



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

LEVEL/ LEFEL : 4

MODULE CODE/ COD Y MODIWL: ACCC4004
INFORMATION ENGINEERING

ASSESSMENT TYPE/ MATH O ASESU: ASSIGNMENT

ASSESSMENT/COMPONENT/ ASESAD/CYDRAN: 2

COMPONENT WEIGHTING/ PWYSAU'R CYDRAN: 70 %

WORD COUNT/ NIFER Y GEIRIAU: N/A

SUBMISSION DETAILS/ MANYLION CYFLWYNO:

- All files of the website and the database should be zipped and submitted electronically to Moodle.



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BACHELORS DEGREE ASSIGNMENT SPECIFICATION (SOAC)

Programme:	BSc Cloud Computing		
Assignment Title:	Information Engineering		
Hand Out Date:	2 nd Week of Term	Submission deadline:	Please refer to the assessments schedule published on Students' Hall in Moodle and the Assessment Board on campus

Referencing:	In the main body of your submission you must give credit to authors on whose research your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have read or quoted in order to complete this assignment (e.g. for books: surname of author and initials, year of publication, <u>title of book</u> , edition, publisher: place of publication).
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Late submission will result in a late penalty mark, as follows:

Up to one week late, maximum mark of 40% for first attempts and 0% for resubmissions. No work will be accepted more than one week after the submission deadline
(Academic Quality Handbook 2016/17 7.5 (5))

AIM(S)

- To introduce the student to the underlying concepts of systems analysis and design of computer-based systems with an emphasis on requirements analysis. This continues through to the analysis of data. Database design techniques are studied and used to translate theoretical skill into practical applications.

Learning Outcomes tested (from module syllabus)	Assessment Criteria To achieve each outcome a student must demonstrate the ability to:
- Produce systems specifications and use them appropriately in the development of a database design model. - Produce a database solution that involves problem solving techniques to create a prototype application.	Database design and entity analysis techniques. Select suitable data types, entity and reverential constrains. Database implementation using suitable DBMS software.

Assessment Summary

Activity type	Percentage
Written	0%
Coursework	70%
Practical	30%
TOTAL	100%

ASSESSMENT

Coursework -70% of the Module

TASK DESCRIPTION

‘Home from home’ is an estate agent that operates in South Wales. They have many shops in most major towns and cities. The following points document the working procedures of the company: -

- The estate agent receives details on properties for sales from many vendors in the area.
- The estate agent documents the details of the properties that are for sale and records information from interested buyers.
- Like any estate agent they may have many buyers interested in the same property. The potential buyers may wish to view properties and are usually given appropriate appointments to do so.
- Vendors will request the estate agent to act on their behalf. The vendor will need to supply details on themselves and the property (or properties) that they have for sale.
- Prospective house hunters visit the estate agent and information is collected detailing the type of property the buyer is interested in.
- Once the buyer has viewed several properties it is anticipated that they will be interested in only one and thus a buyer can only place an offer on one property at any one time. If however the offer is not accepted the buyer may wish to up the offer or make an offer on a different property

Due to the various factors such a prompt and friendly service, the company are gaining an ever-increasing customer base. To maintain their level of service, the company has decided that fast information retrieval and processing is a must. They need to develop a database system. ‘Home from home’ have appointed you on a very large fee to draw up a design for a suitable database.

Additional information

The estate agent would like to use the system to query information for house hunters and produce relevant reports on available properties (i.e. right price range right area)

Once an offer has been placed the estate agent would like to have a facility, built in to the system that would indicate whether or not the vendor has accepted the offer, thus stopping other interested parties from further negotiations on the property.

Task 1

You must use design techniques that you have been looking at to develop a suitable solution for the above scenario.

- An Entity Relationship Diagram Showing:
 - Entities
 - Relationships
 - Degree of Relationships
 - Membership Class
 - Annotated descriptions for each relationship

Documentation

Provide evidence that the tables will link together in a relational database environment. Apply suitable data analysis and design techniques to create a logical design.

