**Ecommerce Database & Website System**

**By: Austin C. Gomez**

**IS 412 Dr. Mok**

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# Project Overview

1. **Project Synopsis**

This project was spearhead by Austin C. Gomez. Austin is a Senior at the University of Alabama in Huntsville (UAH). He is currently studying and anticipating earning a Bachelor of Science in Business Administration in Information Systems /w a concentration in Cyber Security.

Austin decided to create a full system analysis and software development project for a fictional company that is given the name of ‘North Alabama Souvenirs and Gifts’. In this project, Austin was tasked with creating an industry level system analysis of the project at scope. Furthermore, he also had to use his skills in software development, cyber security, and software configuration in order to complete the project.

In the fictional company namely called ‘North Alabama Souvenirs and Gifts’, we theorize that the business is a small and family-owned business with a physical storefront in South Huntsville. Moreover, this company wants to step into the world of ecommerce due to a decline in storefront sales. As a small company, the client is worried if it can afford the fees that an established ecommerce platform might incur such Amazon Marketplace. The company would ask for a small ecommerce project that can be easily managed and run by the owner and fellow staff members.

The idea behind the ecommerce site is so that the customer can easily access it and add items to the inventory along with creating sales, giveaways, and managing giveaways. Using an existing platform such as Amazon Marketplace or Wix would incur fees that the small business could not afford. Moreover, the customer would need a simple ecommerce project that they can pay an monthly fee to a webhost for.

1. **Team Members**

* Austin Gomez

Austin Gomez is the full-stack developer and system analyst for this project. He is a Senior at the University of Alabama in Huntsville (UAH) and studies Information Systems with a concentration in Cyber Security. Austin will use his skillset in software development, technical writing, and system analysis to successfully complete this project for the customer.

1. **Technical Stack**

The following technology shall be used to develop and run this project for the customer:

* + Django CMS

The Django CMS is a powerful development tool used to create web applications from scratch. We chose to use Django for several reasons.

Reason #1:

It is an open-source project that features frequent updates and fixes to security vulnerabilities. This makes patches from a system administrative viewpoint to be extremely streamlined, and it helps to ensure that the customer will not have to worry as much about hacking attempts from outdated and vulnerable software.

Reason #2:

The Django software features a powerful administrative area for the customer built-in and ready to deploy. The developer can then tailor the design of the administrative area to the needs of the customers.

Reason #3:

The developer of the project has familiarity with the Python programming language. In addition, hosting services, such as Amazon AWS, support and provide inexpensive hosting solutions for the customer.

**VII. Deployment**

The development team plans to use the service, PythonAnywhere, to host the ecommerce platform for the customer. For the sake of the semester project, we will be using the ‘free tier’. However, if this project was to go ‘live’ for an actual customer then we would recommend the ‘$12’ tier. The reasons that we chose to use PythonAnywhere as opposed to AWS are detailed below:

* + Low Cost.
  + Dedicated Server Technical Support for Python Projects.
  + Ease of use for system administration support.

All the source code and relevant documentation will be under Version Control will be available in a Github page at the link listed below. For the sake of the semester project, the final project source code will be open source. We use ‘Git’ as our version control measures due to the popularity and helpful resources for it. In addition, we use Github due to it being one of the top platforms for version control management and the overall security that the company provides to its software project.

**Source Code:**

<https://github.com/AustinCGomez/UAH-IS412-FInal-Project>

# Use Case Diagram

Our use case diagram helps to illustrate how we envision the application to run in the long run. We have two actors in this use-case diagram. The first actor is the ‘Site Customer’. These individuals are potential customers that have come across the website. These type of users will be able to do the following:

1. Create a user account.
2. See items for sale.
3. Add items to their cart.
4. Make payments.

The second actor in our use-case diagram is the ‘Web owner. This person will need to do the following:

1. Add and delete items
2. Rename Items
3. Remove Items
4. Add Employees.

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# Domain Model Class Diagram

Through the Domain Model Class Diagram, we hope to illustrate how we plan for the web project to work through a more technical viewpoint. Moreover, we carefully detail how all the components work together to make a successful and functioning project.

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# Activity Diagram

We use the Activity Diagram in order to give a clearer technical and nontechnical overview of how we plan to design the system for the customer. The Activity diagram essentially gives a step-by-step overview of everything that must be done by the application when it is production ready.

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# System Sequence Diagram

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