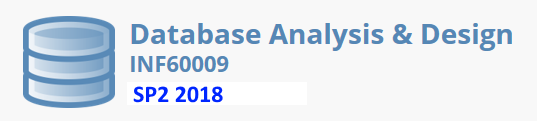
****

**Task 8 - Pass and Credit Requirements**

**Overview**

* This week the Pass tasks focus on data (ERDs) modelling. The Credit tasks focus on the process of converting ERDs into implemented database solutions.
* For submission, it’s same process as the other weeks: complete tasks, document them (usually by asking for screen grabs), and submit online.

## **Getting Started and Submitting**

* Download the files **W08P.DOCX** and **W08C.DOCX** from blackboard
* Paste the required screen captures from the tasks below into these files
* When complete, use the File / Export menu option to generate the files W08P.PDF and W08C.PDF
* Finally log into Doubtfire and submit both files into the appropriate weekly tasks.

## **Pass level Tasks**

* **ALL tasks** in this section MUST be completed for you to successfully complete the Pass Level Tasks
* Read the following narrative:

***‘Easy Movers’*** *hire drivers to work on moving jobs. Each* ***job*** *has a job ID, a title, a duration (in hours), and a description. Drivers all have a name, an address and a mobile phone number. When a driver is allocated to a job the date is recorded, as well as a fixed fee. E.g. Ankit was allocated to project #37 on September 22nd. The fee that Ankit has set for project #37 is $500.*

* Create an ERD solution based on the above narrative.
* Convert the ERD to a relational schema (DO NOT use surrogate keys)
* The ERD may be neatly hand-drawn or can be drawn in a package like Visio. The **symbols** and style of the **ERD must match** the ERDs seen in lectures of **this unit**.
* Scan or take a screenshot of the **ERD** and place it in the document named **W08P.DOCX**
* **Copy and paste the relational schema and place it in the document named W08P.DOCX**
* Read the following narrative:

***‘Glenferrie Pet Services’*** *provides a number of services for clients and their pets. Examples of services are washing, grooming, walking, etc. Each service has a per hour fee. E.g. washing a dog is charged at $50 per hour. Each service has a Description and Service Number. Each client has a name, address – and may or may not have a Glenferrie Pet Services reward card. Glenferrie Peter Services record the date that a service was arranged for a client and the number of hours that are budgeted for that service. E.g. Tina Sparkle has arranged for her dog to be walked on October 03 2017. It is estimated that it will take 1.0 hours to complete. Note: There is no need to record who performed the service or how long it actually took to perform that task.*

* Create an ERD solution based on the above narrative.
* Convert the ERD to a relational schema.
* The ERD may be neatly hand-drawn or can be drawn in a package like Visio. The **symbols** and style of the **ERD must match** the ERDs seen in lectures of **this unit**.
* Scan or take a screenshot of the **ERD** and place it in the document named **W08P.DOCX**
* **Copy and paste the relational schema and place it in the document named W08P.DOCX**
* Read the following narrative:

***Retro Games*** *are planning to hold an exhibition of retro computer game consoles and related gear. Every console/artefact will have a barcode, a title and a description. Each console is provided by an exhibitor (usually a gaming enthusiast). Exhibitors have a name, an address, contact number, and email. One exhibitor may bring more than one console tor the exhibition. Other enthusiasts will come and visit the exhibition as attendees. As each attendee enters the exhibition, their name, address and phone number will be recorded. Each attendee will be given a unique barcode id. During their visit, attendees will nominate which console/artefact they like the most! This will be recorded by staff at Retro Games. Attendees will be able to vote for more than one console/game/artefact.*

* Create an ERD diagram.
* The ERD may be neatly hand-drawn or can be drawn in a package like Visio.
* The **symbols** and style of the **ERD must match** the ERDs seen in lectures of **this unit**.
* Scan or take a screenshot of the **ERD** and place it in the document named **W08P.DOCX**
* **Copy and paste the relational schema and place it in the document named W08P.DOCX**

## **Credit level Tasks**

* **ALL** tasks in this section MUST be completed for you to successfully complete the Credit Level Tasks
* Burnswine University have a IS Department focused on, amongst other things, providing training and educations services.
* As part of their ongoing commitment to improving the quality of courses and learning outcomes, they currently record all their training and seminar attendance in spreadsheets!
* A modelling / database expert has created this ERD:



The same expert has created the following Database SQL statements to create the 'strong entity' tables as well as some sample data (retrieved from an Excel file) for testing purposes.

