**Subject: Cloud Computing**

**Initial Post 1**:

Virtualization decreases costs by reducing the need for physical hardware systems. Virtual machines use efficient hardware, which lowers the quantities of hardware, associated maintenance costs and reduces the power and cooling the demand (Jamsa, 2013). We can allocate memory, space, and CPU in just a second, making us more self-independent from hardware vendors.

This kind of technology basically creates a virtual platform for the users with the help of Software, wherein this platform can be visualized as a layer between primary (RAM, CPU, ROM, storage) and secondary/virtual system also helps us in accessing these primary systems. There are five types of Virtualization: Desktop Virtualization, Application virtualization, Server virtualization, storage virtualization, and network virtualization (Gaille, 2017).

The main advantages of virtualizations are disaster recovery, save energy, deployment on the server is fast, save space in local server room and data center, testing and setting up a lab environment, shifting all local infrastructure on cloud in a short time, reduce the fail rate of the server (Jamsa, 2013). There are many minimum disadvantages associated with Virtualization: extra cost in the initial stage, Software licensing, and the user's need to learn new infrastructure. Pre virtualization steps a company or user need to take before moving on that path (Gaille, 2017).

Implementing and managing a virtualized environment will require IT staff, with expertise in Virtualization. On the user side, a typical virtual environment will operate similarly to the non-virtual environment. Some applications do not adapt well to the virtualized environment (Gaille, 2017).

**Initial Post 2**:

Virtualization refers to the process of generating a virtual version that of a thing that is generally applied for some execution (Han et al., 2015). One type of Virtualization includes virtual machines or OS virtualization, which is the most known type of Virtualization involving putting several instances that of operating systems such as the windows into a single machine. The process is widespread in business since it helps them minimize the number of physical hardware needed in running their Software by minimizing the exact number of the actual machines. The other type includes the application server virtualization, which usually spreads various applications across the services, and it can also spread servers across various applications. Other virtualizations include application visualization, administrative Virtualization, network visualization, and hardware virtualization (Prahlad et al., 2014).

Virtualization is involved with some pros, which include it minimizes the IT costs where it assists the various business in minimizing their expenses in several manners, including the capital, operational expenses, and the data center expenses. Virtualization also ensures that there is the proper utilization of the resources by ensuring that the business acquires most from their resources and hardware utilization (Yu et al., 2018). Virtualization is also involved with some disadvantages, such as upfront costs are usually hefty, especially when one is transitioning the legacy system into Virtualization. The other disadvantage is that not the entire Software or hardware can be virtualized.

**Initial Post 3**:

Virtualization is the term applied in computing, which involves establishing virtual versions of something, including storage equipment, computer network resources, and computer hardware platforms (Jain & Choudhary, 2016). The following are different types of Virtualization:

**Application virtualization**: It is a practice whereby the applications are virtualized and distributed from the server to the end-user gadgets such as smartphones and laptops. The user can access the application right from their devices instead of logging into their computer at work and what is needed is an internet connection.

**Hardware virtualization**: It is currently the most common type of Virtualization, and a virtual machine manager enables it termed a hypervisor. It allows the users to involve various operating systems on the same machine at the same time.

**Network Virtualization**: It joins all the physical networking tools into a single software-based resource (Murugesan, & Bojanova, 2016). It also helps divide the available bandwidth into several and independent channels that can be allocated to servers.

**Pros of Virtualization**: Some of the advantages of Virtualization include available all the time, it offers easier recovery, and cloud migration is more comfortable than documentation.

**Cons of Virtualization**: One of the significant disadvantages of Virtualization is the high initial investment. Quick scalability is also a problem, and also data can be at risk.

**Subject: Analyzing and Visualizing**

**Initial Post 1**:

An effective presentation makes the best use of the relationship between the presenter and the audience. It takes full consideration of the audience's needs to capture their interest, develop their understanding, inspire their confidence, and achieve the presenter's objectives (Burns 2017).

First off, what a design brief is. A design brief is vital to any design project as it will provide the designer(s) with all the information needed to exceed your expectations. A design brief should primarily focus on the results and outcomes of the design and the design project's business objectives (Burns 2017). It should not attempt to deal with the aesthetics of the design. That is the responsibility of the designer. The design brief also allows us (the client) to precisely focus on what you want to achieve before starting the project. A good design brief will ensure that we get a high-quality design that meets our needs, which has chosen the right designer (Kirk 2016).

