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| **New Zealand Diploma in Information Systems** | | |
| **Course No: 5603** | **User Interface Design Principles** | **Level: 5**  **Credits: 15** |

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| **Student Name:** | **Student ID:** |
| **Assessment Type: Case-study** | **Weighting: 70%** |
| **Due Date: 5pm Tuesday 27th August 2024** | **Total Marks: 100** |

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| **Student declaration**  I confirm that:  • This is an original assessment and is entirely my own work.  • The work I am submitting for this assessment is free of plagiarism. I have read and  understood the [Academic Integrity Policy](https://thenest.unitec.ac.nz/TheNestWP/wp-content/uploads/2019/05/2013-09-10-Academic-Integrity-Policy.pdf) here. I have also read and understood the  [Student Disciplinary Statue](https://thenest.unitec.ac.nz/TheNestWP/wp-content/uploads/2020/07/Student-Disciplinary-Statute-FINAL-Feb-2020.pdf) here.   * Where I have used ideas, tables, diagrams etc. of other writers, I have acknowledged the source in every case. | |
| **Student Signature:** | **Date:** |

**Assessment Mapping**

After completing this assessment, the student will have met the following learning outcomes related to the graduate profile outcome.

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| **Graduate Profile Outcome** | **Learning Outcome** | **Part 1** | **Part 2** |
| Apply design principles and core skills in human computer interaction (HCI) to design and develop an accessible and responsive information systems prototype, and test for usability, accessibility, and user experience. | 2. Apply human computer interaction (HCI) core skills to develop the information systems prototype. | ü |  |
| 3. Apply testing procedures to test the information systems prototype for usability, accessibility, and user experience. |  | ü |

**Assessment instructions:**

* This is an individual assessment.
* Your lecturer will assign you a case study.
* For the case study assigned you are required to develop and test the information systems prototype.
* This assessment consists of two parts:
  + Part A: Information systems prototype (Microsoft Visual Studio C# project)
  + Part B: Testing
* You are only allowed to use programming techniques that are taught in this course.
* You are not allowed to use Generative Artificial Intelligence (Gen AI) tools such as ChatGPT and Bard Go etc for ***any purpose***. You may continue to use:
  + spelling/grammar checkers, e.g., Microsoft spell-check, and Grammarly.
* Engaging with Gen AI for this assessment constitutes, and will be treated as, a breach of academic integrity.

**Assessment submission instructions:**

* Upload your information systems prototype (Microsoft Visual Studio C# project) and testing report (single document) all zipped up in a \*.**zip** file to the Moodle link “Upload Assessment One here”.

**Part A: Information Systems Prototype (Total = 75 marks)**

**Instructions:**

Based on the use case narratives, data dictionary, and the **MS Access** database given in your assigned case study, complete the sections below to develop an information systems prototype.

Notes:

* You are to use the **OleDb** objects (set up in the data controller) to interact with the **MS Access** database tables.
* Make sure that your C# project database connection points to **c:\5603** when you submitit as, when marking, your C# project will be run on the lecturer’s machine using the **MS Access** database available on Moodle. Please do not change the structure of the **MS Access** database.
* Microsoft Visual Studio can be obtained using your Azure account.

**Section 1 (55 marks)**

Create the nine associated forms in Visual C# using Microsoft Visual Studio.

**Section 2 (20 marks)**

Create the two associated reports in Visual C# using Microsoft Visual Studio.

Note:

* You are to use programming logic (i.e. master-detail relationships in conjunction with ‘for-each’ loops and find in conjunction with data views) to create the reports.

**Part B: Testing (Total = 25 marks)**

**Instructions:**

For the information systems prototype developed in part A you will apply testing procedures to test its usability, accessibility, and user experience.

**Testing procedure – Section 1**

* Create usability checklist with eleven testing criteria that can be used for testing the information systems prototype.
* Create accessibility checklist with eight testing criteria that can be used for testing the information systems prototype.
* Create user experience checklist with six testing criteria that can be used for testing the information systems prototype.

**Testing procedure – Section 2**

* Using the checklists created in section 1, test the information systems prototype, and provide evidence that shows whether each criterion in the checklists is met.

