

Module ICT3715

INFORMATION AND COMMUNICATION TECHNOLOGY PROJECT

STUDENT NUMBER (Student completes)									

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INSTRUCTIONS:

Complete this Front Page (page 1)

Complete the Plagiarism Pledge (page 2). Your assignment will not be assessed without this.

After you have completed the front page with your information, the plagiarism pledge, and Assignment 3 with Section A and B, save the document as a PDF document.

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PLAGIARISM PLEDGE must be completed and signed before we mark the assignment!!

Assignment 3 [848069]

Due date Monday 8 August 2022, 11:00 PM

Notes:

This is a compulsory assignment. The assignment contributes to 40% of your year mark.

System | Online examination file submission system

Due to the pandemic, the University of South Africa (UNISA) has decided to conduct all examinations in an online environment.

The purpose of this project is then to look at the digital environment and design and develop a simulation of such a system, using the real-life scenario and environment.

You thus must design and develop an online examination file submission system, that can be presented to the University to be used as an alternative to the current system.

Note: You are not allowed to develop any other system or use any other data that was not prescribed or provided to you.

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

Instructions:

- ❖ Make sure that you did complete the instructions on page 1 of this document
- ❖ Complete the header and footer with your own information
- ❖ Add your practical system content to the document
- ❖ Remove everything that is in brackets []
- ❖ Keep the answers that you had for the Assignment 1 and 2 also in this document
- ❖ Make sure that your Table of Content is updated
- ❖ Save the document as PDF, e.g., 12345678 ICT3715_02.pdf, (replace 1234568 with your student number), must be .pdf file before we mark the assignment!!
- ❖ When you are done submit via myModules 2022 on the Module Site under Assignment 3

If the table of contents is not updated minus 1 mark

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1 Assignment 3

1.1 Section A = MIS Reports [20]

Remove everything that is in brackets [], if this is not done minus 2 marks

[Use Task 2 Document – Preparing for the MIS Reports to complete this section of Assignment 3.



The marks allocated to the student will depend on the difficulty of the query (MIS Report)

For purposes required by the Examination Department, the following MIS Reports must be presented in your systems dashboard:

One Daily MIS report

One Weekly MIS reports

At least two more MIS reports

Also refer to “19. 10. System | MIS Reporting: Dashboard” on the myModules 2022 Module Site.

For each of these MIS reports you have to do the following:

- ∂ In your own words, describe the reason for this MIS report. **2 marks**
- ∂ Create the query (the SQL).
The query should be specific and the names of the tables that you use, columns, joints (PKs, FKs) etc. should be clear and precise. **2 marks**
- ∂ Run the query to get an output.
- ∂ You need to provide the marker with each of these queries as well as screen dumps of the output (both the actual data and should you use graphics a

screen dump of the graphic as well). **1 mark [make sure that the information asked / requested by the query do appear in the MIS Report]**

Again, remember, a report is NOT a looooong list of data.

1.1.1 Create the Daily MIS report (5)

Reason

[Add your answer here ...]

Just giving one example [all students will have different MIS Reports]

It will be nice to pick the date and the total submission is displayed ...

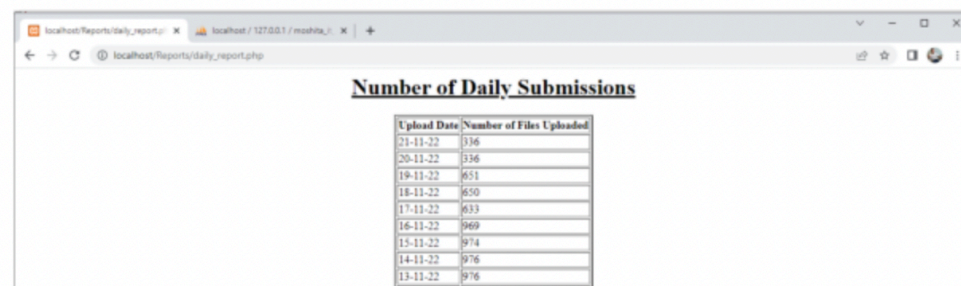
Reason

The reason for this Daily MIS report is to provide the Exam Department with a summary of the number of uploads per day.

