	Sub.	Re-Sub
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Assignment Brief Submission&Resub

LOs	LO3		LO4
Grade " Sub"			
Grade"Resub"	P		Not Achieved " repeat unit"

Student Name:		ID Number	
Unit Number and Title:	ICT123	Intro to IoT connecting things	
Qualification	Higher National Diploma of Technology in Information and Communications Technology. (Y1)		
Academic Year:	2023/2024	Assessor Name:	Dr. Amany AbdElSamea
Assignment Title:	Cloud Computing and big data	Internal Verifier Name:	Dr. Ghada Maher
Assignment No.	2	Issue Date:	09/05/2023
Submission Format: Type of Evidence	Document	Submission Date:	21/05/2023

STUDENT DECLARATION

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 penalised. 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

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.

Also, I acknowledge that I have received the feedback about my work from the assessor.

Student signature: Date: /   /2023

FORMATIVE FEEDBACK

Assessor's Formative Feedback:	Confirm action completed:

Assessor Name: Dr. Amany AbdElSamea   Assessor Signature: *Amany AbdElSamea*   Date:

IV assessment brief approval

IV's signature: *Ghada Maher*   Date: 09/05/2023

Learning Outcomes and Assessment Criteria:

Learning Outcome	Pass	Merit	Distinction
LO3 Recognize the importance of cloud computing in IOT	**P6** Explain virtualization and its hypervisor types **P7** State cloud computing layered architecture, service model (IaaS, PaaS, SaaS), deployment models (Public, Private, Community, Hybrid), management platforms, open source tools, role of cloud computing in IoT	**M6** Compare between virtual machines and containers **M7** Differentiate between type 1(bare-metal) and type 2 (hosted) hypervisors	**D3** Critically evaluate the hypervisor types and the role and usage of cloud computing to bring flexible and scalable processing resources in IoT
LO4 Understand big data principles, characteristics, types, sources, job roles and repositories big data analytics lifecycle in IoT	**P8** Explain the basic principles, characteristics, types, sources, job roles of big data and data repositories **P9** Identify Big Data Analytics Lifecycle	**M8** Compare between different types of data repositories (data warehouse, data marts, and data lake) **M9** Summarize the problems that exist in big data and the advanced big data analytics techniques used to solve it **M10** Summarize advanced analytics techniques (clustering specially k-mean , association rules, regression, text analysis, classification and time series analysis) , methods and tools	**D4** Critically evaluate the usage of Hadoop components (Hadoop Common module, Hadoop Distributed File System (HDFS), YARN, map-reduce) in IoT applications

Scenario

Big data enable real-time analysis of data generated by IOT and thus optimize the use of this technology. Suppose you are working as a big data engineer in SmartTech Company which develops innovative services that help users to receive, control and manage information in IoT environment. As part of your job you can develop and maintain, test and evaluate big data solutions within cloud computing providers organizations. You have been asked to be a member of one of big data projects and you are expected to perform the following tasks.

Task1:

From the above scenario

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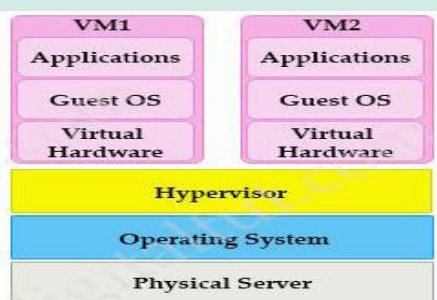
Using the following figure:
1- Explain the meaning of virtualization and State the name of the above hypervisor.
2- Critically evaluate the above hypervisor.
3- Differentiate between type 1(bare-metal) and type 2 (hosted) hypervisors.
4- Compare between virtual machines and containers.
5- State cloud computing service model and deployment models and explain them.

Task2:
6- Identify the data analytics lifecycle
7- Explain types of big data and big data Job roles
8- Compare between Data warehouse, Data lake, and Data mart
9- Critically evaluate the Hadoop components and the meaning of map-reduce and its steps with example.
10- Summarize the meaning of clustering, its types and k-mean clustering algorithm as an example of clustering algorithm
11- Summarize the problems that exist in big data and the advanced big data analytics techniques used to solve it

With my Best wishes

Higher Nationals - Summative Assignment Feedback Form

Student Name			Student ID	
Unit Title				
Assignment Number		Assignment Title		

Assessor Summative Feedback: Feedback should be against the learning outcomes and assessment criteria to help students understand how these inform the process of judging the overall grade. *should be constructive and useful including:
- Feedback should give full guidance to the students on how they have met the learning outcomes and assessment criteria

a) Strengths of performance

b) Limitations of performance

c) Any improvements needed in future assessments

Grade: LO1:

Assessor Signature:	Date: / /2023		
Re-submission Date	/ /2023	Actual Date Received Re-submission	/ /2023

Resubmission Feedback:

*Please note resubmission feedback is focussed only on the resubmitted work

Assessor Signature:	Date: / /2023
Internal Verifier's Comments:	
Signature:	Date: / /2023

 * Please note that grade decisions are provisional. They are only confirmed once internal and external moderation has taken place and grades decisions have been agreed at the assessment board.