

Homework – 12

(10 points)

Name: Patrick Woodrum

Clemson ID: C79975506

Submission: Save this Word document with your answers as a PDF file and upload the PDF file to Canvas.

Chapter 12

1. In what forms can companies provide user support?
Companies can provide user support in many ways, some being user training or help desks.
2. Describe four types of system maintenance.
 - Corrective maintenance diagnoses and fixes logic errors, configuration settings, debugs code, and updates drivers**
 - Adaptive maintenance adds online capabilities, support for mobile devices, input screen entries, or install links**
 - Perfective maintenance upgrades or replaces outdated hardware, writes macros for repetitive tasks, optimizes settings, or upgrades wireless capabilities**
 - Preventative maintenance installs new antivirus software, develops backup schedules, implements defrag process, and analyzes system reports for patterns**
3. What is CM and why is it important?
Configuration Management (CM), referred to as change control (CC), is a process for controlling changes in system requirements during software development. Companies often establish a control process that describes how system changes must be requested and documented. CM helps to organize and handle documentation and is extremely important if systems have multiple versions that run in different hardware and software environments.
4. Define the following terms: *response time*, *bandwidth*, *throughput*, and *turnaround time*. How are the terms related?
Response time – the overall time between a request for system activity and the delivery of the response
Bandwidth – describes the amount of data that the system can transfer in a fixed time period
Throughput – measures actual system performance under specific circumstances and is affected by network loads and hardware efficiency
Turnaround time – applies to centralized batch processing operations, such as customer billing or credit card statement processing
5. What is the CIA triangle?
The CIA triangle shows the three main elements of system security: confidentiality, integrity, and availability. Confidentiality protects information, integrity prevents unauthorized users inside, and availability ensures that authorized users have timely and reliable access to necessary information.

6. Explain the concept of risk management, including risk identification, assessment, and control.
Risk management is how managers must balance the value of assets being protected, potential risks to the organization, and security costs. Risk identification is the analysis of the organization's assets, threats, and vulnerabilities. Risk assessment measures risk likelihood and impact. Risk control develops safeguards that reduce risk and their impact.
7. What are the six security levels? Provide examples of threat categories, attacker profiles, and types of attacks.
-Physical, Network, Application, File, Procedural, User
-Some threats to these security levels can be "back door" attacks that find vulnerability in software packages, "malicious code" that sends infected code to a target system, or even "phishing" threats that create false DNS to steer users to the attacker's website
8. What are some key issues that you must address when considering data backup and recovery?
One of the biggest issues surrounding data backup and recovery nowadays is terrorism and disaster recovery. Backup policies containing detailed instructions and procedures are key to preventing catastrophes with data loss.
9. Provide an example of technical obsolescence and explain how it can be a threat to an information system.
Systems can become obsolete when they no longer support user needs. If an information system's data methods become obsolete and the system is centered around these methods, the information system itself will become obsolete and need complete remodeling or reworking. The system must be discontinued if it has reached the end of its economically useful life.
10. Why is strategic planning important for IT professionals?
Systems analysts need to think like small business owners who have to prepare for the next year, three years, and next five years. Setting intermediate milestones can develop an IT professional's career and make an IT project's management much easier.