# Assignment 1

# Information and Communication Technology Project

**IMPORTANT INFORMATION**

**This document contains the instructions and information for Assignment 1**

BARCODE

# Assignment 1

## Due date: 31 March 2020 Unique number: 832844

This is a compulsory assignment and we will be strict with the due date. The assignment contributes to 10% of your year mark.

The solutions for selected questions of this assignment will be published on 3 April 2020.

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For this module you will be developing 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 that 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.

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

| MS Teams Channel | MS Teams Tab | File or Document |
|---|---|---|
| Tutorial Letters | Files | Tut101.pdf<br>Tut102.pdf |
| Assignment 1 | Files | ICT3715_Ass1.pdf<br>DataForAltHealth.xlsx<br>Template\Assignment_1.docx |

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Download Template_Assignment1.docx and use the template to complete Section A of Assignment 1. When you are done, save it as a PDF. You will combine the SQL that you will create with the PDF and upload it on myUNISA Assignments.

## Section A [5 marks]

Download and read Tut102.pdf to understand the background and specifications for the system.

1. Create a logo for the business for AltHealth. This logo should represent the business. Keep in mind that it is NOT a clinic or a hospital, it is a private business providing alternative health care for the people in the community. Thus, the logo should represent this specific business. There are various sites that will allow you to create free logos, such as https://www.freelogodesign.org/ or create your own. I will choose one and use it as the logo for the MS Teams 2020 site. Save it as either a .jpeg or .png and include it with the compressed (ZIP) file that you will upload.

   (no marks)

2. What programming language do you intend to use in the development of the system? You may decide to use more than one as well. (You do not have to use one of the programming languages that you were taught during your studies, however keep in mind that the programming language the you choose should be able to link a relational (SQL) database. (2)

3. What relational database do you intend to use? (2)

4. What operating system are you going to develop the system on? (1)

## Section B [20 marks]

Study the incomplete ERD provided in Figure 1. You will notice that PKs and FKs are not yet indicated. Recreate the ERD (do not change any of the tables and fields) but now indicate the PKs and FKs. (See the examples on the next page of what is expected of you). Clearly indicate the relationships between the tables, that is one-to-one or one-to-many.

Figure 1: Incomplete ERD Representation of the current database

## EXAMPLE

Below is an EXAMPLE of what you should present. In the first example I have used a pen to indicate the PKs and FKs and the relationships between the tables. In the second example I have used an online tool, erdplus.com to create it. How you create and present it, is your choice, but the information should be clear, precise and readable.

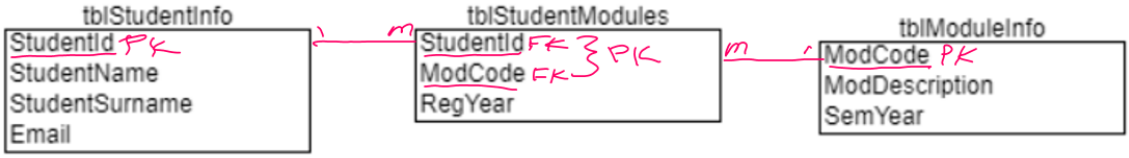


Figure 2: Example 1

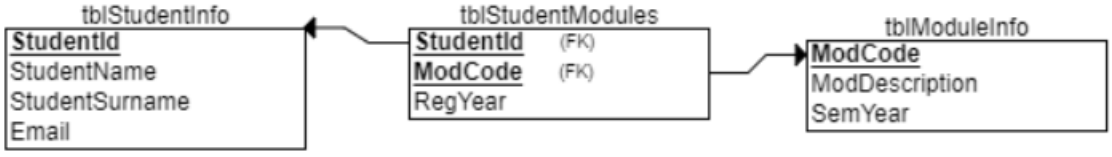


Figure 3: Example 2

## Section C [25 marks]

Use the ERD that you've created and create the tables in a relational database. Use the information in Table 1 to help you in the planning of the structure and definitions of the columns. The table indicates the variable type, size and length for each of the fields.

Export the database that you've created.

**[TOTAL: 50 marks]**

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## 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. Develop the database with the tables and export the SQL. Save it as *your student number.sql*, e.g. 12345678.sql.
3. Combine the (1) PDF, (2) the image file for your logo and (3) 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.]
4. Test the ZIP file to verify that it is working correctly. If we cannot open, then we cannot mark it an you will receive 0%.
5. Upload the ZIP file to myUNISA Assignment 1. Verify that it is the correct module and correct unique number.

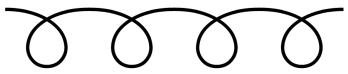

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Table 1: Table definitions

| **Field** | **Type** | **Length** |
|---|---|---|
| Reference_ID | VARCHAR | 20 |
| Description | VARCHAR | 50 |
| | | |
| Client_id | VARCHAR | 15 |
| C_name | VARCHAR | 30 |
| C_surname | VARCHAR | 50 |
| Address | VARCHAR | 200 |
| Code | VARCHAR | 4 |
| C_Tel_H | VARCHAR | 20 |
| C_Tel_W | VARCHAR | 20 |
| C_Tel_Cell | VARCHAR | 20 |
| C_Email | VARCHAR | 200 |
| | | |
| Inv_Num | VARCHAR | 8 |
| Inv_Date | DATE | |
| Inv_Paid | VARCHAR | 3 |
| Inv_Paid_date | DATE | |
| Comments | VARCHAR | 200 |
| | | |
| Supplement_id | VARCHAR | 20 |
| Supplement_Description | VARCHAR | 30 |
| Cost_excl | NUMBER | 6,2 |
| Cost_incl | NUMBER | 6,2 |
| Min_levels | INT | |
| Current_stock_levels | INT | |
| Nappi_code | VARCHAR | 20 |
| | | |
| Item_price | NUMBER | 6,2 |
| Item_Quantatity | INT | |
| | | |
| Supplier_ID | VARCHAR | 15 |
| Contact_Person | VARCHAR | 30 |
| Supplier_Tel | VARCHAR | 30 |
| Supplier_Email | VARCHAR | 50 |
| Bank | VARCHAR | 30 |
| Bank_code | VARCHAR | 10 |
| Supplier_BankNum | VARCHAR | 30 |
| Supplier_Type_Bank_Account | VARCHAR | 20 |