Query

```
$query = "SELECT COUNT(DateExam), DateExam FROM examoutput
GROUP BY DateExam
ORDER BY DateExam DESC";
$rows = $db -> query($query);
```

Screen dumps



Upload Date	Number of Files Uploaded
21-11-22	336
20-11-22	336
19-11-22	651
18-11-22	650
17-11-22	633
16-11-22	969
15-11-22	974
14-11-22	976
13-11-22	976

Query

[Add your answer here ...]

Screen dumps

[Add your answer here ...]

1.1.2 Create the Weekly MIS report (5)

[all students will have different MIS Reports]

Reason

[Add your answer here ...]

Query

[Add your answer here ...]

Screen dumps

[Add your answer here ...]

1.1.3 Create one other MIS report (5)

[all students will have different MIS Reports]

Reason

[Add your answer here ...]

Query

[Add your answer here ...]

Screen dumps

[Add your answer here ...]

1.1.4 Create one other MIS report (5)

[all students will have different MIS Reports]

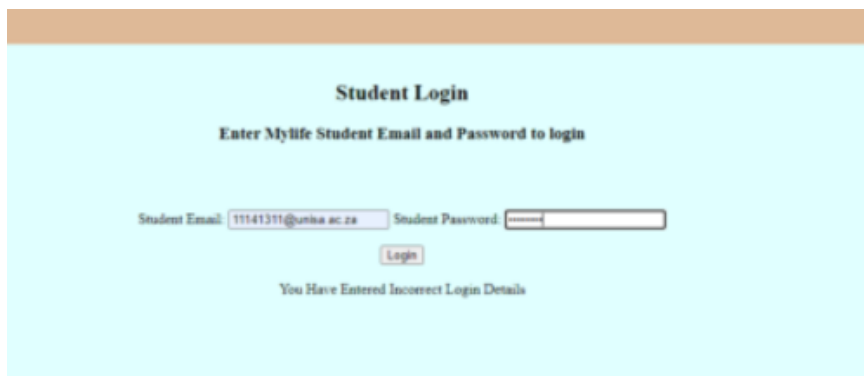
Reason

[Add your answer here ...]

Query**[Add your answer here ...]**Screen dumps**[Add your answer here ...]****1.2 Section B = Graphical User Interfaces [20]**

It is now time to start with the “coding” and create the front-end Graphical User Interfaces (GUI).

1. Create a Graphical User Interface for the student, lecturer and exam department (staff member) to login to the system.
2. When you are done, make a screen dump of the interface, and also provide the code for the GUI.

1.2.1 Student login GUI (7)**Creating the Graphical User Interfaces for the Student Login**Screen dumps**[Add your answer here ...]****5 marks for the screen ...****Make sure that the student has to login with student number/ student email and password (3 marks)****Look and feel of the screen (2 marks)**Code**[Add your answer here ...]**

2 marks for the code

we are going to mark the code, in the practical examination in more detail

1.2.2 Lecturer login GUI (7)

Creating the Graphical User Interfaces for the Lecturer Login

Screen dumps

[Add your answer here ...]

5 marks for the screen ...

Make sure that the lecturer has to login with staff number and password (3 marks)

Look and feel of the screen (2 marks)

Code

[Add your answer here ...]

2 marks for the code, in the practical examination in more detail

1.2.3 Exam Department (Staff member) login GUI (6)

Creating the Graphical User Interfaces for the Exam Department (Staff member) Login

Screen dumps

[Add your answer here ...]

5 marks for the screen ...

Make sure that the staff member of exam department has to login with staff number and password (3 marks)

Look and feel of the screen (2 marks)

Code

[Add your answer here ...]

2 marks for the code, in the practical examination in more detail

2 Assignment 2

2.1 Section A = Database [20]

2.1.1 Create the database for your system and importing the data from your .csv file (20)

[In Assignment 1 you had the opportunity to clean the data and save it as a .csv file.

Now you must create the database, keep in mind the structure of the tables, columns, PK's and FK's, etc. ...

Now you must import the .csv file into your database and describe the process(es) that you followed, problems that you've experienced, etc. Be very specific; the more information you provide, the better.

