Title of Capstone Here

Author's Name Here

A Capstone Presented to the Information Technology College Faculty of Western Governors University in Partial Fulfillment of the Requirements for the Degree Master of Science in Degree Area HERE

Date of Submission Here
Abstract

Remember, your abstract should be a summary describing the most important aspects of the document. It should be about 200 words long and should stand alone. It is not the introduction; it should give the reader a summary of the entire prospectus. Summarize the most important points of the project. Include the following in your summary:

• Business/IT problem under investigation
• Plan
• Research methodology
• Implementation proposal
• Proposed and actual outcomes
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Introduction

This section introduces the problem and an overview of the solution. It contains the "road map" for the organization of the remainder of the paper. Describe the problem it addresses, an overview of the project, and the organization of the paper. Summarize the capstone’s highlights. Include the following in your summary:

Project scope

Include problem definition in this section. What will and will not be included in the project?

Defense of the Solution

What makes the proposed project persuasive?

Methodology Justification

How will the project be carried out, and why in that manner?

Organization of the Capstone Report

What can the reader expect in the remainder of the report?

Systems and Process Audit

In this section, you will document the audit that has occurred prior to the project design and development phase. Provide information and the data analysis of the problem that needs to be resolved. Focus on both the systems audit and business process audit. A technology audit alone is insufficient. You will also need to pay attention to the business process inefficiencies that will be minimized because of your proposed changes. Include the following information in your explanation:

Audit Details

What was the scope of the audit? What was discovered or verified in the process?
Problem Statement

Based on the results of the audit, what is the security problem that needs to be addressed?

Problem Causes

What are the significant factors contributing to the problem?

Business Impacts

Business impact on various organizational units: What are the possible operational sequences of the problem?

Cost Analysis

What will it cost to implement the proposed solution?

Risk Analysis

What are the likelihoods and consequences of various conditions that might impact the situation?

Detailed and Functional Requirements

Document the requirements for the project. What are the requirements to design, develop, and implement the project? Ensure that you have conducted both functional (end user) and detailed requirements and that you have identified gaps and have a thorough understanding of what the solution needs to be. Explain what is required to execute the project. Include the following in your explanation:

Functional (end-user) Requirements

What features must be available for end-users?

Detailed Requirements

What other technical and operational features and standards must be met?
Existing Gaps

Existing gaps which a successful project will fill: What differences will the project make?

Project Design

Create a project plan to design, develop, test, and implement a solution that addresses the problem statement. Make sure you list at a high level the different phases of the project, (e.g., systems audit, requirements gathering, design, development, quality assurance, implementation, and post-implementation support). Include the following information in your plan:

Scope

What will the project include and exclude?

Assumptions

What are the assumptions included in the design?

Project Phases

What are the various steps in the project?

Timelines

By when will each step be started and completed?

Dependencies

What are the steps that cannot be started (or completed) before some other step is completed?

Resource Requirements

What hardware, software, manpower, etc., are needed and when will they be needed?

Risk Factors

What are the likelihoods and consequences of various conditions that might impact the situation?
Important Milestones

What are the measurable points in the project that are most significant?

Deliverables

What will be provided by way of hardware, software, procedures, documentation, etc.?

Methodology

Discuss your methodology, approach, and strategy for the different phases of the project. Justify the adoption of the same. How do you know that this is the right strategy? Describe the approach you are taking to deal with the different aspects of the project. Compare different approaches and pick what you consider as the right strategy. Justify your choice of methodology.

Approach Explanation

Explain your approach to resolving the problem. Include the following in your explanation: Different potential approaches for project phases and shortcomings (if any) in your approach.

Approach Defense

Defend your approach. Include the following points in your defense: Justification of the scalability of the chosen approach and justification of the long-term success of the chosen approach.

Project Development

This section should contain the details on building out your project. Discuss the development and list the multiple phases (if applicable) and the deliverables. Ensure that you list all the details of development including any hardware, software, tech stack, and architecture details. Explain the process for developing your project. Include the following in your explanation:
Hardware

What hardware will be used?

Software

What software must be purchased or developed?

Tech Stack

What are the layers of services that will be provided?

Architecture Details

What will be the configuration of the hardware and networks?

Resources Used

Candidates should address the following question: What manpower, consumables, funds, etc., will be needed and when?

Final Output

Candidates should address the following question: What will the results (tangible and intangible) look like?

Quality Assurance

Describe the approaches, methods for quality assurance and testing of the product. This is an important aspect of developing and implementing a project/product. Provide details on how you are managing quality control.

Quality Assurance Approach

Discuss your approach to quality assurance. Include the following in your discussion:

Specify the quality assurance criteria.
Solution Testing

Explain how you tested your solution. Include the following in your explanation:

Justification for test cases and scenarios and Acceptance criteria.

Implementation Plan

This section should contain the details of an implementation plan. Provide details on how you would roll out the project, what kind of resources would be necessary, and the different phases (if applicable). This should also contain details on end user training and documentation.

Discuss the plan for implementing the project. Include the following in your discussion:

Strategy for the Implementation

What are the alternatives, and why is this approach deemed best?

Phases of the Rollout

What will be the sequence of testing, stages, and acceptances?

Details of the Go-Live

At what point will the project be considered fully implemented?

Dependencies

Must some features be operational before others?

Deliverables

What tangible and intangible deliverables will be provided?

Training Plan for Users

What training will be provided, by whom, and when?
Risk Assessment

Provide details on the risk factors associated with implementing the project, and how you plan to mitigate the risks. Focus on the factors that might impede the progress of project. Do a risk analysis, and provide a cost benefit analysis of going forward with the project.

Quantitative and Qualitative Risks

Discuss quantitative and qualitative risks associated with your solution.

Cost/Benefit Analysis

Develop a cost/benefit analysis for each risk by addressing the following:

- The risk of a benefit shortfall and what a shortfall will cost (e.g., If you predict a 50% decrease in malicious attacks on a particular system, what is the cost of not meeting that benefit level?)
- The risk of a cost overrun and its consequences (e.g., Would a cost overrun result in forced reduced staffing?)

Risk Mitigation

Explain how you would mitigate these risks. Include the following in your explanation:

Rollback plan and alternatives to the original implementation plan, with pros and cons of each

Post Implementation Support and Issues

Discuss post-implementation support for the solution. Provide a plan for support of solution after rollout (if applicable). This should include both fixes for issues and for ongoing maintenance.

Post Implementation Support

The candidate should discuss how the new or enhanced system will be supported. Candidates should address the following question: What forms and levels of support might be needed?
Post Implementation Support Resources

Candidates should address the following question: What forms of resources will be needed, and how will they be provided?

Maintenance Plan

Develop a plan for short- and long-term maintenance.

Conclusion, Outcomes, and Reflection

Summarize the project, deliverables, and outcomes. Outline a summary of the project, and the solution provided. Discuss the shortcomings (if any) and pitfalls with the design, development, and implementation.

Project Summary

Summarize the project.

Deliverables

Discuss the deliverables that you are submitting (e.g., program listings, flow diagrams, site plans).

Outcomes

Discuss the outcomes (e.g., How did those affected react? Was your project actually implemented? How do you feel about your work?).

Reflection

Reflect on what you learned from the process.
References


Appendix A:

Put any supporting material in these appendices. You may need to add more or possibly delete the ones that you do not use.
Appendix B:

Put any supporting material in these appendices. You may need to add more or possibly delete the ones that you do not use.
Appendix C:

Put any supporting material in these appendices. You may need to add more or possibly delete the ones that you do not use.
Appendix D:

Put any supporting material in these appendices. You may need to add more or possibly delete the ones that you do not use.