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Homework 1

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**Homework 1**

**Question 1** : Explain the key reasons for the success of cloud computing platform that we are experiencing today. Please justify your answers.

Cloud computing platforms that we are experiencing are successful because they allow businesses to focus on their core function. They do this by automating routine tasks. Cloud platforms also allow for rapid scalability of compute resources with minimal management effort. These characteristics allow businesses to keep tabs on costs and to transfer fixed costs to variable costs.

**Question 2 :** Research and provide brief description of:

1. architecture of hardware assisted virtualization. Hardware assisted virtualization refers to technologies built into the hardware aimed to improve the processor performance in managing virtual environments.



source: https://www.desktop-virtualization.com/2008/05/14/what-hardware-virtualization-really-means/

1. What are the benefits of using hardware assisted virtualization?

Hardware assisted virtualization improves the performance of virtual machines allowing more users, more calculations, and more resource intensive applications.

source: https://www.desktop-virtualization.com/2008/05/14/what-hardware-virtualization-really-means/

1. What commercial products support that functionality?

AMD processors offer AMD-V technology and Intel offers Intel VT.

Please provide references.

source: https://www.desktop-virtualization.com/2008/05/14/what-hardware-virtualization-really-means/

**Question 3:** Write a paragraph of comparing:

* Running MySQL on your local machine vs.
* on EC2 instance and
* on RDS.  I am looking for a summary of your understanding. Please clearly states advantages of one over the other.

Running MySQL locally is constrained by the compute and storage resources of my PC. Running MySQL on EC2 or RDS instances moves those compute processes to the cloud. In the cloud the resources allocated to the task can be scaled quickly and easily to meet the processing and storage requirements. There are also accessibility and security benefits to using these cloud technologies.