Summative Assessment Outline:
Fundamentals of Information Technology

Competency Name: Fundamentals of Information Technology

Competency Statement: This competency is designed to promote a working knowledge and understanding of computer information technology concepts, skills, and capabilities that support academic and professionally related goals and requirements. Students learn about the application and science of information technology.

Summative Assessment Submission Title: Information Technology Plan
Competency Objectives:
1. Develop an understanding of the Internet and its impact on organizations.
2. Develop an understanding of how 1) Hardware, 2) Operating Systems, and 3) Databases work together to provide an effective computing environment.
3. Develop an understanding of how Application System software supports decision-making in organizations by utilizing application software (e.g. Microsoft Word, Excel and Access).
4. Develop an understanding of computer networks and the service they provide to organizations.
5. Develop an understanding of Information Security and its implications for organizations.

Program Learning Outcomes: PLO #4 - Technology: Apply technology to support decision making in businesses; leadership

Institutional Learning Outcomes: N/A

Purpose of this Assessment

The purpose of this assignment is to demonstrate an understanding of how information technology can be implemented and used to support the needs of business organizations.

Items Required for Submission

The item required for submission is an 11-16 page Information Technology Plan for Biggie Logistics.

Step ONE: Preparation

- To prepare for this assignment, read the case study here and consider the needs and circumstances of the organization in the study.

- After understanding the details presented, research credible academic resources to support the recommendations you will make in your Information Technology Plan. Include at least five of these in the reference section of your Information Technology Plan, and cite them appropriately throughout your paper.

Case Study

You have been hired as the new Chief Information Officer (CIO) for a large logistics company called Biggie Logistics. Biggie Logistics is moving its operations to Ontario, Calif., so they can take advantage of access to the ports, rail, and freeway networks; and because the president, Mr. Big, likes the weather. The new facility is a 20-acre campus of six large warehouses and a single two-story office building in the center of the campus, which will serve as the corporate office and that will house Mr. Big and key company executives. Total staffing in the office building is expected to be between 50 to 100 people. The warehouse buildings are 100,000 to 200,000 square feet each, with only interior roof supports and four walls, all of which have loading doors.

Mr. Big is an important, successful businessman with a lot of street smarts. Unfortunately, he does not know much about technology and is counting on you to explain in clear, common language what this technology stuff is all about. Since he never got around to going to college, he especially values academic research to support recommendations made by his staff. During your initial meeting with Mr. Big, you learn of his particular areas of concern for the new operations center. As CIO, Mr. Big is counting on you to set up the IT infrastructure at the new location.

Networks and Networking

Biggie Logistics needs staff to be able to communicate internally. In particular, Mr. Big would like answers to the following questions. Be sure to point out the best solution, and show why other possibilities would not work as well.

- ❑ What type of network infrastructure would allow the internal staff to receive email from each other?
- ❑ What type of topology would you recommend for the network?

The Biggie Logistics new office building has Category 6 cabling for basic phone and network connectivity. Mr. Big explained that he is seeking your advice on how to establish connectivity between the warehouses and the office building. Since disturbing the trucks coming and going is not an option, you have ruled out fiber and twisted pair cabling connections.

- ❑ What wireless solution will you recommend, and why? In this section of the Information Technology Plan, define the problem, limitations and constraints, describe the recommendations and go through the alternatives and why you chose your solution. Make sure to cover the Wireless Network Topology selection and provide a detailed discussion of Wireless Network Security.

Since Biggies Logistics is a U.S. government contractor, there are a couple of specific network security requirements for their campus, including: (1) it will be required to provide confidential data security throughout the campus and (2) it will be necessary to implement a security program that will evaluate the privacy and security risks and countermeasures associated with the various networking technologies used by Biggie Logistics.

- ❑ Mr. Big wants to know how he can meet the government contractor "confidentiality" contractual obligation. What will you recommend?

Mr. Big would also like you to outline a security program for Biggie Logistics. He would like details about the implementation plan regarding the key elements for your security program.

- ❑ What is important to consider as you make recommendations? Be sure to include Risk Assessment (risk matrix, ongoing process, continuously/regularly), Conduct Penetration Testing, and End User Education.

Computer Hardware, Software, and Databases

Currently, Biggie Logistics has no hardware, software, or databases. Mr. Big has asked for your recommendation regarding what the company should use. He wants the selections to be scaled to the organization's projected size, and also be cost-effective to purchase, operate, and maintain.

- ❑ What will you recommend, and why?
    1. Please explain hardware form factors variations and make appropriate selections.
    2. Discuss the types of software that you would recommend for Biggie Logistics.
    3. Describe database differences and the selection methodology you used to select the appropriate database for the company.

Internet

Biggie Logistics will receive goods from all over the world, and will need to communicate with numerous vendors and suppliers over the Internet. Mr. Biggie would like an explanation of the Internet and the technologies related to its effective use and communication. Naturally, Biggie Logistics plans to communicate externally via email. Mr. Big would like to know what type of network device would allow his internal staff to connect to an Internet Service Provider and a web based email hosting solution provider, so that they can receive email from customers.

- ❑ What exactly is the Internet? Explain to Mr. Big what the Internet is, compare it to an internetwork, and explain the role of an ISP. Describe and provide the function of a domain name, URL and browser. Finally, describe the domain name system (DNS) and the role the DNS hierarchy plays in the function of the Internet.

