

## ASSIGNMENT MATERIAL

### **A/618/7400: Database Design and Development**

For use with the following qualifications:

- HTU Technical Degree in Information Sciences
- HTU B.Sc. Degree in in Information Sciences
- Pearson Level 4 HNC

Assignment Brief Number: 2

Version 1



## Assessment Brief

<b>Student Name/ID Number/Section</b>	
<b>HTU Course Number and Title</b>	<b>Database Design &amp; Development 10204282</b>
<b>BTEC Course Number and Title</b>	<b>Database Design &amp; Development A/618/7400</b>
<b>Academic Year</b>	Spring 2022/2023
<b>Assignment Author</b>	Dr. Salem Alemaishat
<b>Unit Tutor</b>	Dr. Raneem Qaddoura Eng. Lina Hammad Dr. Salem Alemaishat Dr. Rami Ibrahim Eng. Bassam Al-Kasasbeh Eng. Aisha Alsadi
<b>Assignment Title</b>	Developing a Database System
<b>Assignment Ref No.</b>	No. 2
<b>Issue Date</b>	May 14, 2023
<b>Formative Assessment Dates:</b>	From 18 May to 1 June 2023
<b>Submission Date</b>	June 20, 2023
<b>IV Name &amp; Date</b>	Dr. Abdullah Alamareen 13-05-2023

### Submission Format

The assignment should be submitted to the university's eLearning system within the deadline specified above from the link: <https://elearning.htu.edu.jo/login>. The assignment is in the form of:

- 1- A technical document (.docx)
- 2- A user document (.docx)
- 3- A copy of your actual database (.sql file)
- 4- The source code of the user interface (.zip)
- 5- Declaration Form (.docx)

The technical and user document must follow the below guidelines, and contains the sections described in the assignment brief. In your documents, you should make use of headings, paragraphs, and subsections as appropriate. The expected word limit is 5000-10000 words, although you will not be penalized for exceeding the total word limit, do your best to be within the word limit. Your report should be:

- In the form of word soft copies submitted to the university's eLearning system.
- Written in a formal business style using single spacing and font size 12, of times roman.
- Must be supported with research and referenced using the Harvard referencing system.

### Unit Learning Outcomes

- LO2** Develop a fully functional relational database system, based on an existing system design.
- LO3** Test the system against user and system requirements.
- LO4** Produce technical and user documentation.

### Assignment Brief and Guidance

#### Scenario:

You have the position of Junior Database Developer for an IT company that provides solutions health institutions. The company builds and implements products and services to embrace a wide range of modern technologies and open-source technologies.

The company has signed a contract with a local hospital that provides different medical services. Your responsibility as a Junior Developer is to develop a database and a user interface based on the requirements that are gathered from the client as part of the contract. You are assigned to provide the needed system and documentation including user and technical documentation, database development, the system user interface, and testing.

#### Part 1

- 1- Develop the database system using evidence of user interface, output and data validations and querying across multiple tables including system security and database maintenance. You have decided to implement a query language into the relational database system.
- 2- Assessing whether meaningful data has been extracted by query tools to produce appropriate management information.

#### Part 2

- 1- Evaluating the effectiveness of the database solution in relation to user and system requirements.
- 2- Suggest improvements for your database system.
- 3- Suggest how is your database system is flexible and can handle improvements in the future to ensure the continued effectiveness of the system.
- 1- Unit testing that tests the relation between interrelated tables against user requirements. In addition, the testing plan must check the effectiveness of the security like privileges granted to users.
- 2- Assess how the testing was effective.
- 3- Explain the choice of data used.

#### Part 3

- 1- A Technical documentation showing the developed database solution including system security and database maintenance features. The documentation should include diagrams that show movement of data through the system and flowcharts describing how the system works. The documentation shall include the user interface, output and data validations, and querying across multiple tables.
- 2- Produce documentation for users showing an overview of the system, how to use the system, the frequently asked questions, and the contact information.

Learning Outcomes and Assessment Criteria		
Pass	Merit	Distinction
LO2 Develop a fully functional relational database system based on an existing system design		LO2 & LO3 D2 Evaluate the effectiveness of the database solution in relation to user and system requirements and suggest improvements.
P2 Develop the database system with evidence of user interface, output and data validations, and querying across multiple tables.  P3 Implement a query language into the relational database system.	M2 Implement a fully functional database system which includes system security and database maintenance.  M3 Assess whether meaningful data has been extracted through the use of query tools to produce appropriate management.	
LO3 Test the systems against user and system requirements		
P4 Test the system against user and system requirements.	M4 Assess the effectiveness of the testing, including an explanation of the choice of test data used.	
LO4 Produce technical and user documentation		D3 Evaluate the database in terms of Improvements. needed to ensure the continued effectiveness of the system.
P5 Produce technical and user documentation.	M5 Produce technical and user documentation for a fully functional system, including diagrams showing movement of data through the system, and flowcharts describing how the system works.	

### STUDENT ASSESSMENT SUBMISSION AND DECLARATION

When submitting evidence for assessment, each student must sign a declaration confirming that the work is their own.

<b>Student name:</b>		<b>Assessor name:</b>	
<b>Issue date:</b> May 14, 2023	<b>Submission date:</b> June 20, 2023	<b>Submitted on:</b>	
<b>Program:</b> Computing			
<b>Course Name:</b> Database Design and Development			
<b>HTU Course Code:</b> 10204282		<b>BTEC UNIT:</b> 4	
<b>Assignment number and title:</b> No. 2 Developing a Database System			

#### Plagiarism

Plagiarism is a particular form of cheating. Plagiarism must be avoided at all costs and students who break the rules, however innocently, may be penalized. It is your responsibility to ensure that you understand correct referencing practices. As a university level student, you are expected to use appropriate references throughout and keep carefully detailed notes of all your sources of materials for material you have used in your work, including any material downloaded from the Internet. Please consult the relevant unit lecturer or your course tutor if you need any further advice.

#### Student declaration

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.

**Student**

**Date**