**CE00407-3 MANAGEMENT OF DATABASE SYSTEMS**

**COURSEWORK ASSIGNMENT**

**Hand in : Milestone 01/03/10 Final Coursework 12/04/10 Coursework Description**

For the assignment you are required to write an individual report based on a scenario. The report must presented to the tutor and the presentation should include a practical demonstration which will illustrate the area you have researched in detail. The assignment hand in date is by 3.30 pm on Monday 12 April 2010 and presentations will be held during the weeks commencing 12/04/10 & 19/04/10. You can hand in earlier if you wish but you will still be required to complete the full report and give a demonstration. The assignment includes a milestone which is due for Monday 01/03/10.

**WHAT YOU MUST HAND IN**

**(a) 200 -250 word synopsis of the approach you intend to take and the areas you will research (see below):**  the milestone is worth **10%** of the marks for the Coursework. To be submitted in the usual way to the Octagon Reception by 3.30 pm on 01/03/10

You will be expected to book an appointment during week commencing 01/03/10 to present your outline and discuss it with the tutor. If you do not present the summary you will receive zero for this element of the assessment. If you do not present the final coursework, you will receive zero for the summary.

**(b) 2,000 – 2,500 word essay (individual coursework) in report format** **and supporting practical demonstration which is a proof of concept artefact.**

Guidance is that the essay should be in the range 2,000 – 2,5000. The coursework must not be less than 2,000 words and should not exceed 3,000 words. Coursework which is significantly above or below these limits may be penalised. If you do not demonstrate the practical element you will receive zero for the report. Please refer to the mark scheme to make sure you understand what is required.

**THE SCENARIO**

**YOUR ROLE**

You are the recently appointed database administrator for Beaconside Catering Supplies Ltd (BCS). Database administration has not previously been a recognised function at BCS and policies and procedures are lacking.

**THE COMPANY**

BCS is a medium sized company which provides wholesale baking ingredients to commercial bakeries. BCS was originally a manufacturing company and still produces and supplies cake fillings, particularly jam and icings. BCS has recently expanded into buying in and selling on products such as pizza toppings, cake decorations and commercial batter mixes. Most of the company’s sales come from traditional paper based orders but a recently developed web site is attracting increasing amounts of business.

**THE COMPANY DATABASE**

You can assume that the company uses an appropriate enterprise database and you can develop your practical demonstration in any suitable enterprise DBMS. MS Access is NOT an acceptable DBMS for this assignment. You cannot reuse a database or front end previously developed for a different assignment.

**THE PROBLEM**

There have recently been a number of security breaches of the database. These included personal details of customers being obtained by a rival company, junior members of staff accidentally disclosing customer bank details, an unknown member of staff accessing senior staff salary details (which are supposed to be confidential) and emailing these to all members of staff and most shareholders; accidental deletion of data meaning that some orders were not fulfilled.

For the purposes of this assignment, assume that concurrency and transaction management procedures are satisfactory and do not need to be considered.

**THE TASK**

Your report should critically analyse the possible causes of these security failures and should review the security options open to the company, giving an overview of security issues in database management. You should select one technique/strategy to discuss in detail. You will be expected to provide a practical demonstration to show how your chosen technique/strategy could be implemented, the benefits and any issues. This will be a proof of concept application and will not require full interface/functionality. Documentation for the practical demonstration (code/diagrams/screen shots as appropriate must be included as an appendix to your report). You must include a word count.

For the purposes of this assignment, security should be taken to mean safeguarding the database against accidental or deliberate breaches.

**GUIDANCE**

* The report should give an overview of all aspects of database security but should investigate in detail one particular technique/strategy which you will recommend that the company adopts. You can make any sensible assumptions about the structure and technical specification of the existing database but you must explain your assumptions in the report. Your practical demonstration must illustrate the technique/strategy which you are recommending.
* Your discussion must relate to the scenario
* The practical demonstration will be assessed on the security aspect. This is a proof of concept demonstration and you are not expected to create a complete system. You are only required to create a schema/tables and data sufficient to demonstrate the strategy/technique. Please see the mark scheme for guidance on this.
* You must indicate whether you are dealing with a centralised or a distributed database
* It is expected that you will refer to vendor and practitioner reports as part of your research but you must also carry out academic research
* The report should consider security issues; your practical demonstration will show how a particular technique can be applied to a specific DBMS but your report should consider wider issues.
* You can assume that the audience for whom the report is intended will be able to understand relevant technical terms
* If you need clarification on any aspect of the assignment, please discuss this with the tutor in the individual assignment tutorials
* From the point of view of the assignment you can investigate any aspect of security as long as you do so in sufficient depth and can relate it to the scenario.

Grade Guidance

A top grade report & presentation will give a comprehensive overview of all aspects of database security and will include a high quality discussion of the chosen technique/strategy which addresses technical and organisation aspects and include consideration of wider aspects such as interaction with applications. The report will discuss security policies as well as individual security techniques. The practical demonstration will be designed to illustrate the argument and will display good technical skills and a thorough grasp of the subject area. Research will be relevant and current and will include technical and academic material. The report will be well structured and arguments will be supported by references.

A B grade report & presentation will give a comprehensive overview of all aspects of database security and will include a good quality discussion of the chosen technique/strategy which addresses technical and organisation aspects and includes consideration of wider aspects such as interaction with applications. The report will discuss security policies as well as individual security techniques. The practical demonstration will be designed to illustrate the argument and will display good technical skills and a good grasp of the subject area. Research will be relevant and current and will include technical and academic material but will be at a slightly lower level than is required for an A grade. The report will be well structured and arguments will be supported by references.

A C grade report & presentation will give a satisfactory overview of database security but may not be fully comprehensive. The report will include a satisfactory discussion of the chosen technique/strategy which addresses technical and organisation aspects but may not consider wider aspects. The report will discuss security policies as well as individual security techniques. The practical demonstration will be designed to illustrate the argument and will display satisfactory technical skills. Research will be relevant and current but the sources used may be limited or not fully referenced. The report may have some minor presentation issues.

A D grade report & presentation will give an acceptable overview of database security. The discussion may be limited or poorly justified or mainly based on lecture material with little evidence of independent research. The report will discuss individual security techniques but security policies may not be fully understood or discussed. The practical demonstration will be limited but will support the technique/strategy discussed in the report. There will be some evidence of research. The report may have a number of presentation issues.

An E grade report & presentation will include a limited overview of database security and optimisation. Discussion will be limited with little evidence of research and there may be no discussion of the importance of security policies. The practical demonstration will be minimal or the presentation will suggest that the issues have not been fully understood. The report may have a number of presentation issues.

F grade – no valid submission