forms. "Appear" includes appearing in still photographs, voice recordings.

**Acceptable for all viewing audiences**.

Your website media **must** be acceptable for reading and/or viewing for **all** viewing audiences

The following wording is from Microsoft's Imagine Cup website and is a good example of standards from industry. We will use this to judge the acceptability of your work.  
*The content of your entry and any supporting materials must be acceptable for all viewing audiences. We will automatically disqualify any entrant that submits any entry or supporting materials that contain text, sound or images that we, in our sole opinion and for any reason, find vulgar, offensive, or inappropriate for public viewing, or that presents us and the Sponsors in a negative light.*

**Original Authorship**

The cover sheet which you agree to includes this wording:  
*"To the best of my knowledge and belief, the assignment contains no material which has been previously published or written by another person except where due reference has been made."*

This means, you are not allowed to copy from anyone or anything unless you make "due reference" which means write it into your Bibliography.

This becomes important when you ask for help from other students outside of your team or give help to other students outside of your team.

When you are helping your friends, do this by talking to them to guide them as they (not you) do the work.

Never, NEVER, give files to your friends outside of your team. And if you are having problems then do NOT say to your friends-outside-team "please give me your files so I can learn from them" because that puts unfair pressure on your friends and you can get them into big trouble along with yourself.

In a team, you can and will share files, that is the nature of Team Server

Team members can work on common files together.  
Team members must however NOT create or do substantial work on the files representing the individual area responsibility of another team member.

Marksheet 502.632 ("Full-Stack")

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| Item | Mark | Out-of |
| **[TEAM] Business or Organisation Scenario** | Requirement | |
| **[TEAM] Bibliography** The Bibliography includes at least 4 items per student in APA format. To get a better than average grade (2 out of 3 or better) will require more than 4 items per student from a range of sources demonstrating a wide-ranging investigation interest. |  | (3) |
| **[TEAM] Bibliography added notes**  Write a commentary on which sources of information you recommend as the most useful, and why. |  | (3) |
| **[TEAM] Complete Requirements Checklist** Documentation of which requirements you have met, which requirements you have not met, and how and where the marker can find these elements in your work.  This document needs to be effective in supporting marking. |  | (4) |
| **[TEAM]** **Planning documents.** Use Case and/or Flow Diagrams. |  | (4) |
| **[TEAM] Effective communication of the business scenario**  eg by Products, Forms, Controls, Visible dynamic functionality, Titles, Advertising copy text, use of images and other media. |  | (5) |
| **[TEAM] Publish this web app to Azure Cloud** |  | (2) |
| **Team Sub-Total** |  | [21] |
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| **[INDIVIDUAL] Work Diary** |  |  |
| Work Diary relates to Website Production, demonstrating good quantity and quality of time recording with appropriate use of categories. |  | (2) |
| Metrics - Create this as a separate "MS Word" document hand-in using data from your Work Diary - Timesheet.Breakdown of hours per category from your Timesheet.The Timesheet app has a built in SQL query which can provide this for you.Add comments on trends: especially which categories needed the most time and why. |  | (2) |
| Work diary notes effectively record your development process including:   * notes on your challenges and successes as they happen * notes on help you have given to others and help you have received from others |  | (5) |
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| **[INDIVIDUAL] Website Production** |  |  |
| Complexity, scope, completeness and effectiveness of programming elements including code comments, in meeting the Team and Individual Requirements above. |  | (20) |
| **Individual Sub-Total** |  | [29] |
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| **PROJECT TOTAL** |  | [50] |

END of 502.632 ("Full-Stack")