Module Code	DSD 611	Module Title	Cloud Based Systems and Support
Level	6	Credit Value of Module	15
Assessment Task	Case Study		

Assessment No	2	Total marks	70	Weighting	70%

Type of Submission	Written Submission
Method of Submission	Cloud Campus
Due Date	<mark>XXXXX</mark>

Learning Outcomes addressed

Learning outcomes:

PLO: 2

Evaluate different Cloud technology components in terms of security, CI/CD, and data storage to meet client requirement

PLO: 3

Discuss the ethical, legal, and social issues in Cloud computing

Passing Criteria

Module - DSD 611 Cloud Based Systems and Support

Total Marks: 100
Total Weighting: <mark>70%</mark>

A+	90-100%		C+	60-64%
A	85-89%		C	55-59%
A-	80-84%		**C-**	**50-54% PASS MARK**
B+	75-79%		D+	45-49%
B	70-74%		D	40-44%
B-	65-69%		D-	0-39%

Resubmission or Reassessment Requirements

If a student performance fails to meet any of the requirements in the marking schedule, the student may be given opportunity to resubmit or be reassessed.

Resubmission: If it is apparent (before or during marking) that evidence is incomplete, either by omission or error, the assessor may direct the student's attention to the areas of breach, in general terms, and invite him/her to resubmit the work with the identified areas corrected. Only one resubmission opportunity may be given.

Reassessment: If, after valid processing has been applied, a student is still judged not to have reached the standard required, the student may be offered a further assessment opportunity. A new date will be agreed upon, at the assessor's discretion. Only one reassessment opportunity may be given.

Instruction for the assessment

- This assessment is worth 70% of the total marks for the course.
- The assessment must be delivered individually.
- Your submission **must** include references (APA 7 format) if referring to the source material. Failure to do so will have serious consequences.
- You must fill out and submit the ATC Vision College cover sheet.

Assessment Conditions

This is a resource-based assessment. This means that you may have access to any relevant resources to assist you. This could include your learning materials, information on the Internet, and so on. However, all work must be your own with no assistance from any other person.

Assessment brief

Smith Jewellery has traditionally run its own servers and computer systems. The store has four branches in Auckland, Hamilton, Wellington, and Rotorua. They employ 30 full-time permanent staff, and 10 part-time casual staff. They had a dedicated skilful IT person who took care of the software, security and kept everything ticking over. Unfortunately, the IT person left and told them that they had to get their computing into the cloud. That left the staff confused and they hired you to get their computing system up to date.

They want to know the options they have, and what the terminology means. The existing Smith Jewellery software provides management for – stocks, customer profiles, employees, pricing, scheduling, invoicing, POS system (Point of Sales), suppliers, and accounting. Most of their data is static and a mix of structured and unstructured data sets. They would like to eliminate the data storage on their premises but would like to prevent data loss due to natural disasters. The data should be available across all branches when needed and must be accessed by an authorised person. All store information must be stored securely. The current website provides information about the product but doesn't allow online ordering and purchase. In future, they would like to expand their online business and open more branches in other regions.

Your task is to provide them with **thorough** answers to the following questions. Include hyperlinks to any products you recommend.

Section 1- Technical information

1. Smith Jewellery is considering storing its data on the internet through a cloud computing provider. Provide the following information related to the cloud data storage: -
    a. Identify four types of data/information that will be stored on the cloud provider. [4 marks]
    b. Determine four critical data storage requirements for the store. [4 marks]
    c. Compare two suitable cloud data storage types (Object storage, File storage and Block Storage) for Smith Jewellery, in your comparison include the characteristics, advantages, and disadvantages. [6 marks] (150- 200 words)
2. Cloud security is crucial for Smith Jewellery, to evaluate the shared responsibilities in three cloud service models (IaaS, PaaS, and SaaS). You may refer to the *Shared responsibility model* for Cloud Security. [10 marks] (300- 350 words)
3. Recommend one Cloud computing provider with rationale and estimate the cost for the provider. Ensure you include itemised real costs and give them a total package so that they can purchase it immediately. [10 marks] (150- 200 words) (you may add screenshots, please be sure they are clearly visible)

4. Smith Jewellery want to upgrade their software, their previous IT employee suggested them to use Cloud Build which provides an integrated CI/CD platform.
    a. Explain how a CI/CD pipeline works and why it would be beneficial for their software development. [6 marks] (150- 200 words)
    b. Support the use of Cloud Build by providing a detailed justification. [6 marks] (150- 200 words)

