

Glasgow Caledonian University
Department of Computing

Cloud Computing and Web Services (MMI226816)
Coursework 2 Diet 1 2023/2024 Requirements

This coursework is worth 50% of the overall module mark and is an individual coursework, not a group coursework.

Specification

The purpose of this coursework is to allow you to demonstrate your understanding of material covered in the Cloud Computing and Web Services module by undertaking a research-based investigation.

Your research-based investigation should consider **one only** of the following cloud computing platforms for the **comparative review and critical appraisal** of the chosen platform's capabilities compared with those of Google Cloud:

- Microsoft Azure
- Amazon Web Services
- IBM Cloud

The work you undertake must align with your choice of specific Google Cloud technologies chosen from the two lists provided. You should choose one list item only from each list.

List 1 (pick one list item from the following)

- Kubernetes Engine and Cloud Run
- Cloud SQL and Cloud Spanner
- IAM and IAP
- Cloud Pub/Sub
- Firestore and Bigtable

List 2 (pick one list item from the following)

- Cloud Dataproc and Cloud Dataflow
- Operations Suite and IaC
- Cloud Endpoints
- VPC networking
- Vertex AI and Auto ML

Documentation

A **formal report** is required that documents the work undertaken to meet the coursework requirements. A headed section must be included covering your work on your choices from each of the two lists as well as an introduction section and a conclusion section. You should also include a list of references cited in the report and if you wish, appendices.

The focus of your report should be **comparative review and critical appraisal**. The narrative present in your report must cover what you consider to be significant differences between your chosen Google technologies and what you consider to be the equivalent technologies for your choice of alternative cloud platform. **Your report should not solely make use of tables of information taken from the documentation provided for the technologies covered.**

All source code, if your work involved working with code, **must be included directly in the report** and not provided as a screen capture only. The code must be explained in your narrative and accompanied by citations if external sources were consulted. Figures and tables must also be explained in your narrative.

Submission

An electronic copy of the coursework should be submitted via Turnitin on GCULearn.

A Turnitin link for the coursework submission is available in the 'Assignments and Tests' section on GCULearn. You must submit your report in Microsoft Word file format. You may submit any number you wish of draft versions of your coursework to Turnitin. A similarity report will not be provided by Turnitin until the due date.

The suggested length of your report is approximately **2000 words**. The word count only applies to your report narrative. The word count does not include tables, code listings, your references list or the content of appendices.

Your submission document should conform to the following format

<student_id>_CCWS_CW2 e.g. S1712345_CCWS_CW2.docx

The submission deadline is: 5pm Friday 19th April 2024 to GCULearn

You are warned that any plagiarism will be dealt with according to the relevant University Assessment Regulations.

Marking Scheme and Rubric

This coursework is marked out of 100 and accounts for 50% of the overall Cloud Computing and Web Services module mark. The marks available for each report section are shown in Table 1.

Within each section marks will be awarded, as appropriate to that section, for the content provided in the report relevant to that section.

Specifically, more marks will be allocated for narrative that is clear, provides a complete description of the work undertaken and is supported within the report by code and screen captures providing evidence of the work undertaken.

In addition, marks are available for a correctly formatted report with the formal inclusion of reference material and associated citations as well as relevant captioned and cross-referenced figures, code listings and tables.

Table 1 Marking Scheme for CCWS CW2

Report Sections	Marks Available
List 1 Investigation Coverage of your technology choice from List 1 .	35
List 2 Investigation Coverage of your technology choice from List 2 .	35
Introduction Coverage of the purpose of your report. Conclusions A discussion of the results of your work.	15
Report Presentation Formal report quality including report formatting, referencing, citation etc.	15
Total	100

A rubric indicating the criteria used in the grading of each of the sections required for this assignment report is shown in Table 2.

Table 2 Rubric for CCWS CW2

Mark Range	0% – 39%	40% – 49%	50% – 59%	60% – 64%	65% – 69%	70% – 79%	80% – 100%
Evaluation	Clear Fail	Marginal Fail	Satisfactory	Good	Very Good	Excellent	Exceptional
List 1 Investigation	Your work makes no sense and/or is poor concerning the requirements of the list 1 investigation.	Your work is relevant but fragmentary concerning the requirements of the list 1 investigation.	Your work is adequate but limited concerning the requirements of the list 1 investigation.	Your work is mostly elaborated concerning the requirements of the list 1 investigation.	Your work is well elaborated concerning the requirements of the list 1 investigation.	Your work is thorough concerning the requirements of the list 1 investigation.	Your work is systematic/critically reasoned concerning the requirements of the list 1 investigation.
List 2 Investigation	Your work makes no sense and/or is poor concerning the requirements of the list 2 investigation.	Your work is relevant but fragmentary concerning the requirements of the list 2 investigation	Your work is adequate, but limited concerning the requirements of the list 2 investigation	Your work is mostly elaborated concerning the requirements of the list 2 investigation	Your work is well elaborated concerning the requirements of the list 2 investigation	Your work is thorough concerning the requirements of the list 2 investigation	Your work is systematic/critically reasoned concerning the requirements of the list 2 investigation
Introduction and Conclusions	Your work makes no sense and/or is poor concerning the requirements of the introduction and conclusion.	Your work is relevant but fragmentary concerning the requirements of the introduction and conclusion.	Your work is adequate but limited concerning the requirements of the introduction and conclusion.	Your work is mostly elaborated concerning the requirements of the introduction and conclusion.	Your work is well elaborated concerning the requirements of the introduction and conclusion.	Your work is thorough concerning the requirements of the introduction and conclusion.	Your work is systematic/critically reasoned concerning the requirements of the introduction and conclusion.
Report Presentation	Your work is poor concerning the requirements for report presentation.	Your work is inadequate concerning the requirements for report presentation.	Your work is adequate concerning the requirements for report presentation.	Your work is mostly thorough concerning the requirements for report presentation.	Your work is thorough concerning the requirements for report presentation.	Your work is very thorough concerning the requirements for report presentation.	Your work is extremely thorough concerning the requirements for report presentation.