- ❑ What type of network device would allow his internal staff to connect to an Internet Service Provider and a web-based email hosting solution provider, so they can receive email from customers? Identify the device and its two common names and describe its functions at the packet level.

Biggie Logistics has communications needs that span the globe, therefore it must ensure that it has the ability to communicate via the Internet and by phone, regardless of damage caused by a natural disaster, such as a California earthquake.

- ❑ Mr. Big wants your advice on how to set up an infrastructure for this potential communications challenge. What technology will you recommend?

Step TWO: Completing the Written Report

The written report must follow APA formatting and include the following sections. Each section should include the relevant heading:

A. Title Page
B. Introduction of the Information Technology Plan (1/2 to 1 page)
C. Networks and Networking (4 to 5 pages)
D. Computer Hardware, Software, and Databases (2 to 3 pages)
E. Internet (3 to 5 pages)

F. Summary (1/2 to 1 page)
G. References (1 page)

Step THREE: Complete Checklist for Submission

Before you submit, check to see if you believe you have met the criteria noted below.

Did you…

- ✓ Provide an insightful and thorough analysis and presentation of all products and issues as they relate to the company? Did you make sure your comparisons are clear and advantages are clearly defined and described?
- ✓ Demonstrate sophisticated understanding of all Information Technology issues?
- ✓ Develop a plan that demonstrates a sophisticated ability to integrate and synthesize materials from learning materials?
- ✓ Consistently and accurately recommend solutions to technology problems posed?
- ✓ Accurately and precisely integrate at least five references into the Information Technology Plan and provide well-documented in-text citations and a reference page?
- ✓ Make sure your writing is logical and organized? Is your writing free of errors in grammar, spelling and writing mechanics? Is your report of the specified length. Did you follow APA formatting throughout?

Step FOUR: Submit Your Work

- Your completed final assessment documents should be submitted through the Final Assessment page of your competency.

- Please note, for files smaller than 10MB (i.e., most Word documents), use the corresponding "+UPLOAD STUDENT FILE" button to upload your final assessment assignments. For larger files of any type (i.e., voice-over PowerPoint files, videos, or image-heavy documents), please use the optional TEXT EDITOR to provide a URL where your grader can download your file.

+ SRM FA Doc1.docx

+ Upload additional files to this assignment. This is optional

Assignment 5

5. A 10- to 15-slide PowerPoint presentation with supporting voice-over

Use File Uploader

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Download URL for Assignment 5: https://fwk.box.com/s/2nwjgkwooz6pa7wm8uzojjwerzb7sl2|

Comments (Optional)

- How you create a download URL is up to you, but various free online providers, including Google Drive, Box.com, or Dropbox, offer this service. Please make sure that the URL you provide can be accessed by anyone with the link. For further instructions on how to create public links for uploaded files, consult the support pages for your chosen provider.

Scoring Rubric for Summative Assessment

Criterion	EMERGING (1)	DEVELOPING (2)	PROFICIENT (3)	EXEMPLARY (4)
PLO: Analysis **Analysis of Company Needs**	Incomplete analysis of all products and issues as they relate to the company.	Superficial analysis of some of the issues as they relate to the company, and many products are ignored and not fully explained; strengths and weaknesses barely identified.	Thorough analysis of most of the products and issues as they relate to the company. Comparisons are partially provided and some advantages are presented.	Insightful and thorough analysis and presentation of all products and issues as they relate to the company. Comparisons are clear and advantages are clearly defined and described.
Information Technology Issues	Demonstrates only surface understanding of Information Technology issues.	Demonstrates partial understanding of Information Technology issues.	Demonstrates adequate understanding of all Information Technology issues.	Demonstrates sophisticated understanding of all Information Technology issues.
Synthesis	Develops a plan that demonstrates a lack of ability to integrate and synthesize materials from learning materials.	Develops a plan that demonstrates a partial ability to integrate and synthesize materials from learning materials.	Develops a plan that demonstrates an adequate ability to integrate and synthesize materials from learning materials.	Develops a plan that demonstrates a sophisticated ability to integrate and synthesize materials from learning materials.
Accuracy	Rarely accurately recommends solutions to technology problems posed.	Occasionally accurately recommends solutions to technology problems posed.	Sometimes accurately recommends solutions to technology problems posed.	Consistently and accurately recommends solutions to technology problems posed.
PLO: Sources	Integrates few or no academic references into the analysis.	Limited integration of references into the Information Technology Plan and fails to cite all of them appropriately.	Accurately integrates at least five references into the Information Technology Plan with citations.	Accurately and precisely integrates at least five references into the Information Technology Plan with well-documented citations.
PLO: Writing and Organization	Writing is not logical or organized. Sentences do not form a cohesive whole and structure of sentences is distracting	Writing lacks logical progression or organization. Sentences are awkward and often unclear. Word choice is	Writing is generally logical and organized. Sentences are well-phrased and varied in length and structure.	Writing is logical and organized. Sentences are well-phrased and varied in length and structure. Word choice is consistently

	and confusing to the reader. Words are used inappropriately. There are several errors in APA style, grammar, spelling and writing mechanics. The paper is shorter than the specified length.	acceptable but range of words is limited or lacks precision. The writing has errors which impact the understanding of the paper and cause a distraction. The paper is shorter than the specified length.	Word choice is generally precise and mostly accurate. There are occasional errors in APA style, grammar, spelling and writing mechanics. The report is of the specified length.	precise and accurate. The writing is free of errors in grammar, spelling and writing mechanics. The report is of the specified length.. APA style usage is flawless.