GROUP PROJECT

2019 - SEMESTER 1

FACULTY: ACCOUNTING & INFORMATICS

DEPARTMENT: INFORMATION TECHNOLOGY

PROJECT SUBJECTS

INFORMATION MANAGEMENT 2A
COMMERCIAL PROGRAMMING 101
DATABASE PRINCIPLES 3

Contents

1. INSTRUCTIONS

You are required to identify a small business in the surrounding area or a department that operates at DUT. Investigate ways in which an IT solution could improve the function of the business or department. You need to follow the **six core processes** required in the iterative Agile Development process as stated in the textbook – Introduction to Systems Analysis and Design: An Agile Iterative Approach.

It is important that you scale your ideas to fit your allocated time. A small-scale project (for example, a work order and repair history system for a small automotive repair shop) could be quite exhaustive in detail. On the other hand, a very large-scale project (such as a customer relationship management system for a major retailer) would be expected to include only a small subset of the final system's proposed functionality.

Once you have an idea for a project, as a group, you should meet with your Information Management 2/Database Principles/ Commercial Programming lecturer during lab lectures (as per due date) to discuss the project and specifics of your deliverables. You will be required to consult with your lecturer on a regular basis.

2. ESTABLISHMENT OF THE PROJECT TEAM

This is a group project. Each group should have a minimum of 5 and a maximum of 6 students. Each member of the group must be from the same group (e.g. group A only), mix groups (e.g. group A & B members) will not be accepted. You will be allowed to choose your own group. Each group must elect a project leader and secretary. Give your group a name and complete the group list template to be handed to your respective lecturers as per requirements.

While this project promotes group work, it is the responsibility of each individual learner to ensure that he/she understands the curriculum for this subject and the requirements of this project.

3. PROJECT SUBMISSION

Although this is a group project, it is important for everyone to participate in all aspects of the project. Team leaders are responsible for project submission on ThinkLearnZone/Blackboard and phase 1 submission to secretary. Each team will submit only one copy of the project on ThinkLearnZone/Blackboard.

Thus, project submission must be accompanied by the following documents:

3.1 The group project cover sheet *(Appendix A)* must include - *details of each member and the task each member completed.* *Part of your mark will be based on how evenly everyone participated.*

3.2 Plagiarism Statement (Appendix B) *signed* *by all project team members*

Note: No hand-written or hand-drawn material will be accepted. Strictly adhere to due dates and times.

4. PROJECT DELIVERABLES

4.1 INFORMATION MANAGEMENT 2A (IM 2A)

The project deliverables are based on the knowledge you have acquired from Chapters 1, 2, 3, 4 and 6. Your group will be required to compile and submit the following documents:

4.1.1 System Vision Document outlining the problem description, the system capabilities, and the business benefits

4.1.2 Database Design documents to include::

- Project overview (Brief explanation of business you are designing a database for)
- System Vision Document
- All business rules
- Using MS Visio, construct a Crow's-Foot Entity-Relationship Diagram. Your ERD design should have a minimum of five entity sets, and a similar number of relationship sets. You can use either own made up data or realistic data. You should certainly include different kinds of relationships (e.g., one-many, many-many) and different kinds of data (strings, integers, etc.). Don't forget to indicate primary keys and foreign keys for entity sets.

Specify functional dependencies and draw normalised dependency diagrams showing the First Normal Form (1NF), Second Normal Form (2NF) and Third Normal Form (3NF). Then, produce relational schemas from the normalised dependency diagrams you developed (remember that your schemas must be from 1NF to 3NF with respect to the functional dependencies you specified.

Note: Marks will not be awarded for Entity Relationship Diagram not drawn using MS Visio.

Ensure that all diagrams match and correct naming conventions have been used.

Document Presentation (1.5 line spacing, New Times Roman – whole document)
Headings: Centralised, Font size 14
Body: justify, Font Size 12

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5. DELIVERABLES AND DUE DATES

Deliverable	**Due Date**	**Submit to**
Group List	Feb 25 - 1 March 2019	During Lab Lectures
System Vision Document (**Printed copy**) All group members **must be present** during lab lecture feedback	11-15 March 2019	During lab lectures – Feedback from lecturer
Project Design Document - **Printed copy**	18 April 2019 Closing time: **11:30 am**	**Printed copy** – handed to **IT Secretary**
Updated System Vision Document and Database Design Document - **Soft copy**	18 May 2018 Closing time: **11:59 pm**	**Soft copy** - submitted on Blackboard

Please not that late submissions of a printed copy will attract a penalty of 5% per day.

