LONDON METROPOLITAN UNIVERSITY

Islington college
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Module Code & Module Title

CC5068NI– Cloud Computing & IoT

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Submitted To: Sugat Man Shakya

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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

Answer the following questions and submit it into classroom.

1. What is cloud migration? Define the common steps with all cloud providers.

   Answer: A cloud migration is when a company moves some or all its data center capabilities into the cloud, usually to run on the cloud-based infrastructure provided by a cloud service provider such as AWS, Google Cloud, or Azure.

   So here are three steps towards achieving a successful transition to the Cloud:

- **Step 1: Implementation**

  While the concept of cloud computing may seem like an obvious choice for businesses looking to improve data storage and collaboration, the actual execution of transitioning to the Cloud requires considerable thought and planning. Without adequate preparation, a cloud platform is doomed to fail-draining valuable time, resources, and money out of your business's budget.

- **Step 2: Migration**

  Once you've developed a strategic cloud implementation plan, it's time to take the plunge and move your data to the Cloud.

  Cloud migration is the process of moving data, applications, or other business files from on-site storage devices to cloud servers. Transitioning from one cloud server to another is called cloud service migration. In both cases, the use of some type of integration tool may be necessary to secure files as they are moved from the customer's servers to the cloud vendor's technologies.

- **Step 3: Consultation**

  From the information above you've probably gathered that the implementation and migration process require lots of time. And while switching to the Cloud saves both time and money once deployed, getting a cloud platform off the ground and running is a time-cost that some companies are unable to make.

2. What are the six phased strategy for cloud migration? Describe with their benefits.
   Answer: Same as below.

3. Study and write about 6R's also known as AWS Migration Strategy.

   AWS Migration Strategies

   1. Repurchase ("Drop and Shop")
      This strategy involves decommissioning the application and replacing it with a cloud-based version, typically on the AWS Marketplace. Effectively, this is a licensing change—instead of using a traditional on-premises license, you can start using the same application as a cloud service. This is a smaller effort than "lift and shift" (see below) because you are not moving anything—just starting a new license agreement in the cloud.
   2. Rehost ("Lift and Shift")
      This strategy involves moving applications from the on-premises environment to the cloud without modification. It is commonly used to migrate large-scale legacy applications to meet specific business objectives such as an accelerated product launch timeline.
   3. Replatform ("Lift, Tinker and Shift")
      The replatform strategy involves moving applications almost as-is but replacing some components to take advantage of the cloud.
   4. Refactor / Re-Architect
      This strategy calls for a complete overhaul of an application to adapt it to the cloud. It is valuable when you have a strong business need for cloud-native features, such as improved development agility, scalability, or performance. In many cases, refactoring involves breaking up the application into independent services and transitioning to a microservices architecture.
   5. Retire and 6. Retain
      The final two strategies are "passive"—they don't involve migrating an application to the cloud.

4. What could be the possible challenges/disadvantages after fully migrating to the cloud? Answer in your own way.

   Answer:

   1: Financial cost

   In the long run, the cost of cloud migration sees returns of increased efficiency, lower admin costs, and streamlined processes. But getting there can still feel like an (expensive) uphill battle.

   2: Adoption resistance

   When it comes to migration success, it is often people who pose the biggest challenge. People tend to resist change. And a cloud migration brings a lot of change and disruption—often with significantly new systems, processes, and even leadership.

   3: Skill shortage

   Despite the many benefits of cloud computing, the complexity of migrating stops many organizations in their tracks. One of the primary obstacles is finding people who have the skills to manage an effective migration.