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**Assessment One Marking Sheet: Case Study 1**

**Student Name:**

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| --- | --- | --- | --- |
|  |  | **Your mark** | **Comment** |
| Part A  Section 1  (55 marks) | Main menu |  |  |
| Add property |  |
| Update property |  |
| Delete property |  |
| Add job |  |
| Update job |  |
| Delete job |  |
| Assign material |  |
| Remove material |  |
| Part A  Section 2  (20 marks) | Tradesmen Report |  |  |
| Invoices |  |
| Part B  Sections 1 & 2 (25 marks) | Usability |  |  |
| Accessibility |  |  |
| User experience |  |  |
| Total  **(100 marks)** |  |  |  |

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**Assessment One Marking Sheet: Case Study 2**

**Student Name:**

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| --- | --- | --- | --- |
|  |  | **Your mark** | **Comment** |
| Part A  Section 1  (55 marks) | Main menu |  |  |
| Add business |  |
| Update business |  |
| Delete business |  |
| Add assignment |  |
| Update assignment |  |
| Delete assignment |  |
| Allocate equipment |  |
| Remove equipment |  |
| Part A  Section 2  (20 marks) | Consultants report |  |  |
| Invoices |  |
| Part B  Sections 1 & 2  (25 marks) | Usability |  |  |
| Accessibility |  |  |
| User experience |  |  |
| Total  **(100 marks)** |  |  |  |

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**Assessment One Marking Sheet: Case Study 3**

**Student Name:**

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|  |  | **Your mark** | **Comment** |
| Part A  Section 1  (55 marks) | Main menu |  |  |
| Add cat |  |
| Update cat |  |
| Delete cat |  |
| Add visit |  |
| Update visit |  |
| Delete visit |  |
| Assign treatment |  |
| Remove treatment |  |
| Part A  Section 2  (20 marks) | Veterinarian Report |  |  |
| Invoices |  |
| Part B  Sections 1 & 2  (25 marks) | Usability |  |  |
| Accessibility |  |  |
| User experience |  |  |
| Total  **(100 marks)** |  |  |  |

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**Assessment One Marking Sheet: Case Study 4**

**Student Name:**

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| --- | --- | --- | --- |
|  |  | **Your mark** | **Comment** |
| Part A  Section 1  (55 marks) | Main menu |  |  |
| Add vehicle |  |
| Update vehicle |  |
| Delete vehicle |  |
| Add service |  |
| Update service |  |
| Delete service |  |
| Assign part |  |
| Remove part |  |
| Part A  Section 2  (20 marks) | Mechanics report |  |  |
| Invoices |  |
| Part B  Sections 1 & 2  (25 marks) | Usability |  |  |
| Accessibility |  |  |
| User experience |  |  |
| Total  **(100 marks)** |  |  |  |

