Assignment

Brief

Different companies have different applications and have different architectural needs. As a group, choose among the choices and discuss what kind of servers / server configuration / virtualization will be needed.

1. A deposit / withdrawal system for a rural bank located in the province
2. A record keeping system for a chain of hospitals
3. An inventory management system for a chain of supermarkets
4. A learning management system for a university
5. A ticketing system for an international IT helpdesk

Submission

- Submit the URL of the GitHub Repository that contains your work to NTU black board.

3. An inventory management system for a chain of supermarket

item	Operating Features of Supermarket business
1	When supermarket is established & start receiving a number of customers, we need to keep our transaction data, inventory data secured somewhere. There are two ways we can do it either get a cloud server or go with a large database and high storage server at our premises. We choose hybrid solution here with inventory data put into cloud and other transactions data kept on-premises (please refer diagram for details) as cloud servers have the risk of getting hacked resulting in sensitive data leaks that can harm our supermarket system.
2	Every single client which is connected to the server can be operated and controlled through the server. And all the other client storage devices used in supermarkets can also share the resources and services of the main server. It is

	known as a server-client system. A server, therefore, is essential for connectivity & storage purposes in a supermarket
	Major functions of a computer server in a supermarket system
1	Inventory management: Supermarkets store a large variety of goods and products in large quantities. It is important for the supermarkets to keep a record of all the items which they have by way of database server
2	Keep transactions records, Connectivity and Monitoring: The file server system in the supermarkets help to store the data of all the transactions taking place in the supermarket ; sharing of data between interconnected devices and monitoring large crowd of people visiting supermarket for security reason.
3	As seen from the above, supermarkets conduct a very large amount of financial as well as other operations, a large database with file server system is essential for quick data transfer and retrieval from one place to another
	Determining if Server Virtualization is necessary for our business
1	If we need to use more operating systems and applications without necessarily breaking the budget for electricity, space, and hardware, then virtualization may be the best option for us.
2	if we wish to reduce the work hours for our IT staff so that we do not have to spend a lot of time on patching, installation, administration, and supporting application servers,
3	If we wish or need to simplify backup and reduce the downtimes of applications, by adding storage space, then virtualization is the best option for us
4	if we feel that we need to master cloud challenges, Virtualization may also be the best option for us. With experience in handling cloud challenges, we will be

	better placed when our business will be migrating to virtualization.
	Four important steps that can be considered part of the virtualization process:
1	Evaluation of the network's and system's current capacity and performance and the requirements it may need in the future
2	Calculation of the expected payoff if the system or network is virtualized
3	Creation of a strong infrastructure
4	Map our timeline for virtualization

1. An inventory management system for a chain of supermarkets