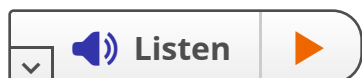




SB



Project One: Technology, Hardware, and Software Guidelines and Rubric



Competency

In this project, you will demonstrate your mastery of the following competency:

- Describe the technologies, hardware, and software used within the information technology field



James Otis
tax associates

Scenario

You are working as a contracted information technology specialist. You have been contacted by James Otis Tax Associates, a small tax preparation company. The company is growing rapidly and is opening a new office. They are focused on hiring and retaining the best in the field, and they believe that one way to do this is to provide every employee with the appropriate tools and technology they need to effectively complete their work. Your company has been asked to provide its expertise in identifying the technology components needed for the computer systems and network for the three employees in the new office. They would also like you to address the security needs of the various employees.





Directions

The manager at James Otis Tax Associates has asked you to submit a report describing the technology hardware and software needed to build a computer network for the new office. The manager has asked you to describe the computer system for each new employee, including an explanation of the purpose for each selected technology component, and to identify specific software programs that the employees would need. He has also asked you to describe the security measures needed to support the systems. In your explanation, include how your knowledge of human-computer interaction (HCI) impacted your choices for each component.

The manager has provided the following employee descriptions:

- **Certified Public Accountant (CPA):** The CPA is a senior position at a tax preparation company. The CPA will be not only handling sensitive customer data from personal tax returns but also preparing tax returns for corporate clients. The CPA is also responsible for the personal tax returns filled out by the tax and data-entry specialist employees.
- **Tax Specialist:** The tax specialist has the dual role of entering data and verifying that tax returns are correct. This position involves customer interaction in gathering data for minimizing

taxes owed or maximizing tax refunds.

- **Data-Entry Specialist:** This position requires data entry for personal tax returns for customers who walk in the door. Although the data-entry specialist works with sensitive customer data, they do not have access to the tax returns once the returns are submitted to the tax specialist for review.

For each employee, you must:

- **Describe all hardware components, including peripherals, needed to create the systems**
- **Identify specific software programs (more than one) that would be beneficial to each identified employee. Programs could include:**
 - Operating systems
 - Applications such as:
 - Office automation products
 - Security products
- **Describe security measures needed to support this system. Security measures could focus on:**
 - Access
 - Administration and user passwords
 - Firewalls

Along with each description, **explain the purpose of each technology component in each system.** In your explanation, **include how your knowledge of human-computer interaction (HCI)**

impacts design choices for components

Impacted your choices for components.

Finally, choose a network topology that could be used to connect all of the new employees identified by the manager. Create a Visio diagram to **identify the networking equipment needed to enable the workflow between the employees.**

What to Submit

To complete this project, you must submit the following:

Technology Needs Report

Your technology needs report should be 3–5 pages in length. For each of the new employees, you must describe all hardware components needed to create the system, identify specific software programs that the employees would need, and describe security measures needed to support the systems. Along with each description, explain the purpose of each technology component in each system. In your explanation, include how your knowledge of human-computer interaction (HCI) impacted your choices for each component.

Network Diagram

You have also been asked to include a visual representation of the topology you selected and the network equipment needed to support interactions between these employees. Use Visio to create a 1-page (or 1-slide) diagram that identifies the networking equipment needed to enable the workflow between these employees.

Supporting Materials

[Technology Needs Template](#)

This template can be used as a note-taking or organizational tool. You may submit it along with your report and diagram, but it is not a requirement and it will not be graded.

Project One Rubric

| Criteria | Exemplary (100%) | Proficient (85%) | Needs Improvement (55%) |
|------------------------|--|--|---|
| Hardware Components | Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner | Describes all hardware components, including peripherals, needed to create each system | Shows progress toward proficiency, but with errors or omissions; areas for improvement may include misestimating level of equipment needed to fit the needs of the system or miss |

| | | | |
|-----------------|--|---|---|
| | | | key hardware components |
| Software | Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner | Identifies specific software programs that would be beneficial to each employee | Shows progress toward proficiency, but with errors or omissions; areas for improvement may include recommending software with insufficient functionality or outside of the norms for budget and purpose |
| Security | Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner | Describes security measures needed to support each system | Shows progress toward proficiency, but with errors or omissions; areas for improvement may include thoroughness of descriptions at security |

| | | | |
|--|---|---|---|
| | | | recommendati |
| <p>Component Purpose</p> | <p>Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner</p> | <p>Explains the purpose of each technology component in each system</p> | <p>Shows progress toward proficiency, but with errors or omissions; areas for improvement may include thoroughness explanations addressing each component</p> |
| <p>Human-Computer Interaction</p> | <p>Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner</p> | <p>Explains how knowledge of human-computer interaction (HCI) impacted choices for components</p> | <p>Shows progress toward proficiency, but with errors or omissions; areas for improvement may include thoroughness explanations addressing each component and correct use of human-computer interaction</p> |

| | | | |
|--|---|--|--|
| | | | <p>concepts throughout the explanation</p> |
| <p>Network Components</p> | <p>Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner</p> | <p>Identifies all equipment needed to create a functioning network for the employees</p> | <p>Shows progress toward proficiency, but with errors or omissions; areas for improvement may include ensuring the size and scope of the equipment matches the needs of the network and addressing all hardware components</p> |
| <p>Articulation of Response</p> | <p>Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner</p> | <p>Clearly conveys meaning with correct grammar, sentence structure, and spelling, punctuation, and capitalization</p> | <p>Shows progress toward proficiency, but with errors in grammar, sentence structure, and spelling, punctuation, and capitalization</p> |

| | | | |
|-----------------------------------|---|---|--|
| | sophisticated, or creative manner | demonstrating an understanding of audience and purpose | spelling, negatively impacting readability |
| Citations and Attributions | Attributes sources where applicable using citation methods with very few minor errors | Attributes sources where applicable, but with consistent minor errors | Attributes sources where applicable, but with major errors |



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