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ASSESSMENT BRIEF	
Subject Code and Title	COMR2002 BUSINESS INFORMATION SYSTEMS
Assessment	Practical Skills – Database Application Assignment
Individual/Group	Individual
Length	Add the required length for the assignment, presentation, discussion post, etc.
Learning Outcomes	1. Recognise the range of cultural, security, privacy and ethical issues confronting individuals and organisations as consequence of using Information Systems. 2. Apply practical skills in the major functions of spreadsheet and database tools. 3. Communicate with IT professionals, stakeholders and user groups of information systems.
Submission	By 11:55pm AEST/AEDT Sunday of Week 12
Weighting	40 %
Total Marks	40 marks

Context:

The aim of this assessment is to assess the student's ability to solve business problems using database design tool and software. Weekly online practical work will help students to complete this assessment. It also aims to enable students to think about the impacts of using IT in Businesses and communicate key issues through a written report.

Many companies depend on the accurate recording, updating and tracking of their data on a minute-to-minute basis. Employees access this data using databases. An understanding of this technology allows business professionals to be able to perform their work effectively

Instructions:

Students are expected to develop a database for the case study provided. Students need to design and implement the database using LibreOffice Base. Students will be having several database- related practical activities during the semester and each practical activity contributes to the completion of your assignment. Additional information you need in

developing the database will be provided during the week you are expected to implement a practical activity.

The following are the list of requirements:

- Create an E-R Diagrams using Diagram Editor (10% mark)
- Create database tables using LibreOffice Base (10% mark)
- Create queries and forms using LibreOffice Base and SQL (10% mark)
- Report on Impact using the technology (10%)

Students need to submit the following:

1) A word document containing:
   a) Introduction - a summary of the case study
   b) Database
      - explanation of the database development activities
      - E-R Diagrams created
      - Database tables created using LibreOffice Base
      - SQL queries and the reports generated by those queries
   c) Impact of using technology (at least 500 Words)
      - Discuss how Business Information Systems are being used in the case study (go to their website: tourdownunder.com.au/ and analyse from there)
      - Discuss the cultural, security, ethical and privacy issues in using IS and IT
2) LibreOffice Base files used in creating the tables, queries and forms

Assessment Attributes	Fail (Unacceptable)	Pass (Functional)	Credit (Proficient)	Distinction (Advanced)	High Distinction (Exceptional)
Documentation *5*	The document is incomplete and do not meet the minimum requirements. Report was written very poorly with grammatical and spelling errors; less than required length; and incomplete and incorrect citations. *1*	Document contains the minimum requirement. Grammatical and spelling errors are present; document presentation needs to be improved. *2*	Document contain the required contents. Summary of the case study and database development activities are presented well. *3*	Document exceeds minimum standards. Summary of the case study and database development activities are presented excellently. *4*	Document exceeds minimum standards and exhibit high quality presentation. Summary shows sophisticated understanding of the case study and database development activities. Document is presented and formatted excellently. *5*
E-R Diagram *10*	E-R Diagram created was incomplete and incorrect. More than 50% of the entities, attributes and relationships identified were incorrect.	E-R diagram created was complete but some attributes and relationships were incorrect. Some entities identified should not be an entity. More than 50% of attributes were missing (or incorrect)	E-R diagram created was complete. All entities identified were correct. Less than 50% of attributes and relationships were missing or incorrect. *5-6*	E-R diagram created was complete. Identified entities were correct and complete. Attributes were correct and complete. Some relationships were missing (or incorrect) *7-8*	E-R Diagram created was complete and correct. All entities, attributes and relationships were correctly identified. *9-10*

		and incorrect relationships identified.			
	1-2 *3-4*				
Database Tables *5* *1*	Database tables are incorrect and incomplete. E-R Diagram is not correctly translated to database tables. Majority of the tables, attributes are missing. Not all entities were translated into tables.	Database table is complete. All entities are translated into tables. Some attributes of the E-R Diagram are not in the table and types of attributes are incorrect. Relationships are not translated to tables (primary keys and foreign key are incorrect) Some data in the table were entered. *1*	Database table is complete All entities are translated into tables. Attributes are all present and relationships among tables are established (primary keys and foreign keys are mostly correct) All data in the table were entered. Most of the attributes have correct types. *3*	Database table is complete and correct. All entities are correctly and completely translated into tables. Attributes and types of attributes were correctly identified. All data in the table were entered. Most table relationships are correct (primary keys and foreign keys and their relationship have been mostly correctly established). *4*	Database table is complete and correct. All entities are correctly and completely translated into tables. Attributes and types of attributes were correctly identified. All data in the table were entered. All table relationships were correct (primary and foreign keys and their relationships were all correctly identified) *5*

		2			
SQL Reports	SQL queries and generated reports were mostly incorrect.

Forms were not created | More than 50% of the SQL queries and reports were correct.

