Tutorial Letter 102/3/2018

Visual Programming 2

INF2611

Semesters 1 and 2

School of Computing

IMPORTANT INFORMATION:

This tutorial letter contains the **assignments** for 2018, semesters 1 and 2.

All other important information is sent to your **myLife account** and is available on the module **INF2611 website**.

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INTRODUCTION

This tutorial letter contains the assignments for SEMESTERS 1 and 2 of 2018.

There are **15** weeks in this semester. You **must** submit all the assignments **electronically**; no hard copies will be accepted. The module assessment consists of two compulsory assignments and a final examination. The **year mark** is the total assignment marks achieved; the final mark = 30% year mark + 70% examination mark. For admission to the examination, you must submit at least Assignment 01 before the due date. The following is a proposed schedule to pace your studies and ensure that you have sufficient time to complete the assignments:

Week	2018 S1	2018 S2	Chapters (textbook)	Assignments
1	15 Jan	18 June	**Finalise registration**	Start Assignment 01
2	22	25		
3	29	2 July	**Revise Chapter 07 and 08**	Complete Assignment 01
4	5 Feb	9	**Chapter 09**	
5	12	16	**Chapter 10**	
6	19	23	**Chapter 11**	
7	26	30		
8	5 March	6 Aug	**Chapter 12**	Start Assignment 02
9	12	13		
10	19	20		
11	26	27		
12	2 April	3 Sept	**Exam preparation**	Complete Assignment 02
13	9	10		
14	16	17		
15	23	24		

- Assignments may ONLY be submitted ELECTRONICALLY via myUnisa (see *Study @ Unisa*).
- How to submit an assignment via myUnisa: Go to myUnisa and log in with your student number and password. Select the module. Click on **Assignments** in the left-hand menu. Click on the assignment number you want to submit. Follow the instructions.

NOTE: According to the UNISA system

- no late assignments will be accepted after these dates
- you are encouraged to use the assignments as examination preparation

Assignment number	Type	Semester 1 Due date	Semester 2 Due date
01	PDF	5 March 2018	6 August 2018
02	PDF	16 April 2018	25 Sept 2018

Assignment project: database application

For this subject you are expected to create a database application. The project is divided into two assignments. Assignment 01 entails the GUI application design and planning of the final project. Assignment 02 entails the database management system that is integrated with the GUI application.

Assignment 01 [30]

Due date	**Semester 1: 5 March 2018**	**Semester 2: 6 August 2018**
Study material	Prescribed textbook: chapters 7 to 11	
Submission procedure	Electronic submission via myUnisa	
Number of criteria	Six	

Assignment 01: Database application

You are required to create a database application that is aimed towards benefiting the local community. For example: a database application for a local library.

For Assignment 01 you are required to do the following:

1) Provide information regarding the planning of your final database application (the final database application is due for Assignment 02).
2) Create the GUI program using Qt Designer. This requirement will include screenshots of your program's main window, sub-windows/dialogs and widgets.
3) Provide information regarding the planning of your database management system (the final database management system is due for Assignment 02).

Use the assignment **rubric** as your guide as your assignment will be assessed according to this rubric. Remember to include your assignment answers according to the rubric numbers provided.

You are required to submit a PDF document. (NB: Include the unique assignment number.) Insert your **name and student number** in the **document footer**.

Assignment 01: Rubric

Criteria **Please include the following numbers and headings to indicate which criteria you are meeting**	Not attempted	Not achieved	Expectations partially achieved	Expectations achieved
1. Purpose of the database application Give a short description of your database application.	0	0	1	2
2. Planning for database application Give at least two questions that you asked to determine the scope and requirements of the project.	0	0	1	2
3. Description of application Explain what data will be manipulated. (2) Explain who will use this application. (2) Describe two useful features of this application. (2)	0	2	3-5 Marker discretion	6
4. Database management system Describe the features of the database that will be incorporated in the application (e.g. multiple tables, relationships). *Please note that an entity relationship diagram is not required, but can be included.*	0	2	3-5 Only explained	6 Included examples
5. Multiple-document interface Include a snapshot **and** an explanation of how multiple documents will be implemented in this database application. Indicate the MainWindow and Sub-windows/Dialogs.	0	2	3-5 Marker discretion	6 One main window and two sub-windows/dialogs in snapshot
6. Widgets Include a snapshot **and** an explanation of at least four different types of widgets that will be used in this database application.	0	2	3-5 Only snapshot/s	8 Explanation including snapshot/s
TOTAL : _____/30				

Assignment 02 [70]

Due date	**Semester 1: 16 April 2018**	**Semester 2: 25 Sept 2018**
Study material	Prescribed textbook: chapters 7 to 12	
Submission procedure	Electronic submission via myUnisa	
Number of criteria	7	

For Assignment 02 you are required to submit your final database application, according to the following requirements:

- The application must be developed in Python, and must connect to a database.
- The application must be directed towards the community to enhance the functionality of an entity in the community and assist with daily operations. It may be a good idea to start with a very limited range database that may be extended later. Rather have a small system that works well, than a large over-extended system that does not do anything.
- **Database application requirements:**
  - The application must include at least three examples of windows/dialogs used.
  - The application must include data maintenance functions (add, edit and delete options).
- **Database management system requirements:**
  - It must consist of at least three tables.
  - The tables should be maintained by using the database application (i.e. the application must include add, edit and delete functionality for each of the tables).

Use the assignment **rubric** as your guide, as your assignment will be assessed according to this rubric. Remember to include your assignment answers according to the rubric numbers provided.

You are required to submit a PDF document. (NB: Include the unique assignment number.) Insert your **name and student number** in the **document footer**. Please include screenshots as required.

Assignment 02: Rubric

Criteria **Please include the following numbers and headings to indicate which criteria you are meeting**	Not attempted	Not achieved	Expectations partially achieved	Expectations achieved
1: Introduction. Introduce this database application. Provide the name of your application and describe the different features it entails.	0	2	3-7 Marker discretion	8
2. Database handling: **2.1.** Provide the code that you used to create your database and your first database table. The code should include the table's fields.	0	2	3-11 Marker discretion	12 Code for creating database and one database table including the table's fields
2.2. Provide the SQL code necessary to display all the tables in your database **and** the structure/fields of your first database table and provide a **screenshot** of the output.	0	2	3-5 Marker discretion	6 Code and screenshot provided
2.3. Provide the **details** and **screenshot** of at least **three tables** in your database. This should include your tables' records.	0	2	3-11 Less than three tables	12 Three tables with detail and snapshot
3: User interface design. Provide the details and snapshots of the application design, the windows/dialogs used and the components included in each window/dialog. Refer to the navigation between windows.	0	2	3-11 Less than three windows/dialogs	12 Three windows/dialogs with details and snapshot
4: Database manipulation. Provide the details of the data manipulation and code required; and snapshots and explanations of the application code that was used to manipulate the data. For example: the code used to execute the functions of the buttons which appear on your windows/dialogs.	0	2	3-19 Marker discretion	20 Add, edit and delete manipulation of more than one table, including code
TOTAL: _____ /70 …… **PERCENTAGE: _____%**				