For example:

- If you have created programming scripts and procedures to complete this task, describe it to the marker OR
- If you have followed prompts and buttons in the database of your choice, describe it to the marker.

Furthermore, describe the problems you have experienced during the import process, and more important describe how you have solved it.]

[Add your answer here ...

You will also have to **provide screen captures as evidence** of the data successfully imported in the database. The screen captures should clearly show the tables, columns, screen shots of data imported, etc. The more information you provide, the better.]

2.2 Section B = Backup and Recovery for the Database and Programming code [10]

Remember software must be free and not have a trial period, that can expire before your examination of your system at the end of the year.

[You will not be able to use as an excuse at the end of the year that your system has crashed or that you have changed something at the last minute and now the system is not working anymore.

Thus...

Having a **data backup and recovery plan** is important to the overall success of your system.

Without one, YOU and then the Exam Department may suffer from permanent data loss, massive downtime, and unnecessary time wasted and expenses.

It is important that you have a backup and recovery process in place. Just indicating that you backup to a "CD" or the "Cloud" or even a "Memory stick" is not sufficient at all.

The purpose of the backup is to create a copy of data that can be recovered in the event of a primary data failure.

Primary data failures can be the result of hardware or software failure, data corruption, or a human-caused event, such as a malicious attack (virus or malware), or accidental deletion of data.

In this section you have the opportunity to describe the backup and recovery processes that you have put into place. The processes and methods for both backup and recovery (restoring) of the data will depend on the database that you have chosen. Thus, you will describe it in terms of the database environment of your choice. **Again, be specific, add screenshots as evidence.** Convince the marker that you have backup and recovery in place and that you know how to implement and use it. *(Do not copy and paste "theory" from the Internet or some or other textbook - you need to describe how you have implemented backup and also how you will recover data).]*

2.2.1 Database (5)

[Add your answer here for the backup and recovery plan for your database ...]

2.2.2 Programming code & Portfolio (assignments) (20)

[Add your answer here for the backup and recovery plan for your programming code and your Portfolio (assignments) ...]

3 Assignment 1

3.1 Section A [4]

3.1.1 Programming Languages (2)

[Identified the programming languages that you will use to develop your system]

[Add your answer here ...]

3.1.2 Database (2)

[Identified the database software that you will use to develop your database]

[Add your answer here ...]

3.2 Section B [10]

3.2.1 Cleaning the data

[Download the data file from Additional Resources on the myModules 2022 Site]

[Add a column in your Table for the Staff member (this is the lecturer or the staff member from the Exam Department) password and the Student password]

[Add a column for the student e-mail, use the student number given in the table and add @myLife.unisa.ac.za after the student number]

[Follow the processes to clean the data. Extract the cleansed data into a .csv file. Attached the .csv file to the end of your assignment]

3.3 Section C [10]

3.3.1 Activity Diagram (7)

[Get the Activity Diagram from 14. 5. System | Data flow diagram on the myModules 2022 Site]

[You must change the Activity Diagram to add one part so that the Exam Department, Lecturer, and the Student when logging on to the system they must be verified (against the data in the database) and use a password with the login]

[Add your Activity Diagram here ...]

3.3.2 ERD Diagram (3)

[Get the ERD Diagram from 13. 4. System | Database and the ERD on the myModules 2022 Site]

[You must make sure that you understand the ERD diagram and the table given below the ERD diagram on the 13. 4. System | Database and the ERD on the myModules 2022 Site so that you can start creating the database]

[Make sure that your ERD diagram is correct after you have completed Section B]

[Add your ERD Diagram here ...]

3.4 Section Backup and Recovery for the Database and Programming code [6]

3.4.1 Backup and Recovery Software for the Database (3)

[Identified two types of software that you can use for the backup and recovery of your database. Remember software must be free and not have a trial period, that can expire before your examination of your system at the end of the year]

[Add your answer here ...]

3.4.2 Backup and Recovery process for the Programming code and your Portfolio (assignments) (3)

[Identified what process / software you can use for the backup and recovery of your programming code and your Portfolio (assignments). Remember software must be free and not have a trial period, that can expire before your examination of your system at the end of the year]

[Add your answer here ...]