Forms were created but not fully functioning. | More than 75% of the SQL queries and reports generated were correct.

All elements of the forms were created and have been linked to the tables. | All SQL queries and reports generated were correct.

All elements of the forms were created and all have been linked to the tables. Most of the data can be added and correctly saved in the tables.

Forms were designed appropriately. | All SQL queries and reports generated were correct.

All elements of the forms were correctly created, have been linked to the tables, and can correctly save data entered.

Forms have very good design. |
| 10 | 1-2 | 3-4 | 5-6 | 7-8 | 9-10 |
| Critical reasoning and presentation of emerging technologies and the arguments used in defending issues in culture, ethics, security and privacy | The Business Information Systems (BIS) identified are not appropriate.

Makes assertions about the use of BIS and its impact that are not justified. | BIS identified is appropriate but reasons were not fully justified.

Some issues were justified by arguments and not merely assertions. | BIS identified is appropriate and arguments were presented to justify the use of the technology in the organisation.

Takes into account the complexities of the issues of using BIS. Other viewpoints were acknowledged. | BIS identified is highly appropriate for the organisation and arguments presented to justify the appropriateness of the technology to the organisation is expertly presented.

Accurately takes into account the complexities of the use of BIS | Emerging technology identified is highly appropriate for the organisation. The technology is innovative and arguments presented to justify the appropriateness of the technology to the organisation is expertly presented.

Accurately |

10	1-2	3-4	Justifies any conclusions reach with arguments and not merely assertions 5-6	in the organisation. Justifies any conclusions reached with well-developed arguments and substantiated by research. 7-8	takes into account the complexities of the issues of introduction this new technology to the organisation. Limitations of the proposed technology were also acknowledged. Justifies any conclusions with well-developed arguments and well-articulated viewpoint on the issues of using the proposed technology and substantiated by research. 9-10

**DATABASE ASSESSMENT Part 1 –
E-R DIAGRAM**

The management of Santos Tour Down Under
decided to replace the spreadsheet with a
database. You were asked to create the new database. Your first step is to create the database
model using the E-R Diagram. **Note that this is part of your assessment.**

Instructions:

1. Read the Database Assessment Case Study Background (Database Case Study
    Background.docx)

2. Identify the entities and attributes of the database module using the following information:
    a. Santos Tour Down Under must maintain information about its <u>sales reps, customers,
        product inventory, order</u>.
    b. For the sales rep, the sales rep number, last name, first name, street address, city,
        state, zip, country total commission , and commission rate for each sales rep must
        be recorded
    c. Customer information must also be maintained including the customer number,
        name, street address, city, state, zip, country, current balance, and credit limit for
        each customer, as well as the number of the sale rep who represents the customer.
    d. The product id, product name, product colour, quantity available, its manufacturer
        id and unit price are also maintained.
    e. For each order, the order number, date order was placed, and the customer number
        that placed the order must also be stored.
3. Identify the relationships among entities using the following information:
    a. A customer can only have one sales representative but a sales representative can
        have one or more customers.
    b. A customer can have zero or more orders and each order has one customer.
    c. An order can have several products and a product can have several orders.
    d. Given the order number and the product ID, the quantity of products ordered and
        the quoted price is stored (*Hint: these attributes should be added once the many-t-
        many relationship between order and product is resolved, the new entity should be
        called <u>orderline</u>).
4. Create the database model using E-R Diagram. You can use draw.io or any of the E-R
    diagram drawing tools you prefer.
5. Save your E-R Diagram.

6. Convert the E-R Diagram to relational schema (relational model).

7. Copy your E-R Diagram and save your relational schema in a document.

8. Save your document.

9. BACK-UP! BACK-UP! BACK-UP! Do not forget to keep a back-up files. Either upload in your google drive or dropbox; and/or just e-mail the file to yourself so that you have a copy in your email; and/or save in a USB drive.

10. You can show your work to your lecturer for feedback.

11. REMEMBER THAT THIS EXERCISE IS PART OF THE FINAL DATABASE ASSESSMENT YOU HAVE TO SUBMIT ON WEEK 12.

DATABASE ASSESSMENT Part 2 – DATABASE TABLES AND FORMS

Now that you have created the logical design for your database . Your next step is to create the tables and forms. **Note that this is part of your assessment.**

Instructions:

1. Given the relational schema you created in the part 1 of the assessment, normalise the schema in 3NF. Add the normalised schema in your document and explain why do you think it is in the 3NF.

