



MODULE NAME:	MODULE CODE:
CLOUD DEVELOPMENT A	CLDV6211

ASSESSMENT TYPE: POE (PAPER & MEMORANDUM)

TOTAL MARK ALLOCATION: 100 MARKS

TOTAL HOURS: A MINIMUM OF 15 HOURS IS SUGGESTED TO COMPLETE THIS ASSESSMENT

By submitting this assignment, you acknowledge that you have read and understood all the rules as per the terms in the registration contract, in particular the assignment and assessment rules in The IIE Assessment Strategy and Policy (IIE009), the intellectual integrity and plagiarism rules in the Intellectual Integrity Policy (IIE023), as well as any rules and regulations published in the student portal.

INSTRUCTIONS:

1. ***No material may be copied from original sources, even if referenced correctly, unless it is a direct quote indicated with quotation marks. No more than 10% of the assignment may consist of direct quotes.***
2. ***Any assignment with a similarity index of more than 25% will be scrutinised for plagiarism. Please make sure you attach a similarity report to your POE if required.***
3. ***Make a copy of your assignment before handing it in.***
4. ***Assignments must be typed unless otherwise specified.***
5. ***All work must be adequately and correctly referenced.***
6. ***Begin each section on a new page.***
7. ***Follow all instructions on the assignment cover sheet.***
8. ***This is an individual assignment.***

Referencing Rubric

Providing evidence based on valid and referenced academic sources is a fundamental educational principle and the cornerstone of high-quality academic work. Hence, The IIE considers it essential to develop the referencing skills of our students in our commitment to achieve high academic standards. Part of achieving these high standards is referencing in a way that is consistent, technically correct and congruent. This is not plagiarism, which is handled differently.

Poor quality formatting in your referencing will result in a penalty **of a maximum of ten percent being deducted from the mark awarded**, according to the following guidelines. Please note, however, that **evidence of plagiarism in the form of copied or uncited work (not referenced), absent reference lists, or exceptionally poor referencing, may result in action being taken in accordance with The IIE's Intellectual Integrity Policy (0023).**

Markers are required to provide feedback to students by indicating (circling/underlining) the information that best describes the student's work.

Minor technical referencing errors: 5% deduction from the overall mark – the student's work contains five or more errors listed in the minor errors column in the table below.

Major technical referencing errors: 10% deduction from the overall mark – the student's work contains five or more errors listed in the major errors column in the table below.

If both minor and major errors are indicated, then 10% only (and not 5% or 15%) is deducted from the overall mark.

The examples provided below are not exhaustive but are provided to illustrate the error.