**Assessment One Marking Rubric**

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| **Part 1** |  |  |  |  |
| Section 1  Forms  (55 marks) | The C# project can be run using Microsoft Visual Studio.  All nine forms are provided. All nine forms utilize the data controller’s OleDb objects (e.g., Data Adapter) correctly. The data controller’s connection points to the correct folder. Each form is created appropriately considering the corresponding metadata and use case narrative. All nine forms function correctly. However, weaknesses are identified in 1 or 2 of the forms such that they could be more usable. There can be minor formatting/spelling errors in the forms.    (48 – 55 marks) | The C# project can be run using Microsoft Visual Studio.  All nine forms are provided. Some forms utilize the data controller’s OleDb objects (e.g., Data Adapter) correctly. The data controller’s connection points to the correct folder. Each form is created considering the corresponding metadata and use case narrative. However, weaknesses are identified in 1 to 3 forms as they do not function correctly. There can be minor spelling/formatting errors in the forms.      (37 – 47 marks) | The C# project can be run using Microsoft Visual Studio.  Some forms are provided. Some forms utilize the data controller’s OleDb (e.g., Data Adapter) objects correctly. The data controller’s connection might not point to the correct folder. Each form is created considering the corresponding metadata and use case narrative. However, weaknesses are identified in more than 3 forms as they do not function correctly or do not correspond to the metadata.  There may be formatting/spelling errors in the forms.  (28 – 36 marks) | The C# project cannot be run using Microsoft Visual Studio.  The data controller is either absent or not used correctly. The forms do not utilize the data controller’s OleDb objects (e.g., Data Adapter) correctly. The data controller’s connection does not point to the correct folder. One or more forms are missing. Some forms are not created considering the corresponding metadata and use case narrative.  There may be formatting/spelling errors in the forms. Zero marks here if you have used programming techniques that are not taught in this course and/or used generative AI in your work.  (0 – 24 marks) |
| Section 2  Reports  (20 marks) | The C# project can be run using Microsoft Visual Studio.  Both reports are provided and use the print preview dialog. Each report is created appropriately considering the corresponding use metadata and use case narrative. Both reports function correctly.  Each report is created using the data controller and the prescribed programming logic.  However, there can be minor formatting/spelling errors in the reports.  (18 – 20 marks) | The C# project can be run using Microsoft Visual Studio.  Both reports are provided and use the print preview dialog. Each report is created considering the corresponding metadata and use case narrative. However, weaknesses are identified in 1 of the reports as it does not function correctly. Each report is created using the data controller and the prescribed programming logic.  There can be minor formatting/spelling errors in the reports.    (15 – 17 marks) | The C# project can be run using Microsoft Visual Studio.  Both reports are provided and use the print preview dialog. Each report is created considering the corresponding metadata and use case narrative. However, weaknesses are identified in both reports as they do not function correctly. Each report is created using the data controller and the prescribed programming logic.  There may be formatting/spelling errors in the reports.  (10 – 14 marks) | The C# project cannot be run using Microsoft Visual Studio.  One or both reports are missing, do not use the print preview dialog or are not created considering the corresponding metadata design and use case narrative. One or both reports is not created using the data controller and the prescribed programming logic.  There may be formatting/spelling errors in the reports. Zero marks here if you have used programming techniques that are not taught in this course and/or used generative AI in your work.  (0 – 9 marks) |

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| **Part 2** |  |  |  |  |
| Usability Testing  (11 marks) | 11 appropriate usability testing criteria are present in the checklists along with the evidence required to demonstrate that the testing has taken place. There are no formatting/spelling errors.    (11 marks) | 11 appropriate usability testing criteria are present in the checklists along with the evidence required to demonstrate that the testing has taken place. There are one to four formatting/spelling errors.    (9 -10 marks) | 11 appropriate usability testing criteria are present in the checklist, but the evidence required to demonstrate that the testing has taken place is limited or missing. There may be some formatting/spelling errors.  (6 – 8 marks) | Less than 11 appropriate usability testing criteria are present in the checklists and the evidence required to demonstrate that the testing has taken place is missing. There may be some formatting/spelling errors.  (0 – 5 marks) |
| Accessibility Testing  (8 marks) | 8 appropriate accessibility testing criteria are present in the checklists along with the evidence required to demonstrate that the testing has taken place. There are no formatting/spelling errors.  (8 marks) | 8 appropriate accessibility testing criteria are present in the checklists along with the evidence required to demonstrate that the testing has taken place. There are one or two formatting/spelling errors.  (6 – 7 marks) | 8 appropriate accessibility testing criteria are present in the checklists, but the evidence required to demonstrate that the testing has taken place is limited or missing. There may be some formatting/spelling errors.  (4 – 5 marks) | Less than 8 appropriate accessibility testing criteria are present in the checklists and the evidence required to demonstrate that the testing has taken place is missing. There may be some formatting/spelling errors.  (0 – 3 marks) |
| User Experience Testing  (6 marks) | 6 appropriate user experience testing criteria are present in the checklists along with the evidence required to demonstrate that the testing has taken place. No formatting/spelling errors.  (6 marks) | 6 appropriate user experience testing criteria are present in the checklists along with the evidence required to demonstrate that the testing has taken place. There are one or two formatting/spelling errors.  (4 – 5 marks) | 6 appropriate user experience testing criteria are present in the checklists, but the evidence required to demonstrate that the testing has taken place is limited or missing. There may be formatting/spelling errors.    (3 marks) | Less than 6 appropriate user experience testing criteria are present in the checklists and the evidence required to demonstrate that the testing has taken place is missing. There may be some formatting/spelling errors.  (0 – 2 marks) |