DROP TABLE STUDENT;

CREATE TABLE STUDENT (

STUID NUMBER PRIMARY KEY

, FULLNAME VARCHAR(30)

, GENDER VARCHAR(1)

);

INSERT INTO STUDENT (STUID,FULLNAME,GENDER) VALUES (2719000,'Emma Jay','F');

INSERT INTO STUDENT (STUID,FULLNAME,GENDER) VALUES (9091431,'Dave Smith','M');

INSERT INTO STUDENT (STUID,FULLNAME,GENDER) VALUES (9198112,'Jane Jones','F');

INSERT INTO STUDENT (STUID,FULLNAME,GENDER) VALUES (8184398,'Mike Jacobs','M');

DROP TABLE STAFF;

CREATE TABLE STAFF (

STFID NUMBER PRIMARY KEY

, FULLNAME VARCHAR(30)

, GENDER VARCHAR(1)

);

INSERT INTO STAFF (STFID,FULLNAME,GENDER) VALUES (131,'Karen Lovell','F');

INSERT INTO STAFF (STFID,FULLNAME,GENDER) VALUES (232,'Denise Randle','F');

INSERT INTO STAFF (STFID,FULLNAME,GENDER) VALUES (455,'Sean Mellerick','F');

INSERT INTO STAFF (STFID,FULLNAME,GENDER) VALUES (217,'Haley Daniel','F');

DROP TABLE SEMINAR;

CREATE TABLE SEMINAR (

SEMID NUMBER PRIMARY KEY

, TITLE VARCHAR(30)

, SDATE DATE

);

INSERT INTO SEMINAR (SEMID,TITLE,SDATE) VALUES (401,'Database Security','13-JAN-2016');

INSERT INTO SEMINAR (SEMID,TITLE,SDATE) VALUES (402,'Agile Programming','14-JAN-2016');

INSERT INTO SEMINAR (SEMID,TITLE,SDATE) VALUES (406,'Business Inelligence','13-JAN-2016');

INSERT INTO SEMINAR (SEMID,TITLE,SDATE) VALUES (409,'Social Media Analytics','14-JAN-2016');

1. You must write the DROP and CREATE TABLE statements for the **Staff Allocation** and **Attendance tables**. Ensure that you include all appropriate Primary Keys and Foreign Keys.
2. Create SQL **INSERT statements** for the **Staff Allocation** Table based on this data retrieved from a Burnswine Excel file. **Note:** You will need to determine which pieces of data from this spreadsheet are required to be inserted into the Staff Allocation table.

|  |  |  |
| --- | --- | --- |
|  | **A** | **B** |
| **1** | **ALLOCATION DATA** |  |
| **2** | **Seminar Number** | **Staff Details** |
| **3** | 401 | 131 Karen |
| **4** | 401 | 455 Sean |
| **5** | 402 | 131 Karen |
| **6** | 402 | 217 Haley |
| **7** | 406 | 455 Sean |

1. Create SQL **INSERT statements** for the **Attendance Table** based on this data retrieved from a Burnswin Excel file.Each attendee awards a point score in the range 0-10 for the seminar that they attended. **Note:** You will need to determine which pieces of data from this spreadsheet are required to be inserted into the Attendance table.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **A** | **B** | **C** |
| **1** | **Attendance Data** |  |  |
| **2** | **Seminar Id** | **Student identification** | **The score awarded by student** |
| **3** | 401 | 9091431 Dave | 8 points |
| **4** | 401 | 9198112 Jane | 5 points |
| **5** | 401 | 8184398 Mike | 7 points |
| **6** | 402 | 9198112 Jane | 6 points |
| **7** | 402 | 9091431 Dave | 7 points |
| **8** | 406 | 9198112 Jane | 4 points |

1. Create SQL SELECT statements to meet the following requirements
2. Using a **UNION** clause, write an SQL statement that lists the names and genders of all staff and students in a single result set. The list must be in gender / name sequence.
3. Using a **SUBQUERY** statement, write an SQL statement that displays all rows from the Attendance table only if the score given is **more** than the average of all scores.
4. Using a **LEFT OUTER JOIN** statement, write an SQL statement that displays a list of ALL staff names and seminar numbers of any seminars that they have presented. *Note: The list must include staff who are not allocated to any presentations.*
5. Using an **RIGHT OUTER JOIN** statement, write an SQL statement that displays a list of ALL student names and shows the title of any seminar that they attended and the score they gave it. *Note: This list must include students who attended no seminars.*

Copy and paste the following into the document named **W08.docx**

* **Drop Table** statements (include the drop statements for Staff, Student & Seminar as well)
* **Create Table** statements (inc. the Create statements for Staff, Student & Seminar as well)
* **Insert** statements (include the Insert statements for Staff, Student & Seminar as well)
* **Union** statement & Result Set
* **Subquery** statement & Result Set
* **Left Outer Join** statement & Result Set
* **Right Outer Join** statement & Result Set

## **References**

* Chapter 4 <http://proquest.safaribooksonline.com/book/databases/sql/9780321584069> via Swinburne library
* <http://www.w3schools.com/sql/>
* <https://www.techonthenet.com/sql/>
* Lecture 8 of this unit