2. Save your document.

3. Create a database in LibreOffice Base DBMS.

4. Create your database tables in LibreOffice Base

5. Add 2 sample records for each table you created.

6. For revision on how to create databases and tables, go to the following website:

   a. LibreOffice Base Tutorial #1 – Basic Functionality - http://www.gofree.com/Tutorials/LibreOfficeBase1.php

   b. LibreOffice Base Tutorial #2 – Creating Tables. http://www.gofree.com/Tutorials/LibreOfficeBase2.php

   c. LibreOffice Base Tutorial #3 – Creating Records. http://www.gofree.com/Tutorials/LibreOfficeBase3.php

   d. LibreOffice Base Tutorial #4 – Editing Field Properties. http://www.gofree.com/Tutorials/LibreOfficeBase4.php

   e. Read Base Handbook provided on Module 4-8 (BH40 -Base Handbook. pdf)

   f. If you prefer watching a tutorial on how to create databases and tables in LibreOffice Base, watch this video : https://youtu.be/jWU0WdMJ2Kw

7. Add 2 sample records for each table you created. Note that the type of products that TDU retail shops sell are Guernsey, tshirts, caps; locations of branches can be in Adelaide, Melbourne, Sydney, Brisbane, New York, Paris, London, Perth, Hobart, Darwin, Tokyo, Manila, Hong Kong, Bali).

8. Save your database files.

9. Create forms for the Customer Information to be used for data entry. Your form should look something like this (you are free to have a different layout and design for your form as long as it contains all the data needed):

10. Create forms for Product and Sales Rep.

11. Finally, create the form for Orders (using sub-forms for orderline). It should look something like this:

12. Using the forms you created, add 3 more records for each form you created. After using the form, you should have 5 records for each table.
13. Save your database.
14. BACK-UP! BACK-UP! BACK-UP! Do not forget to keep a back-up files. Either upload in your google drive or dropbox; and/or just e-mail the file to yourself so that you have a copy in your email; and/or save in a USB drive.
15. You can show your work to your lecturer for feedback.
16. REMEMBER THAT THIS EXERCISE IS PART OF THE FINAL DATABASE ASSESSMENT YOU HAVE TO SUBMIT ON WEEK 12.

DATABASE ASSESSMENT Part 3 – DATABASE QUERIES AND FORMS

You now have to create queries and reports using the database you created. **Note that this is part of your assessment.**

Instructions:

1. Use the database you created in the database assessment part 1 and part 2.
2. Create queries answering the following questions (note that you can use query wizard but there are some questions that need SQL statements to be written using the sql view:
    a. List all the Product ID and Product Names being sold
    b. List all the customers number and name who ordered tshirts
    c. List all the customer number and customer names and the names of their sales representative.
    d. List the entire customer name and the products they ordered.
3. Create 2 reports:
    a. Report containing all the information about the customer.
    b. Report containing all the products ordered per customer.

4. Save your database.
5. BACK-UP! BACK-UP! BACK-UP! Do not forget to keep a back-up files. Either upload in your google drive or dropbox; and/or just e-mail the file to yourself so that you have a copy in your email; and/or save in a USB drive.
6. REMEMBER THAT THIS EXERCISE IS PART OF THE FINAL DATABASE ASSESSMENT YOU HAVE TO SUBMIT ON WEEK 12.
7. The following are the list of documents you need to submit in week 12:
    a. Document containing the E-R diagram, relational schema and normalised schema

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b. LibreOffice Base Database file (containing the tables, forms, queries and reports)

DATABASE ASSESSMENT Part 4 – Impact of Technology

You will now discuss the impact of using technology applied to the Santos Tour Down Under case study. **Note that this is part of your assessment.**

Instructions:

1. Discuss how Business Information Systems are being used in the case study (go to their website: tourdownunder.com.au/ and analyse from there)
2. Discuss the cultural, security, ethical and privacy issues in using IS and IT
3. Save your document
4. BACK-UP! BACK-UP! BACK-UP! Do not forget to keep a back-up files. Either upload in your google drive or dropbox; and/or just e-mail the file to yourself so that you have a copy in your email; and/or save in a USB drive.
5. REMEMBER THAT THIS EXERCISE IS PART OF THE FINAL DATABASE ASSESSMENT YOU HAVE TO SUBMIT ON WEEK 12.

At this point, you should have all the materials you need to submit your database assessment. As stated in the assessment document, you are required to submit the following on week 12:

3) A word document containing:
   a) Introduction - a summary of the case study
   b) Database
      - explanation of the database development activities
      - E-R Diagrams created
      - Database tables created using LibreOffice Base
      - SQL queries and the reports generated by those queries
   c) Impact of using technology (at least 500 Words)
      - Discuss how Business Information Systems are being used in the case study (go to their website: tourdownunder.com.au/ and analyse from there)
      - Discuss the cultural, security, ethical and privacy issues in using IS and IT
4) LibreOffice Base files used in creating the tables, queries and forms

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