Assessment Task – General

SWIN BUR NE — SWINBURNE UNIVERSITY OF TECHNOLOGY

National Unit Details

Code(s)	ICTDBS403 ICTDBS502 ICTWEB425	Title(s)	Create Basic Databases Design a Database Apply SQL to extract and manipulate data
Assessment Number	0	**Assessment Title**	Pre-Test

Section 1 – General Assessment Information

Decision Making Rules	Every task must be completed satisfactorily to be assessed as competent in the unit. ** For graded units, competence must be demonstrated before a mark can be given.*
Reasonable Adjustment	Students may request reasonable adjustment for assessment tasks. Reasonable adjustment usually involves varying: ▪ the processes for conducting the assessment (eg: allowing additional time, varying the venue) ▪ the evidence gathering techniques (eg: oral rather than written questioning, use of a scribe, modifications to equipment) However, the evidence collected must allow the student to demonstrate all requirements of the unit.
Special Consideration	Students can apply for Special Consideration where personal circumstances have adversely affected their task result or ability to undertake an assessment. A Special Consideration form can be completed prior to, but no later than 3 days after, the date of the assessment and submitted to the relevant Manager.
Re-submission *(where tasks are not satisfactorily completed)*	Assessment tasks that are not satisfactory can be resubmitted up until the end of the unit as scheduled on the Unit Outline. The timing on this may depend on the equipment required for this assessment task. **NOTE**: Assessment tasks submitted for the first time after the end of the unit as scheduled on the Unit Outline will not be assessed and student should be told to re-enrol in the unit.
Plagiarism	There are serious penalties for plagiarism. Students must ensure that all assessments are their own work (or group work). Please refer to https://www.swinburne.edu.au/current-students/manage-course/exams-results-assessment/plagiarism-academic-integrity/

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Section 2 – Student and Assessor Instructions

Conditions	*This assessment is:* - *Open book* - *Individual* *You will need access to:* *Computer with MS Office* *Access to Microsoft Azure and the ability to start an SQL Server database on that service.*
Task Overview and/or Description	a. Download DAD_Challenge_3_Template.docx and DAD_Challenge_3_Retest_1_Data.xlsx b. You have 3 hours to complete the following tasks **Swinny Uni** Swinny Uni operates in Hawthorn Victoria. The organisation plans to increase marketing and build its student base over the next year. Swinny Uni currently store all of their data in a spreadsheet (a sample is provided). To assist the Swinny, it is believed they need a database solution developed for them. Swinny would like you to create an ERD, Relational Schema and Database for them along with some sample queries to demonstrate the databases ability to serve their needs. In the future, other students will develop a web interface to the database, a rich user experience, analytical data tools and so on. **Task 1.** Swinny Uni offer a number of different subjects. Each subject has a subject code and a description. A subject may be offered multiple times, for example Database Analysis and Design may be offered in Semester 1 of 2019 and again in Semester 2 of 2019 and yet again in Semester 1 of 2020 etc. A student may over time enrol in many different subject offerings and even in some cases the same subject offering on more than one occasion. Each time a student enrols in a subject offering it is called an enrolment, and the grade achieved for that particular enrolment is recorded (not when the enrolment is first made but at the end of the semester). Each subject has a current price (cost to students to enrol when that subject is offered). Prices have usually increased by around 10% each year, so the price paid for a given historical enrolment needs to be recorded separately. Swinny have a number of students. Each student has a first name, surname, student id, phone number and gender recorded.

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Create an **ERD** based on both the narrative above and the sample data provided.

- The ERD must be drawn using a drawing package such as **draw.io**
- Do **not** introduce any surrogate keys into your solution.
- Your ERD MUST be approved by your teacher BEFORE commencing Task 2.

Once approved by your teacher, add a printout / screenshot of your ERD to the provided submission template.

Task 2.

- Convert your ERD into a **Relational Schema**
- Do **not** introduce any surrogate keys into your solution.

