

IT Capstone Topic Approval Form

The purpose of this document is to help you clearly explain your capstone topic, project scope, and timeline and to ensure that they align with your degree's emphasis. Without clearly addressing each of these areas, you will not have a complete and realistic overview of your project, and your Course Instructor cannot accurately assess whether your proposed project will be suitable for the capstone.

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PROGRAM MENTOR: Tracey Lanham

DEGREE EMPHASIS: Cloud Computing

ANALYSIS:

Project Topic – A small-town retailer, *Ma & Pa's*, has recently developed a product that has the potential for rapid demand and in turn, company growth if the product is advertised and sold beyond the local market. To support this opportunity, a cloud-based application and webpage will need to be developed.

Problem Statement or Project Purpose – *Ma & Pa's* is a small-town retailer that's been serving its local rural community for decades. To stay relevant in the internet age, they have decided to expand product development focused on improving day-to-day activities and expanding the customer base for new and upcoming products. Through this effort, a new product has been developed that has the potential for exponential growth if an advertisement campaign, along with supporting infrastructure, is properly planned and deployed successfully. The current on-site infrastructure is not sufficient to support this initiative. They have hired CJEYS LLC to architect, build, & deploy a new retail webpage in the cloud that keeps costs at a minimum, while also providing a highly available and scalable solution that scales in or out based on consumer demands.

DESIGN and DEVELOPMENT:

Project Scope

a. Project Goal(s) and Supporting Objectives –

1. Explore and determine an appropriate cloud vendor to build the proposed solution
2. Architect and deploy a highly available & scalable web application solution to meet the needs of *Ma & Pa's* & its consumers
3. Implement security measures and best practices along with audit tools
4. Perform analysis of sales campaign and results from audit tools ensuring compliance with industry regulations and standards

b. Project Outcomes and Deliverables –

1. Newly provisioned web application and supporting infrastructure, built in the cloud to support *Ma & Pa's* advertisement campaign and compete in the ongoing and changing demands of the retail industry

2. Modern 3-tier architecture that's loosely coupled to enable scalability, ease of maintenance and support, and extensibility for future growth
 3. Implementation of industry best practices and guidelines thru the separation of resources (public & private subnets) and least-privilege access for governance and regulatory compliance
- c. Projected Project End Date – The project should be completed by the end of Q2 2023. This will provide ample time to deploy, test, and train the *Ma & Pa's* organization on how to fully utilize the new solution for a successful advertisement campaign for their new and upcoming products in development.

IMPLEMENTATION and EVALUATION:

Describe how you will approach the execution of your project –

1. Explore various cloud providers and their offerings, and engage the chosen Cloud Service Provider (CSP) to prepare for provisioning and deployment.
2. Evaluate current infrastructure to ensure the new solution is compatible and supports the existing file formats, versions, etc...
3. Diagram the proposed solution along with approved and non-overlapping CIDR ranges
4. Provision and deploy the new solution based on the architecture agreed upon by *Ma & Pa's* stakeholders.
5. Configure and implement security measures and auditing processes so all Federal and local laws and ordinances are complied with.

✔ This project does not involve human subjects research and is exempt from WGU IRB review.

COURSE INSTRUCTOR SIGNATURE:

COURSE INSTRUCTOR APPROVAL DATE: