



Assignment 2

Information and Communication Technology Project

IMPORTANT INFORMATION

This document contains the instructions and information for Assignment 2

BARCODE

Assignment 2

Due date: 30 April 2020

Unique number: 720678

This is a compulsory assignment and we will be strict with the due date. The assignment contributes to 15% of your year mark.

The solutions for selected questions of this assignment will be published on 4 April 2020.

For this module you will continue to develop a solution for Mr John M., who is an alternative health care practitioner.

Note: you are not allowed to develop any other system or use any other data than the system that is prescribed and provided.

The outcome of this assignment will form part of the development and implementation of the relational database. Your implementation effort will be greatly reduced if you take care with the preparation phases of the system.

Before you start with this assignment, download the following documentation from:

MS Teams Channel	MS Teams Tab	File or Document
Suggested Solutions	Files	Ass1_suggested_solutions.pdf Ass1_suggested_solutions_sql.sql
Assignment 1	Files	DataForAltHealth.xlsx
Assignment 2	Files	ICT3715_Ass2.pdf Template_Assignment_2.docx

Download Template_Assignment2.docx and use the template to complete the required information in Assignment 2. When you are done, save it as a PDF. You will combine the SQL that you will create with the PDF, into one ZIP folder, and upload it on myUNISA Assignments.

Before you start with this assignment:

Use the suggested solutions (both the PDF and the SQL) for Assignment 1 to compare your ERD and database. Apply the required changes and updates. Keep in mind that it will be required of you during the final presentation to add additional tables and data to the existing system, thus it is important that you understand how these processes are done.

The purpose of this assignment is two fold. In Section A you will have the opportunity to export the data from Excel to comma delimited (CSV) files and import it to your SQL database. In Section B you will use the data and create reports using SQL commands.

Section A - Exporting and importing of data [20 marks]

Open the spreadsheet DataForAltHealt2020.xlsx. Export the data from each of the worksheets to a CSV file and import it to the database.

Keep the following in mind whilst doing this:

- It is important to follow the correct order in which the data should be imported into the different tables, as referential integrity is enforced on the tables (PKs and FKs). For example, before the data for the table `tblClient_info` can be imported, the data for the table `tblReference` should be imported.
- The order of the fields in the individual tables should match the order of the columns in the CSV document.
- The worksheet `Invoice_info` is not in 3NF and should be reworked before it can be exported and imported to the tables `tblInv_info` and `tblInv_items` respectively.

- Refer to the Teams channel Discussion Export and Import of data where we will discuss the above in more depth.

For Section A, after importing the data and verifying that all the data is correctly imported, export the database. Save it as *yourstudentnumber.sql*, e.g. 12345678.sql.

Section B - Creating of Reports [30 marks]

For each of the questions in Section B, (a) provide the SQL that you've used to create the report and (b) provide a printout or screen shot of the ALL results.

Day-to-day report 1 (5 marks)

Create the SQL to generate the following day-to-day report:

A list of the clients (prior to 2020) that have not yet paid their invoices. The report should have the following headings and sorted in ascending order:

CLIENT ID, CLIENT (name and surname), INVOICE NUMBER and INVOICE DATE

Below is an example of the output:

CLIENT ID	CLIENT	INVOICE NUMBER	INVOICE DATE
5512160318087	Glen Mavimbela	INV01446	2018-12-23
.....			
.....			
151021036088	Shaun Lesch	INV01575	2019-12-15

Day-to-day report 2 (5 marks)

Create the SQL to generate the following day-to-day report:

A list of all the clients whose birthdays are today.

The report should have the following headings:

CLIENT ID AND CLIENT NAME.

Below is an example of output for clients whose birthdays are on 16 December.

CLIENT ID	CLIENT NAME
5512160318087	Glen Mavimbela
341216047088	Sandiso Naidoo
4812160561083	Nkgopoleng Spengane
8012160653084	Lucas De Witt

Day-to-day report 3 (5 marks)

Create the SQL to generate the following day-to-day report:

A list of all the Supplements where the minimum level is below the current stock level. In other words, this will give the health care practitioner an idea of the stock that is critical low and need to be ordered.

The report should have the following headings and be sorted according to the Supplier Information:

SUPPLEMENT, SUPPLIER INFORMATION, MIN LEVELS AND CURRENT STOCK.

Below is an example of output that you can expect:

SUPPLEMENT	SUPPLIER INFORMATION	MIN LEVELS	CURRENT STOCK
Supplement-91	SUPPLIER A John Adams (011)-(863)-(0056)	6	3
Supplement-71	SUPPLIER A John Adams (011)-(863)-(0056)	5	3
.....			
Supplement-193	SUPPLIER G Matthew Nel (082)-(820)-(5123)	10	2

MIS REPORT 1 (5 marks)

It is important for the health care practitioner to know who the **top 10** clients are that purchased most *frequently* supplements from him during 2018 and 2019.

Below is an extract of results that you can expect. Notice the headings.

CLIENT	FREQUENCY
4403190822084 Phindile Tong	7
8610120779086 Promise Mdluli	5
3406260688085 Sven Maswanganyi	5
.....	
2011240231088 Nhloso Schoeman	4

MIS REPORT 2 (5 marks)

It is important for the health care practitioner to know during which month the most purchases were made. He would like to know this information as from 2012 to current. That will help him to determine which month he should target existing and new clients with specials and additional advertisements.

Below is an extract of results that you can expect. Notice the headings.

NUM OF PURCHASES	MONTH
125	January
137	February
...	
...	
125	December

MIS REPORT 3 (5 marks)

To keep in contact with his clients, it is important that the health care practitioner has all the contact information for each client. He realised that there are many clients with more than one field empty. To start, he decided to

get a report of all the clients where both the cellphone and the email addresses are empty.

Below is an extract of the report that you can expect.

CLIENT	HOME	WORK	CELL	E-MAIL
2804070757085	(040)-(139)-(2394)	(082)-(568)-(0086)		
.....				
.....				
.....				
9210160769082	(089)-(394)-(7495)	(025)-(803)-(4678)		

[TOTAL: 50 marks]

Submit the assignment

Follow the steps below and submit your assignment:

1. Complete Sections A and B on the template provided. Save it as *your student number.pdf*, e.g. 12345678.pdf.
2. Combine the (1) PDF and (2) the SQL and compress it (ZIP it). Use the ZIP format provided by Windows. [We have discussed it in ICT2612 on how to ZIP files.]
3. Test the ZIP file to verify that it is working correctly. If we cannot open, then we cannot mark it and you will receive 0%.
4. Upload the ZIP file to myUNISA Assignments. Verify that it is the correct module, correct assignment and correct unique number.

