

## The importance of data and related management issues

### Abstract

In this module we will discuss the importance of data and the management issues that relate to it, and its life cycle. We will also focus on document management system, discuss the details of data warehousing, data mining, analytical processing and knowledge management. We will also discuss about transaction and analytic processing systems. We will also learn the effects of data improvement on the businesses. This module also helps to develop an understanding of the complexity of organizational networks and the advantage of communication and collaboration to gain the competitive advantage for the organization. We will also emphasize on the limitation and issues in managing information resources and also learn about different aspect of information security. We will also learn the concepts of disaster recovery and security measures.

### Module 1 Deliverables

Assignments: Essay Questions

#### *Essay Question 1*

*What is a document management system (DMS)? List some ways a DMS can help a business become more efficient and productive. Explain in scholarly detail.*

Document management system is the automated control of imaged and electronic documents, page images, spreadsheets, and voice and e-mail messages, word processing documents and other documents through their life cycle within an organization, from initial creation to finally archiving or destruction.

Document management system consists of hardware and software that manage and archive electronic documents and also convert paper documents into electronic documents and then index and store them according to company policy. All DMSs have the capabilities so they can be identified and accessed like data in a database. These systems range from the ones designed support a small workgroup to fully web enabled enterprise systems.

A DMS can help a business to become more efficient and productive by

Enabling the company to access and use the content contained in the documents

Cutting labor costs by automating business processes

Reducing the time and effort required to locate information the business needs to support decision making

Improving the security of the content, thereby reducing the risk of intellectual property theft

Minimizing the costs associated with printing, storage and searching for content

The major document management tools are workflow software, scanners and databases. When workflows are digital, productivity of the organization increases and the cost decreases. This makes green computing possible. The document management system makes it possible for the company's all source of knowledge to be together and at one place including relevant email communication, scanned paper documents anything which can be stored as a file. The DMS starts from the time when any content the people inside organization creates. It should be easily accessible to everyone with proper authentication.

### *Essay Question 2*

*Discuss in scholarly detail how consolidating data marts into an enterprise data warehouse (EDW) help a company to meet its compliance requirements and a going green initiative.*

A company should start with data marts to minimize the investment or risk of a failure of a large information system and later should consolidate them into an enterprise wide data warehouse. Now by consolidating data marts into a data warehouse helps drive better business decisions as well as save money. There are two other business benefits which can be achieved are compliance and going green.

#### Compliance –

Storing integrated data in an enterprise data warehouse makes it easier for the company to control which people can access and use sensitive financial data. In addition, an EDW can help a company to meet regulatory compliance requirements by providing increased accuracy in reporting financial results, data security, encryption of sensitive data, and disaster recovery planning. This provides a single, unified platform for data access, data cleansing, data analytics which is secure, reliable and highly scalable.

#### Going green –

There is a big impact to the environment if we have to maintain separate data marts. By consolidating power-hungry servers which are often underutilized reduces both electricity consumption and the amount of heat produced, which in turn reduces the amount of energy required for cooling the equipment. One of the benefits touted by green computing by hardware appliance vendors is to realize the leverage achieved by reducing server sizes. It is very important for an application like a data warehouse that has the potential to consume enormous resources. So by using the data warehouse they can be clubbed into a cluster thus by reducing the power consumption and cost.

### *Essay Question 3*

*Discuss in scholarly detail why companies use portals and also list and briefly define three types of portals as part of the response.*

A portal is basically a web based gateway to files, information and knowledge on a network. Portals can include discussion boards, document sharing and workspaces. Users can upload presentations or share documents with peers.

There are mainly four types of portals out of which we will cover three of them.

Corporate Portals – These are private gateways to corporate web sites that enable communication, collaboration and access to company information. The corporate portal is the point of access through a web browser to critical business information located inside and outside of an organization. Companies deploy portals to support strategic business initiatives and use them as a tactical tool for managing enterprise applications.

