



CS 230 Project Three Guidelines and Rubric

Competency

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

- Analyze the characteristics of and techniques specific to various systems architectures

Scenario

You work for Creative Technology Solutions (CTS) as a Technology Consultant. First, you introduced your client, The Gaming Room, to different approaches they can use as they expand their game onto various operating systems. You then explained the integration of the client's game in a distributed environment. Now, you will explain how to apply the client's needs to the architectures of the different operating platforms available.



In relation to their game, Draw It or Lose It, you have been asked to:

- Explain the operating system architectures for different operating systems.
- Analyze the differential file system components that represent a collection of data.
- Explain the functions of memory and storage management.
- Identify memory management techniques.
- Describe distributed systems and the networks that interconnect them.

Directions

Analyze the characteristics of and techniques specific to various systems architectures and make a recommendation to The Gaming Room. Specifically, address the following in the Recommendations section of the software design document:

- 1. **Operating Platform:** Recommend an appropriate operating (server) platform that will allow The Gaming Room to expand Draw It or Lose It to other computing environments.
- 2. **Operating Systems Architectures:** Describe the details of the chosen operating platform architectures.
- 3. **Storage Management:** Identify an appropriate storage management system to be used with the recommended operating platform.
- 4. **Memory Management:** Explain how the recommended operating platform uses memory management techniques for the Draw It or Lose It software.
- 5. **Distributed Systems and Networks:** Knowing that the client would like Draw It or Lose It to communicate between various platforms, explain how this may be accomplished with distributed software and the network that connects the devices. Consider the dependencies between the components within the distributed systems and networks (connectivity, outages, and so on).
- 6. **Security:** Security is a must-have for the client. Explain how to protect user information on and between various platforms. Consider the user protection and security capabilities of the recommended operating platform.

What to Submit

To complete this project, you must submit the following:

Software Design Document

Use the Software Design Template provided in Project One that you have been building on and complete the **Recommendations** section.

Please note: You will only be graded on the sections relevant to Project Three that are outlined in the Directions and Rubric. Although it may be helpful to implement feedback from your instructor on aspects that were outlined in Projects One and Two, it is **not required** for the Project Three submission. The purpose of building on this document is to have one complete document at the end of the course.

Project Three Rubric

Criteria	Exemplary (100%)	Proficient (85%)	Needs Improvement (55%)	Not Evident (0%)	Value
Operating Platform	Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner	Recommends an appropriate operating platform for expanding an application to various computing environments	Shows progress toward proficiency, but with errors or omissions	Does not attempt criterion	5

Criteria	Exemplary (100%)	Proficient (85%)	Needs Improvement (55%)	Not Evident (0%)	Value
Operating System Architectures	Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner	Describes the details of recommended operating platform architectures	Shows progress toward proficiency, but with errors or omissions; areas for improvement may include lack of detail in summarizing the various platforms	Does not attempt criterion	20
Storage Management	Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner	Identifies an appropriate storage management system to be used with the recommended operating platform	Shows progress toward proficiency, but with errors or omissions	Does not attempt criterion	20
Memory Management	Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner	Explains how the recommended operating platform uses memory management techniques for an application	Shows progress toward proficiency, but with errors or omissions; areas for improvement may include incomplete memory and storage management explanation or lack of identification of memory management techniques	Does not attempt criterion	20
Distributed System and Networks	Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner	Explains how an application communicates across various operating platforms	Shows progress toward proficiency, but with errors or omissions; areas for improvement may include description of distributed systems	Does not attempt criterion	15
Security	Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner	Explains how to protect user information on and between various platforms	Shows progress toward proficiency, but with errors or omissions; areas for improvement may include a lack of security recommendations	Does not attempt criterion	15

Criteria	Exemplary (100%)	Proficient (85%)	Needs Improvement (55%)	Not Evident (0%)	Value
Articulation of Response	Exceeds proficiency in an exceptionally clear, insightful, sophisticated, or creative manner	Clearly conveys meaning with correct grammar, sentence structure, and spelling, demonstrating an understanding of audience and purpose	Shows progress toward proficiency, but with errors in grammar, sentence structure, and spelling, negatively impacting readability	Submission has critical errors in grammar, sentence structure, and spelling, preventing understanding of ideas	5
Total:					100%