- Suitable tables created
- Suitable fields created
- Suitable foreign keys created
- Suitable relationships created
- Tables relate together correctly
- Verify the design meets user requirements
- Table design meets the rules of third normal form (3NF)
- Use references to books, journals, notes and web material used in the completion of the assignment
- Use Microsoft Visio to produce the final ERD document the tables and comment on the results achieved in Visio

Task 2

You are required to implement a database to meet the requirements of the **Home From Home** Database system using the Entity Relationship Model that you have developed. The system should contain the following:

- Tables (Your table design should follow the ER diagram provided but you may wish to add additional attribute field to enhance the design)
- Forms
- Queries
- Reports
- Relationships
- Macros

Documentation

- Front page with name, topic etc.
- Screen Capture from the Relationship Diagram
- Output from all reports
- Screen Capture for each form used
- Evidence of SQL
- Brief user guide

Guide to Successful implementation of assignment requirements:

<u>Initial design</u> ▪ Tables successfully created ▪ Appropriate relationships between table ▪ Tables populated with suitable data ▪ Appropriate menus created ▪ Appropriate forms created ▪ Appropriate reports created ▪ Query produced from a single table
<u>Implementation of Successful Querying and use of SQL</u> ▪ Create relationships using SQL ▪ Add records to tables using SQL ▪ Create a relationship (Foreign Key) using SQL ▪ Produce a Report from a query ▪ Main Menus and form navigation work together correctly
<u>Use of additional MS-Access functionality</u> ▪ Produce calculation in a report ▪ Produce Master and Embedded forms ▪ Producing reports and forms from a macro query ▪ Menus are displayed immediately after the database opens
<u>Documentation</u> Provide suitable user documentation and description of the database function

Please discuss with your Lecturer the specific requirements for this submission.

MARKING CRITERIA – ASSIGNMENT TWO

This section details the assessment criteria. The *extent* to which these are demonstrated by you determines your mark. The marks available for each criterion are shown. Lecturers will use the space provided to comment on the achievement of the task(s), including those areas in which you have performed well and areas that would benefit from development/improvement.

Common Assessment Criteria Applied	Marks available
1. Knowledge and Understanding of Subject Extent of knowledge and understanding of concepts and underlying principles associated with the discipline.	
Suitable development methods employed and justified.	25
2. Analysis Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence	
Provide evidence that the tables will link together in a relational database environment.	20
3. Practical Application and Deployment Deployment of methods, materials, tools and techniques; application of concepts; formulation of innovative and creative solutions to solve problems.	
Successful demonstration of software implementation	45
4. Skills for Professional Practice Attributes in professional practice: individual and collaborative working; deployment of appropriate media; presentation and organisation.	
All work suitable presented and referenced.	10