Add your relational schema (text or screen shots as you prefer) to the provided submission template.

Task 3.

Part A:

- Normalise the sample data provided to 1NF
- *Add you're a screen shot of your 1NF data to the provided submission template.*

Part B:

- Normalise the sample data provided to 2NF
- *Add you're a screen shot of your 2NF data to the provided submission template.*

Part C:

- Normalise the sample data provided to 3NF
- *Add you're a screen shot of your 3NF data to the provided submission template.*

Ensure any discrepancies between the normalised example data and your Relational Schema are reconciled.

Task 4.

- Create a Data Dictionary documenting the datatypes, constraints and any other relevant notes on the fields represented in your relational schema.

Add your data dictionary (or a screen shot of it) to the provided submission template.

Department Details	Author:	Date created:	Date last updated:	File name: DAD_Pre_Test_Instructions.docx		Version:
Template Details	Author: VE Quality and Policy	Date created: 05 October 2016	Date last updated: 27 April 2017	Location: VE Staff Wiki/Quality/Quality Life Cycle/Plan	Version: 1	Page 3 of 6

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Section 2 – Student and Assessor Instructions

Task 5.

- Create an SQL Server database instance on Azure.
- Write and run the DDL to create your database on that instance.
- Do **not** introduce any surrogate keys into your solution.
- Add the sample data (from the spreadsheet into the tables) to your database.

Additional Data: You must also add a **yourself** as a **customer**. Use your name and student id.

Add the DDL used to create your database to the provided submission template.

Run the query: Select * from customer

Add a screenshot of the result set from the above query to the provided submission template.

Task 6.

Write and run queries to meet each of the following requirements.

Include screen shots of BOTH the query and the result set for each query in the provided submission template.

Query 1:

Write a query that shows the following information for every enrolment:

The student first name, surname the subject code and description, the semester and year and the price paid for the enrolment.

Query 2:

Write a query which shows the number of enrolments for each subject, make sure subjects with no entries in the database are included.

For example:

Procedure	Num Enrollments
Database Analysis & Design	3
Intro to Programming	2
Project Management	0

(The actual results will vary, this demonstrates format only)

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Section 2 – Student and Assessor Instructions

	Query 3: Write a query which lists all subject offerings which have a price greater than the average price. (This query must use a sub-query **Task 7:** Create a View based on Query 1 above. Add a screenshot of the DDL used to create the view to the provided submission template. ***Submit your submission on the Swinburne LMS***
How the Assessment will be Conducted	*You will be provided with* - DAD_Pre_Submission_Template.docx - DAD_Pre_Test_Data.xlsx
Submission Details	*Your will be required to submit a document based on the provided template which includes your responses to the questions in the template.*

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Section 3 – Assessment Criteria (Evidence to be Provided by the Student)

The evidence you must provide is a document submitted on the Swinburne LMS

The document must be based on the provided template and include responses to all of the questions asked.

Notes for the teacher

List in the Required Evidence column below all aspects of the task that are required to be demonstrated by the student for satisfactory completion of the task.

Ensure that it is very clear to the student the evidence they are being asked to provide. This should also ensure that different assessors would give a similar result when assessing the evidence of a student. Depending on the assessment task, the evidence listed may be a repeat of the Task Overview and/or Description but more often it is a clear list of only what is being assessed.

There must be room for Student Feedback in required evidence section.

* For graded units, ensure the marks allocated to each requirement are not too broad a range. You could use a rubric in Bb.

Please note: A suggestion for graded tasks is to list the required evidence to be assessed as Satisfactory, Unsatisfactory, Not submitted. Once the student has satisfactorily completed all required evidence, allocate the marks using a rubric.

Marking Guide

	Required Evidence	Satisfactory	Not Submitted	Unsatisfactory
1	Challenge Completed			

If the unit is graded, add rubric or how marks allocated here.

Feedback to Student

Task Result	☐ **Satisfactory**	☐ **Unsatisfactory**

	Name	Signature	Date
Assessor			