Team A



Project Requirements Specification

CIS-470 – Senior Project

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**Project Requirements Specification**

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| Team: | Team A |
| Team Members: | John Boley, Justin Byrne, James Coltman, Marshall Gibson |
| Date: | 04/11/2016 |
| Project Title: | Williams Specialty Company - - Business Automation |

**System Overview**

Williams Specialty Company (WSC) wants to simplify (and improve) their workflow through the development (and implementation) of a proprietary Business Process Automation (BPA) application system. This system will include a host of business operations ranging from processing client and inventory data to generating vital business records and orders. Because this system is comprehensive in scope, the development should be approached as an overarching Business Process Management (BPM) strategy for WSC; maintaining and optimizing WSC’s core operational mechanisms such as business processes, reports, and data.

**Methodology Description**

Through the key principles outlined throughout the Waterfall Model (or methodology), we have developed our root (or preliminary) database, application, and process models to establish a strong (initial) foundation for this application system. Albeit, we anticipate (as with any project) that this project will continue to change as it emerges (and evolves) throughout its SDLC, our initial foundation should provide our team with a comprehensive (and orderly) architecture to build from. With this in mind, our team approached the development of this application’s requirements, specifications, and modeled diagrams through a Bottom-Up Design Methodology; initially modeling application components (or parts), while subsequently assembling our application’s components to produce a final functional system.

**Requirements**

Through the Bottom-Up Design methodology, we (initially) constructed our Data-Dictionary (DD) to ensure that our team appropriately mapped out the bulk of data required to meet this system’s requirements; and required processes. From this dictionary, an Entity Relationship Diagram (ERD) was generated to allow our team to quickly (and efficiently) focus on administrating this applications RDBMS through pre-assembled and categorized groups of data; throughout this project’s SDLC. Then, processes were then modeled, through UML Sequence Diagrams; by exploring (and dissecting) this projects SOW. Finally, through the culmination of these documents an overarching Class Hierarchy Model was generated, illustrating the relationships amongst each (programmable) class, including how (and where) functions should be grouped; to effectively manage (and manipulate) these components throughout this projects SDLC.

**Class Hierarchy Model**



**Entity Relationship Diagram (ERD)**



**Data-Dictionary (DD)**



**Preliminary UML Sequence Diagram(s)**