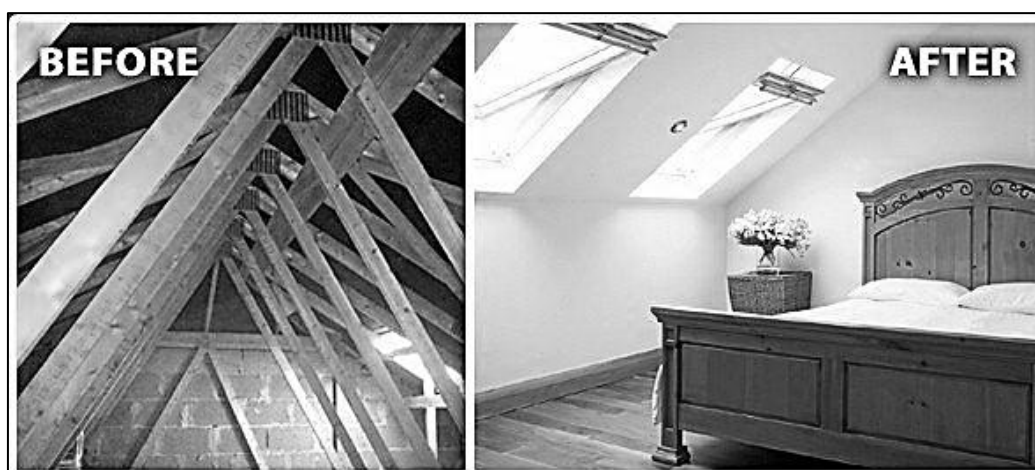
Required: Technically correct referencing style	Minor errors in technical correctness of referencing style Deduct 5% from mark awarded	Major errors In technical correctness of referencing style Deduct 10% from mark awarded
<u>Consistency</u> The same referencing format has been used for all in-text references and in the bibliography/reference list.	Minor inconsistencies. The referencing style is generally consistent, but there are one or two changes in the format of in-text referencing and/or in the bibliography. For example, page numbers for direct quotes (in-text) have been provided for one source, but not in another instance. Two book chapters (bibliography) have been referenced in the bibliography in two different formats.	Major inconsistencies. Poor and inconsistent referencing style used in-text and/or in the bibliography/reference list. Multiple formats for the same type of referencing have been used. For example, the format for direct quotes (in-text) and/or book chapters (bibliography/reference list) is different across multiple instances.
<u>Technical correctness</u> Referencing format is technically correct throughout the submission. Position of the reference: a reference is directly associated with every concept or idea. For example, quotation marks, page numbers, years, etc. are applied correctly, sources in the bibliography/reference list are correctly presented.	Generally, technically correct with some minor errors. The correct referencing format has been consistently used, but there are one or two errors. Concepts and ideas are typically referenced, but a reference is missing from one small section of the work. Position of the references: references are only given at the beginning or end of every paragraph. For example, the student has incorrectly presented direct quotes (in-text) and/or book chapters (bibliography/reference list).	Technically incorrect. The referencing format is incorrect. Concepts and ideas are typically referenced, but a reference is missing from small sections of the work. Position of the references: references are only given at the beginning or end of large sections of work. For example, incorrect author information is provided, no year of publication is provided, quotation marks and/or page numbers for direct quotes missing, page numbers are provided for paraphrased material, the incorrect punctuation is used (in-text); the bibliography/reference list is not in alphabetical order, the incorrect format for a book chapter/journal article is used, information is missing e.g. no place of publication had been provided (bibliography); repeated sources on the reference list.
<u>Congruence between in-text referencing and bibliography/reference list</u> All sources are accurately reflected and are all accurately included in the bibliography/reference list.	Generally, congruence between the in-text referencing and the bibliography/reference list with one or two errors. There is largely a match between the sources presented in-text and the bibliography. For example, a source appears in the text, but not in the bibliography/reference list or vice versa.	A lack of congruence between the in-text referencing and the bibliography. No relationship/several incongruities between the in-text referencing and the bibliography/reference list. For example, sources are included in-text, but not in the bibliography and vice versa, a link, rather than the actual reference is provided in the bibliography.
In summary: the recording of references is accurate and complete.	In summary, at least 80% of the sources are correctly reflected and included in a reference list.	In summary, at least 60% of the sources are incorrectly reflected and/or not included in reference list.

Overall Feedback about the consistency, technical correctness and congruence between in-text referencing and bibliography:

Portfolio of Evidence (PoE) — Background

Scenario

Domingo Roof Works is a closed corporation based in Pretoria, in the Gauteng province. They specialise in turning lofts in houses into liveable rooms. Job types vary between simply fitting floorboards to full conversions with dormer windows, electrical fittings and staircases. When a customer requests a quotation, the work they want is classified by job type. One or more employee(s) will be assigned to the job. Each job will be allocated equipment and materials. Jobs are charged at a rate determined by the job type and how many days are needed to complete the job.



Source: https://i.skyrock.net/6904/85516904/pics/3224889183_1_2_r8gJWhXe.jpg [Accessed 04 February 2021].

Below are samples of the hard copy records currently kept by Domingo Roof Works:

Job Card No.	Customer	Address	Job Type	No. of days	Material used
11000	Tendai Ndoró	3 Leos Place 457 Church Str PRETORIA, 0002	Full Conversion	7	<ul style="list-style-type: none"> • 90 x standard floorboards, • 3 x power points, • 20 metres standard electrical wiring, • Standard stairs pack
10478	Donald Puttingh	408 Oubos 368 Prinsloo Street PRETORIA, 0001	Semi Conversion	2	<ul style="list-style-type: none"> • 50 x standard floorboards • 1 x power points • 10 metres standard electrical wiring
14253	Tracy Samson	206 Albertros 269 Stead Avenue PRETORIA, 0186	Floor Boarding	2	<ul style="list-style-type: none"> • 40 x standard floorboards

Job Card No.	Customer	Address	Job Type	No. of days	Material used
11258	Jacob Smith	A201 Overton 269 Debouvlrde Str PRETORIA, 0002	Full Conversion	8	<ul style="list-style-type: none"> • 80 x standard floorboards • 3 x power points • 20 metres standard electrical wiring • Standard stairs pack
12058	Thato Molopo	11 Luttig Court 289 MALTZAN Str PRETORIA, 0001	Semi Conversion	3	<ul style="list-style-type: none"> • 60 x standard floorboards • 2 x power points • 15 metres standard electrical wiring
13697	Dakolo Mudau	1182 CEBINIA Str PRETORIA, 0082	Full Conversion	7	<ul style="list-style-type: none"> • 80 x standard floorboards • 4 x power points • 40 metres standard electrical wiring • Standard stairs pack
10211	Sifiso Myeni	503 Hamilton Gardens 337 Visagie Str PRETORIA, 0001	Full Conversion	7	<ul style="list-style-type: none"> • 100 x standard floorboards • 5 x power points • 30 metres standard electrical wiring • Standard stairs pack
10471	Ricardo Keyla	10 Silville 614 Jasmyn Str PRETORIA, 0184	Semi Conversion	2	<ul style="list-style-type: none"> • 40 x standard floor boards • 1 x power point • 8 metres standard electrical wiring
13521	Smallboy Mtshali	307 FEORA East PRETORIA-WEST, 0183	Semi Conversion	3	<ul style="list-style-type: none"> • 65 x standard floor boards • 3 x power points • 18 metres standard electrical wiring
10102	Wilson Jansen	701 Monticchico Flat 251 Jacob Mare Str PRETORIA, 0002	Floor Boarding	2	<ul style="list-style-type: none"> • 70 x standard floor boards