Section 2- Social, Legal and Ethical information

5. Research and summarize the following issues related to cloud computing for the Smith Jewellery: - (Useful resources:- https://www.digital.govt.nz/dmsdocument/1~cloud-computing-information-security-and-privacy-considerations/html#introduction and https://cloudcode.nz/)

    a. Two social issues (200- 300 words) [8 marks]
    b. Two ethical issues (200- 300 words) [8 marks]
    c. Two legal issues (200- 300 words) [8 marks]

Submission

Upload a single Microsoft Word document to GitHub, Canvas or as indicated by your tutor, which includes the followings:

- A cover sheet
- Answers to all questions
- Reference list if any

NOTES:

***Wordcount** is indicative only with no penalty for submitting over the suggested range.

***Sufficient** is defined as per the points below:

a) The answer provided by the student is correct, logical and meets the requirements

b) The answer is supported by relevant ideas and/or supporting details.

c) Information is presented in a logical manner that is easily followed.

d) There is minimal interruption to the work due to misspellings and/or grammatical errors.

***Insufficient** is defined as not meeting any of the points above (a, b, c, and d).

***Reasonable** is defined as meeting at least point a) above.

***Most** is defined as about 80% of all, **Some** is defined as about 50% of all, and **Few** is defined as about 20% of all

	Students must score 50% in each section		
Section 1 **[46 Marks]**	**Grade Distribution**	**Student Mark**	**Comments**
	4		
1. a Identify four types of data/information that will be stored on the cloud provider	Award one mark for each correct type of data		
	4		
1. b Determine four critical data storage requirements for the store.	Award one mark for each correct data storage requirement		

	0	1.5	3	4.5	6		
1. c Comparison of two cloud storage types **Criteria** a) Characteristics b) advantages c) diadvantages	Insufficient or incorrect information	A sufficient comparison of two suitable cloud data storage types was provided which covers only one criterion	A sufficient comparison of two suitable cloud data storage types was provided which covers two criteria	A reasonable comparison of three suitable cloud data storage types was provided which covers all the criteria	A sufficient comparison of three suitable cloud data storage types was provided which covers all the criteria		
	0	**2.5**	**5**	**7.5**	**10**		
2. Cloud security is crucial for Smith Jewellery, to evaluate the shared responsibilities in three cloud service models (IaaS, PaaS, and SaaS).	Insufficient or incorrect information	Reasonable evaluation of shared responsibility for cloud security in **one** cloud service model. Minor details are missing.	Reasonable evaluation of shared responsibility for cloud security in **two** cloud service models. Minor details are missing.	Reasonable evaluation of shared responsibility for cloud security in three cloud service models. Minor details are missing.	Sufficient evaluation of shared responsibility for cloud security in three cloud service models.		

	0	2.5	5	7.5	10		
3. Recommend one Cloud computing provider with rationale and estimate the cost for the provider.	Insufficient or incorrect information	Either The suitability of the Cloud Computing provider is justified reasonably, **OR** the estimated cost is provided but missing crucial details.	The suitability of the Cloud Computing provider is justified reasonably, and the estimated cost is provided but missing some details.	The suitability of the Cloud Computing provider is justified Sufficiently, and the estimated cost is provided but missing a few details.	The suitability of the Cloud Computing provider is justified sufficiently, and the estimated cost is provided with all details which are broken down into various items.		
	0	**1.5**	**3**	**4.5**	**6**		
4a Explain how a CI/CD pipeline works and why it would be beneficial for their software development	Insufficient or incorrect information	Reasonably covered the functionality of CI/CD but missing benefits.	Reasonably covered the functionality of CI/CD and one benefit of CI/CD provided for the Software development	Sufficiently covered the functionality of CI/CD and two benefits of CI/CD provided for the Software development	Sufficiently covered the functionality of CI/CD and three benefits of CI/CD provided for the Software development		
	0	**1.5**	**3**	**4.5**	**6**		
4b Support the use of Cloud Build by providing a detailed justification	Insufficient or incorrect information	Limited explanation in support of Cloud Build, missing crucial information.	A reasonable explanation provided in support of Cloud Build	Sufficient explanation provided in support of Cloud Build but missing references/examples	Sufficient explanation provided in support of Cloud Build with references/examples to other businesses.		

Section 2 [24 Marks]							
	0	**1**	**2**	**3**	**4**	**Total 24 Marks for Q5**	
5. Issues related to cloud computing • Two social issues • Two ethical issues • Two legal issues **4 marks for each issue** **4*6= 24 marks**	Insufficient or incorrect information	An identified issue has limited relevance to cloud computing, missing crucial details	An identified issue has somewhat relevance to cloud computing, missing some details	An identified issue is fully relevant to cloud computing, but missing minor details	Sufficient explanation of an issue related to cloud computing.	Social issue /4 Social issue /4 Ethical issue /4 Ethical issue /4 Legal issue 4 Legal issue /4	