IM 2A ASSESSMENT RUBRICS

PROJECT OUTLINE DOCUMENT (Total 10)

	0	1	3	5
Overview, Problem Description & Proposed Solution	Description not clear	Brief overview of the system without highlighting the problem	Problem definition is incomplete.	Clearly worded description of the problem and proposed solution.
	0	**1**	**3**	**5**
System Capabilities & Benefits	Not included or incomplete	Includes a few capabilities	Includes most but not all of the capabilities.	Clearly defined list of all system capabilities

DATABASE DESIGN DOCUMENT (Total 30)

	0	2	4	6
Business Rules	Not included	Basic business rules included. Missing relationships. Missing rules. Missing bi-directional rules.	Most rules, relationships and bi-directional relationships included.	All business rules, relationships and bi-directional relationships included as well as good use of language.
Dependency Diagrams	Not included	Includes dependency diagrams but contains errors and incomplete diagrams	Majority of the diagrams for the entities are included. Not all entities are fully normalized. Missing dependencies or primary keys.	Clear, complete set of diagrams showing full normalization and all dependencies.
Entity Relationship Diagram (ERD)	Not included	Incomplete ERD with inaccurate or incomplete entities, relationships, connectivity and cardinality. Not fully normalized. Missing primary and foreign keys.	Most requirements met with few omission and errors wrt entities, relationships, connectivity, cardinality, primary and foreign keys.	Fully normalised entities shown using crow's foot notation. All primary and foreign keys included. Correct display of relationships including connectivities and cardinalities.
Relational Schema	Not included	Partial incomplete schema shown. Primary key errors. Incorrect naming conventions used. Doesn't match the ERD and dependency diagrams.	Most entities included. Entities and primary keys match the ERD and dependency diagrams. Possibly a few incorrect attribute names or primary keys.	Clear schema showing all entities with correct naming conventions and primary keys. The schema matches the ERD and dependency diagrams.
Presentation of document	Inconsistent layout (font etc). Document is incomplete - info. is missing	Font & layout is consistent. Some key info is missing. Not neatly bound.	Consistent font & layout. Contains relevant info but not logically presented. Cover with Group details	Consistent font & layout. Neatly bound. Clearly presented. Easy to read. Logical flow of info. Cover with Group details

6. APPENDIX A: GROUP PROJECT COVER SHEET

Group Name (E.g. Xclusive Developers): _____

Please complete this form and submit as cover sheet every time you submit your project. One submission is required per group. Details completed below ***must*** be ***correct.***

Student No.	Surname, Initials	Group (A-I or CS or CP)	Task Completed	Signature
1.				
2.				
3.				
4.				
5.				
6.				

7. APPENDIX B: GROUP PLAGIARISM STATEMENT

FACULTY OF ACCOUNTING AND INFORMATICS

DEPARTMENT OF INFORMATION TECHNOLOGY

Group Plagiarism Statement

You are guilty of plagiarism if you copy something from a book, article or website without acknowledging the source and pass it off as your own. In effect you are stealing something that belongs to someone else. This is not only the case when you copy work word-by-word (verbatim), but also when you submit someone else's work in a slightly altered form (paraphrase) or use a line of argument without acknowledging it. You are not allowed to use another student's past written work. You are also not allowed to let anybody copy your work with the intention of passing it off as his/her work.

Students who commit plagiarism will get 0 (zero) for the plagiarised work, without the opportunity to resubmit AND the matter may also be referred to the Dean for disciplinary action. Plagiarism is regarded as a serious contravention of the rules and can lead to expulsion from this and other universities.

This declaration must be completed and submitted to your respective group lecturer for all phases of the project

Student No.	Student Initials & Surname	Signature
1		
2		
3		
4		
5		
6		
7		

1. We understand what plagiarism is and we are aware of the DUT'S policy in this regard.
2. We declare that this tutorial/project is own work.
3. Where other people's work has been used (either from a printed source, internet or any other source) this has been carefully acknowledged and referenced in accordance with departmental requirements.
4. We have not used other students past work to hand in as our own.
5. We have not allowed and will not allow anyone to copy our work with the intention of passing it off as their own work.