Employees assigned job cards

Job Card No.	Employee No.	Names
11000	EMP100	Albert Malose
11000	EMP920	Chris Byne
11000	EMP010	John Hendriks
10478	EMP920	Chris Byne
14253	EMP771	Smallboy Modipa
11258	EMP681	Stanley Jacobs
11258	EMP010	John Hendriks
11258	EMP771	Smallboy Modipa
12058	EMP681	Stanley Jacobs

Rates by job type

Job Type	Daily Rate
Full Conversion	R1 200.00
Semi Conversion	R1 080.00
Floor Boarding	R900.00

Example of an invoice from Domingo Roof Works:**Invoice**

Job Card No.: 12058

Customer Details:

Thato Molepo, 11 Luttig Court, 289 MALTZAN Str, PRETORIA, 0001

Job Type: Semi Conversion

Employees allocated:

EMP681 Stanley Jacobs

Equipment/ Materials

60 x standard floor boards,

2 x power points,

15 metres standard electrical wiring

Costs

Job Type	Rate	No. of days	Subtotal
Semi Conversion	R1 080.00	3	R3 240.00
			VAT @14%: R453.60
			Total: R3 693.60

Instructions

The Portfolio of Evidence (PoE) requires you to create a database cloud web application for Domingo Roof Works. The web application will be progressively developed through the execution of Task 1 (database design) and 2 (data, queries and migration) that build on each other to create a final application for CLDV6211.

Summary Sheet:

ITEM	DESCRIPTION
Summary of Activities	<p><i>Students must upload their submission to Learn or any other secure alternative platform as instructed by the lecturer. Please verify where and how this should be done with the lecturer before submission.</i></p> <p><i>Please supply the URL of the Web App with the submission.</i></p>
Tools & Resources	<ul style="list-style-type: none"> • Microsoft Visual Studio 2017 or higher • Microsoft Visio or other database design software; • MS SQL Server 2012 or higher • Windows Azure subscription with Microsoft Azure SQL Database

The data shown in the PoE above is not necessarily normalised – it is your duty to organise the data in the most optimal way possible. For example, the hard copy records shown above will not necessarily map directly to database tables. You are expected to use these tables as a starting point for your own normalisation and optimisation of the Domingo Roof Works.

Where required you should show all SQL scripts along with their results.

Task 1 — Database Design **(Marks: 100)**

Learning Units: 1 – 3

Assessment:

Assessment/ deliverable	Marks	Weight	Duration
Task 1	100	25%	15 hrs

Produce an entity relationship model for the proposed database system for Domingo Roof Works.
Use **Integration Definition for Information Modeling (IDEF1X)** standard.

Task 2 — Data, Queries and Migration **(Marks: 100)**

Learning Units: 4 – 6

Assessment:

Assessment/ deliverable	Marks	Weight	Duration
Task 2	100	30%	15 hrs

A. Complete the following task by working on a local MS SQL Server.

- Create all the tables using SQL. Show all your SQL scripts and the finished tables.
- Populate data on all the job cards and the details of those jobs. Show all your SQL scripts and give a listing of this table.
- Populate data for the members of employees including those listed in the scenario. Assign employees to job cards. Show all your SQL scripts and give a listing of this table.
- Populate data on the materials that are used on a job card. Show all your SQL scripts and give a listing of this table.
- Write a query that selects all the job cards and which employees have worked on them.
- Write a query that selects the materials that have been used on job cards of type 'Full Conversion'.
- Write a query that selects all the job cards that Chris Byne has worked on.

- Write a query that shows all job cards that have taken place in addresses that contain '0001' or '0002'.
- Write a query that counts the number of jobs that have used electrical wiring.
- Write a query that produces the output that could be used to prepare an invoice. This should include a calculation for VAT charged on a job card (calculated at 14% of total cost of the job card).
- Update the daily rate of pay for a Full Conversion to R1 440.00.

