

**UNIVERSITI TEKNOLOGI MALAYSIA**  
**FACULTY OF COMPUTING**  
**SCSJ1023: PROGRAMMING TECHNIQUE II**  
**ASSIGNMENT 2 (Sem. 1 2013/2014)**

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You can work in a group of two or three for this assignment. Choose from any of the questions listed below. Report to me the names of your group, your group members and the question of your choice by email or in class next Monday (*first come first serve basis*). Not more than 6 groups can select a particular topic/question.

**1. Corporate Sales Data**

- a) Output: Write a program that uses a structure to store the following data on a company division:

Division Name (such as East, West, North, or South)

Quarter (1, 2, 3, or 4)

Quarterly Sales

The user should be asked for the four quarters' sales figures for the East, West, North, and South divisions. The data for each quarter for each division should be written to a file.

*Input Validation: Do not accept negative numbers for any sales figures.*

- b) Input: Write a program that reads the data in the file created by the output program in (a) above. The program should calculate and display the following figures:

- Total corporate sales for each quarter
- Total yearly sales for each division
- Total yearly corporate sales
- Average quarterly sales for the divisions
- The highest and lowest quarters for the corporation

*Instead of writing two different programs you can also combine (a) and (b) into a single program and utilise the concepts of opening and closing files where applicable.*

## 2. Inventory Program

- a) Write a program that uses a structure to store the following inventory data in a file:

Item Description  
Quantity on Hand  
Wholesale cost  
Retail Cost  
Date Added to Inventory

The program should have a menu that allows the user to perform the following tasks:

- Add new records to the file.
- Display any record in the file.
- Change any record in the file.

*Input Validation: The program should not accept quantities, or wholesale or retail costs less than 0. The program should not accept dates that the programmer determines are unreasonable.*

- b) Screen Report

Write a program that reads the data in the file created by the program in (a) above. The program should calculate and display the following data:

- The total wholesale value of the inventory
- The total retail value of the inventory
- The total quantity of all items in the inventory

*Instead of writing two different programs you can also combine (a) and (b) into a single program and utilise the concepts of opening and closing files where applicable.*

### 3. Customer Accounts

Write a program that uses a structure to store the following data about a customer account:

Name  
Address  
City, State, and ZIP  
Telephone Number  
Account Balance  
Date of Last Payment

The structure should be used to store customer account records in a file. The program should have a menu that lets the user perform the following operations:

- Enter new records into the file.
- Search for a particular customer's record and display it.
- Search for a particular customer's record and delete it.
- Search for a particular customer's record and change it.
- Display the contents of the entire file.

*Input Validation: When the data for a new account is entered, be sure the user enters data for all the fields. No negative account balances should be entered.*

**Please register your group member and assignment topic on the Google Document as shared in the E-Learning. You can start immediately after I OKed your status on the topic selection. Submit softcopies (upload the ZIP file containing data files, program files, executable files and output files where applicable) of your work in E-learning before 10 May 2014, 11:55 PM.**

**DUE DATE : 10 May 2014, 11:55 PM.**