Commercial Portal – A nice example of this type of portal is about.com or google directory or yahoo directory. They are commonly used as gateways to general information over the internet.

Publishing Portals – These are intended for communities with specific interests. These portals involve relatively little customization of content, but they provide extensive online search in a specific area and some interactive capabilities. Examples are zdnet.com and techweb.com.

Vertical Portals – These portals target specific markets. It usually offers industry news, event calendars, links related to sites and lists of vendors and businesses that offer products and services.

#### *Essay Question 4*

*Discuss in scholarly detail concepts behind business continuity and disaster recovery (BC/DR) and describe characteristics of these BC/DR plans.*

In IT business disaster can happen without warning. So business continuity plan is an important element in any security system. Such plan defines the method by which all the businesses can recover from a major disaster. Destruction of all of the computing facilities can cause significant damage. Therefore it becomes very difficult for many companies to obtain insurance coverage for their computers and in house information systems without having a satisfactory disaster prevention and proper recovery plan.

Disaster recovery can be defines as the series of defined events connecting the business continuity plan for protection and for recovery. The following are some key thoughts about the process

The purpose for a business continuity plan is to have a business to run actively after a possible disaster. Each components in the business should have a proper and documented recovery capability plan.

Recovery planning is a part of asset protection in an organization. Every organization should define management's responsibility to correctly identify and protect assets.

Planning should focus primarily on the recovery from a total loss in case of an incident of all capabilities.

Proof of capability usually involves some kind of what-if analysis that shows that the recovery plan is current.

All critical applications must be identified and their recovery procedures are addressed in the plan.

The plan should be written so that it will be effective in case of disaster, not just to satisfy auditors

The plan should be kept in a safe place. The plan should be audited regularly.

Disaster recovery planning can be very complex and it usually takes several months to complete. Some organizations use special software to plan the details.

#### *Essay Question 5*

*Discuss in scholarly detail methods of attack against computing facilities and provide descriptive examples of these attacks.*

There are different methods of attack against computing. And there are chances that every day we came to know about a new one. On high level we can categorize them mainly into two groups i.e. data tampering and programming attacks. Data programming is a common means of attack that is overshadowed by other types of attacks. It refers to an attack when someone enters false, fabricated or fraudulent data into a computer, or changes or deletes existing data. Data tampering is extremely serious because it may not be detected. This is the method often used by insiders and fraudsters. Programming attacks are popular with computer criminals who use programming techniques to modify computer programs installed in the computer. For these types of crimes, programming skill and knowledge of the targeted systems are needed. Examples of programming attacks are viruses, worms and Trojan horses. Malware can be used to launch denial of service (DoS) attacks.

Malware – It is any unwanted software that exploits flaws in other software to gain illicit access. Now a days malware attacks are more organized, it is designed to steal data and resources from the computers of victim for profit. Recently in 2014 Microsoft has confirmed reports an active attack that suspiciously installed malware on computers running a fully patched version of IE10.

Virus – Virus is a very common method of attack. This is basically a piece of computer code. It receives its name from the program's ability to attach itself to and infect the computer programs installed, without the knowledge of the owner of the program. When someone uses the affected software is used, the virus infection spreads, causing damage to that program.

Worm - Unlike a virus, a worm spreads without any human intervention, such as checking email or transmitting files. Worms use networks to propagate and infect anything attached to them. Worms can spread through a network can clog and degrade a network's performance through network. In February 2014, Johannes B. Ulrich, CTO of the Sans Institute, informed that a malicious worm has been able to infect around 1,000 Linksys routers ranging models from E1000, E1200, and E2400 routers. These are some of the incidents which gets registered and accepted, in today's world there are a lot of attacks which goes unnoticed..

Trojan horse – These are referred to as backdoors because they give the attacker the illegal access through a network port. A network port is generally a physical interface for communication between a computer and devices on a network.

#### References

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