To Implement a persuasive brief for data presentation, the analyst needs to understand the relevant issues, both current—those likely to emerge in the future and present the results to the audience. The study of background information allows the analyst to choose suitable data sources and appropriate statistical methods. Any conclusions presented in an analysis, including those that can impact public policy, must be supported by the analyzed data.

Initial preparation: Many factors affect the design of our presentation. A powerful presenter will acknowledge and address each of the following: Objectives. What are the objectives of this analysis? What issue am I addressing? What question(s) will I answer? Justification. Why is this issue interesting? How will these answers contribute to existing knowledge? How is this study relevant? Data. What data am I using? Why is it the best source for this analysis? Are there any limitations? Analytical methods. What statistical techniques are appropriate? Will they satisfy the objectives? The audience will have a variety of different experiences, interests, and levels of knowledge. A powerful presenter will need to acknowledge these and prepare for and respond to them accordingly. Ask ourselves: how much will our audience already know about our topic? How can we link new material to things they might already understand? Will we need to win them over to a particular point of view?

Ensure that the data are appropriate for the analysis to be carried out. It requires investigation of a wide range of details such as whether the data source's target population. It is sufficiently related to the analysis's target population, whether the source variables and their concepts and definitions are relevant to the study. The longitudinal or cross-sectional nature of the data source is appropriate for the analysis, whether the sample size in the study domain is sufficient to obtain meaningful results and whether the data's quality, as outlined in the survey documentation or assessed through analysis, is sufficient (Kirk 2016).

If more than one data source is being used for the analysis, investigate whether the sources are consistent and how they may be appropriately integrated into the analysis. Interpretation of results: Since most analyses are based on observational studies rather than on the results of a controlled experiment, avoid concluding causality. Where possible, avoid arbitrary time reference points. Instead, use meaningful points of reference, such as the last central turning point for economic data, generation-to-generation differences for demographic statistics, and legislative changes for social statistics.

Advantages: The use of different types of graphs makes the report more meaningful, and accordingly, acceptance of the report increased. Sometimes the use of pictures helps to limit the discussion, which reduces the cost of the report. Sometimes people lose their interest in reading long reports. However, the use of bar diagrams, pie charts, and photographs makes the report more attractive, helping the audience hold interest (Kirk 2016). An illustrative report not only easily understandable but also enhances the goodwill of the organization. Usually, executives have not much time to go through the whole report. For this reason, an executive summary is included in the formal reports. In addition to the executive summary, graphs and charts help the executives to make prompt decisions.

Disadvantages: Time consuming - Preparation of graphs and charts increases the completion time of the report. Graphs help easy understanding but to prepare graphs, an individual needs to have special knowledge. It can be easily manipulated to give false impressions (Kirk 2016). All may not get the meaning of graphical representation because it involves various technical matters that are complicated to general people.

**Initial Post 2**:

Data visualization is used to model complex events and visualize them into more meaningful forms (Best Data Visualization Techniques for small and large data, n.d.). Today, data visualization has many applications in data science, analysis, mining, governance, security, and management. For data visualization, I chose Histogram Plot as it is one of the most popular data visualization techniques used by many people. A histogram visualizes data distribution over a continuous interval or a particular time (Best Data Visualization Techniques for small and large data, n.d.). Histogram makes it easier to identify different sets of data and the frequency of the data occurring in a given particular dataset (Best Data Visualization Techniques for small and large data, n.d.). It is not easy to visualize if we do it with a tabular form. Besides, we can visualize massive data sets with the use of histograms. It is not easy to analyze and visualize large sets of data if we consider using a simple Line plot for the visualization. Using Pie or donut charts with large data sets will be more confusing and irritating for both the eye and the brain, estimating its areas and angles. Lastly, a histogram correctly depicts the skewness of the given data, which has many applications.

For compound visualization, our choice is Infomural as it is similar to graphic facilitation that shows various process levels, including annotations, for the entire process. An infomercial is typically used in a large crowd setting that allows multiple team members to present and assess their ideas and information. Also, infomercials signify small pieces that work towards fulfilling the whole picture or process. It is more expressive and less politically inclined as compared to a cartoon depiction. All in all, the infomercial is best used to connect all small elements that portray the big picture (Kirk, 2016).

**Instructions**:

* Total of 5 Responses
* Minimum of 200 words for each response
* Minimum of 2 APA References for each response
* Responses should cover:
  + Ask a captivating, thoughtful question about the topic.
  + Provide extensive additional information on the topic
  + Explain, define, or analyze the topic in detail
  + Make an argument concerning the topic.
* Please follow the format below:
* Response 1, References
* Response 2, References
* .
* .
* Response 5, References