B. Migrate the database that you have created above to Windows Azure Online Platform.

POE — Web Application

(Marks: 100)

Learning Unit: 8

Assessment/ deliverable	Marks	Weight	Duration
PoE	70	35%	15 hrs
Task 1 (Revised)	10		
Task 2 (Revised)	10		
Self-Evaluation	10		

Using information from Task 1 and 2, develop and deploy on cloud (Azure platform) a web application that will serve as an interface for the Domingo Roof Works. Domingo Roof Works should be able to:

- Create new and retrieve Job Cards.
- Update job type daily rate.
- Create and retrieve invoice for the customers.
- Create, update and retrieve employee information.
- Deploy Web App on Azure Platform and is accessible on the Web.

Appendix A

Assessment Sheet (Marking Rubric)

Please note: Tear off this section and **attach** it to your work when you submit it.

MODULE NAME:	MODULE CODE:
CLOUD DEVELOPMENT A	CLDV6211

STUDENT NAME:
STUDENT NUMBER:

RUBRIC 1 (for Task 1) — SKELETON OUTLINE	Levels of Achievement				Feedback
	Excellent	Good	Developing	Poor	
	Score Ranges Per Level (½ marks possible)				
In order to be awarded full marks for these elements of Task 1, students need to have:					
Notation: Diagram uses an appropriate E-R notation. The notation is used correctly for all elements of the diagram.	12–15	9–11	4–8	0–3	
Professionalism: Diagram presents a professional appearance. It could be shared with a “real-world” customer without changes.	9–10	7–8	3–5	0–2	
Entity Sets: Diagram captures all entity sets necessary for a database that would satisfy the initial problem statement.	12–15	9–11	4–8	0–3	

RUBRIC 1 — SKELETON OUTLINE [continued]	Levels of Achievement				Feedback
	Excellent	Good	Developing	Poor	
	Score Ranges Per Level (½ marks possible)				
In order to be awarded full marks for these elements of Task 1, students need to have:					
Attributes and Keys: Diagram captures all attributes and primary keys necessary for a database that would satisfy the initial problem statement.	17—20	11—16	6—10	0—5	
Complexity: The required number of tables and foreign key relationships will be needed to implement the database.	17—20	11—16	6—10	0—5	
Constraints: Diagram captures all cardinality and participation constraints necessary for a database that would satisfy the initial problem statement. (Recognising that if all relationships are legitimately many-many with partial participation, then no constraint annotations are necessary.)	17—20	11—16	6—10	0—5	
TASK 1 SUBTOTAL					/100

MODULE NAME:	MODULE CODE:
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STUDENT NAME:
STUDENT NUMBER:

RUBRIC 2 (for Task 2) — SKELETON OUTLINE	Levels of Achievement				Feedback
	Excellent	Good	Developing	Poor	
In order to be awarded full marks for these elements of Task 2, students need to have:	Score Ranges Per Level (½ marks possible)				
Use SQL statements to create and change databases, tables and indices.	25—30	20—24	11—19	0—10	
Use the INSERT , UPDATE and DELETE statements to modify the data in a table.	17—20	11—16	6—10	0—5	
Construct SELECT statements to solve data requirements by coding the SELECT clause, the WHERE clause and the ORDER by clause.	25—30	20—24	11—19	0—10	
Demonstrate proper coding format for SQL statements.	9—10	6—8	3—5	0—2	
Database Migration to Windows Azure.	9—10	6—8	3—5	0—2	
TASK 2 SUBTOTAL					/100

MODULE NAME:	MODULE CODE:
CLOUD DEVELOPMENT A	CLDV6211

STUDENT NAME:
STUDENT NUMBER:

RUBRIC 3 (for PoE) — SKELETON OUTLINE	Levels of Achievement				Feedback
	Excellent	Good	Developing	Poor	
In order to be awarded full marks for these elements of PoE, students need to have:	Score Ranges Per Level (½ marks possible)				
Good coding standards: Efficient code (no redundancy).	9–10	7–8	3–6	0–2	
User interface: Appropriate controls employed to support web functionality.	9–10	7–8	3–6	0–2	
Application functionality: Create new and retrieve saved Job Cards.	9–10	7–8	3–6	0–2	
Application functionality: Update job type daily rate.	9–10	7–8	3–6	0–2	
Application functionality: Create and retrieve saved quotation for the customers.	9–10	7–8	3–6	0–2	
Application functionality: Create, update and retrieve employee information.	9–10	7–8	3–6	0–2	
Application functionality: Deploy Web App on Azure Platform and is accessible on the Web.	9–10	7–8	3–6	0–2	
PoE TOTAL					/70

[TOTAL MARKS: 100]