COMMON ASSESSMENT AND MARKING CRITERIA

	OUTRIGHT FAIL	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	EXCELLENT	EXCEPTIONAL
Assessment Criteria	0-29%	30-39%*	40-49%	50-59%	60-69%	70-79%	80-100%
1. Research-informed Literature Extent of research and/or own reading, selection of credible sources, application of appropriate referencing conventions	Little or no evidence of reading. Views and findings unsupported and non-authoritative. Referencing conventions largely ignored.	Poor evidence of reading and/or of reliance on inappropriate sources, and/or indiscriminate use of sources. Referencing conventions used inconsistently.	References to a limited range of mostly relevant sources. Some omissions and minor errors. Referencing conventions evident though not always applied consistently.	Inclusion of a range of research-informed literature, including sources retrieved independently. Referencing conventions mostly consistently applied.	Inclusion of a wide range of research-informed literature, including sources retrieved independently. Selection of relevant and credible sources. Very good use of referencing conventions, consistently applied.	A comprehensive range of research informed literature embedded in the work. Excellent selection of relevant and credible sources. High-level referencing skills, consistently applied.	Outstanding knowledge of research-informed literature embedded in the work. Outstanding selection of relevant and credible sources. High-level referencing skills consistently and professionally applied.
2. Knowledge and Understanding of Subject Extent of knowledge and understanding of concepts and underlying principles associated with the discipline.	Major gaps in knowledge and understanding of material at this level. Substantial inaccuracies.	Gaps in knowledge, with only superficial understanding. Some significant inaccuracies.	Evidence of basic knowledge and understanding of the relevant concepts and underlying principles.	Knowledge is accurate with a good understanding of the field of study.	Knowledge is extensive. Exhibits understanding of the breadth and depth of established views.	Excellent knowledge and understanding of the main concepts and key theories. Clear awareness of challenges to established views and the limitations of the knowledge base.	Highly detailed knowledge and understanding of the main theories/concepts, and a critical awareness of the ambiguities and limitations of knowledge.
3. Analysis Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence	Unsubstantiated generalisations, made without use of any credible evidence. Lack of logic, leading to unsupportable/missing conclusions. Lack of any attempt to analyse, synthesise or evaluate.	Some evidence of analytical intellectual skills, but for the most part descriptive. Ideas/findings sometimes illogical and contradictory. Generalised statements made with scant evidence. Conclusions lack relevance.	Evidence of some logical, analytical thinking and some attempts to synthesise, albeit with some weaknesses. Some evidence to support findings/ views, but evidence not consistently interpreted. Some relevant conclusions and recommendations, where relevant	Evidence of some logical, analytical thinking and synthesis. Can analyse new and/or abstract data and situations without guidance. An emerging awareness of different stances and ability to use evidence to support the argument. Valid conclusions and recommendations, where relevant	Sound, logical, analytical thinking; synthesis and evaluation. Ability to devise and sustain persuasive arguments, and to review the reliability, validity & significance of evidence. Ability to communicate ideas and evidence accurately and convincingly. Sound, convincing conclusions / recommendations	Thoroughly logical work, supported by evaluated evidence. High quality analysis, developed independently or through effective collaboration. Ability to investigate contradictory information and identify reasons for contradictions. Strong, persuasive, conclusions, justifiable recommendations	Exceptional work; judiciously selected and evaluated evidence. Very high quality analysis, developed independently or through effective collaboration. Ability to investigate contradictory information and identify reasons for contradictions. Highly persuasive conclusions
4. Practical Application and Deployment Effective deployment of appropriate methods, materials, tools and techniques; extent of skill demonstrated in the application of concepts to a variety of processes and/or contexts; formulation of innovative and creative solutions to solve problems.	Limited or no use of methods, materials, tools and/or techniques. Little or no evidence of appreciation of the context of the application.	Rudimentary application of methods, materials, tools and/or techniques but without consideration and competence. Flawed appreciation of the context of the application.	An adequate awareness and mostly appropriate application of well established methods, materials, tools and/or techniques. Basic appreciation of the context of the application.	A good and appropriate application of standard methods, materials, tools and/or techniques. Good appreciation of the context of the application, with some use of examples, where relevant.	A very good application of a range of methods, materials, tools and/or techniques. Very good consideration of the context of the application, with perceptive use of examples, where relevant. Evidence of some innovation and creativity.	An advanced application of a range of methods, materials, tools and/or techniques. The context of the application is well considered, with extensive use of relevant examples. Application and deployment extend beyond established conventions. Innovation and creativity evident throughout.	Outstanding levels of application and deployment skills. Assimilation and development of cutting edge processes and techniques.
5. Skills for Professional Practice Demonstrates attributes expected in professional practice including: individual initiative	Communication media is inappropriate or misapplied. Little or no evidence of autonomy in the completion of tasks. Work is poorly structured and/or	Media is poorly designed and/or not suitable for the audience. Poor independent or collaborative initiative. Work lacks structure, organisation, and/or coherence	Can communicate in a suitable format but with some room for improvement. Can work as part of a team, but with limited involvement in group activities. Work lacks	Can communicate effectively in a suitable format, but may have minor errors. Can work effectively as part of a team, with clear contribution to group activities.	Can communicate well, confidently and consistently in a suitable format. Can work very well as part of a team, with very good contribution to group activities.	Can communicate professionally and, confidently in a suitable format. Can work professionally within a team, showing leadership skills as appropriate,	Can communicate with an exceptionally high level of professionalism. Can work exceptionally well and professionally within a team, showing advanced leadership skills. Work is exceptionally coherent, very fluent and is presented professionally.

and collaborative working; deployment of appropriate media to communicate (including written and oral); clarity and effectiveness in presentation and organisation.	largely incoherent.		coherence in places and could be better structured.	Mostly coherent work and is in a suitable structure.	Work is coherent and fluent and is well structured and organised.	managing conflict and meeting obligations. Work is coherent, very fluent and is presented professionally.	
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