

## **BAC41 Management Information Systems, Semester 2/2012**

### **Assignment 2 (25%)**

**Assignment Task: Building a Relational Database for Inventory Management**

**Software skills: Database design, querying, and reporting**

**Business skills: Inventory management**

#### **Case Background**

Business today depends on the databases to provide reliable information about items in inventory, items that need restocking, and inventory costs. In this assignment, you'll use database software to design a database for managing inventory for a small business.

Sylvester's Bike Shop, located in San Francisco, California, sells road, mountain, hybrid, leisure, and children's bicycles. Currently, Sylvester's purchases bikes from three suppliers but plans to add new suppliers in the near future. This rapidly growing business needs a database system to manage this information.

Initially, the database should house information about suppliers and products. The database will contain two tables: a supplier table and a product table. The reorder level refers to the number of items in inventory that triggers a decision to order more items to prevent a stockout. (In other words, if the number of units of a particular item in inventory falls below the reorder level, the item should be reordered.) The user should be able to perform several queries and produce several managerial reports based on the data contained in the two tables.

Your task is to build the database of this shop. The requirement of this database needs to consist of two tables, product and supplier table. You will need to design the attributes and input data in each table. There need to be at least 10 records for each

table. You will need to demonstrate the skill of database design, querying and reporting.

Once you have built the database, perform the following activities:

1. Prepare a report that identifies the five most expensive bicycles. The report should list the bicycles in descending order from most expensive to least expensive, the quantity on hand for each, and the price for each. (5 marks)
2. Prepare a report that lists each supplier, its products, the quantities on hand, and associated reorder levels. The report should be sorted alphabetically by supplier. Within each supplier categories, the products should be sorted alphabetically.  
  
(5 marks)
3. Prepare a report listing only the bicycles that are low in stock and need to be reordered. The report should provide supplier information for the items identified. (5 marks)
4. Write a description of how the database could be enhanced to further improve management of the business. What tables or fields should be added and Why? What additional reports would be useful and why? (10 marks)

### **Assignment specification**

This assignment is a group assignment, the numbers of students per group are 4 students.

There are two tasks to be done for this assignment, presentation to the lecturer and submitted document (in pdf format).

The presentation of this assignment is due in week 11 during the tutorial hrs (the week of Monday, October 1<sup>st</sup>, 2012). Each group will present the work only to the lecturer (using MS Access). There will be 5-10 minutes for each group presentation. This is for activity 1, 2 and 3 which you are required to implement the database, queries and reports in Microsoft Access.

The document is due to be submitted by Friday, October 5<sup>th</sup> at 5pm through Moodle. The numbers of words limitation are 1,500 words. This document is only for activity 4.

Please note that if the assignment is submitted after the due date/time (after 5pm of Friday, October 5th, 5% will be deducted per day late (including the weekends).