

Summer 2019

# Enterprise-Level Database Implementation

Brian Grey



## Computer and Information Science Undergraduate Project Topics and Ideas

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***Title:***

Enterprise-Level Database Implementation

***Author:***

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***Difficulty:***

Moderate

***Specialization:***

Software Engineering

***If other, please specify:***

***Most Appropriate Course:***

Project II

***Brief Description:***

The student will design/already have designed an application requiring a robust database solution. This application may be a website, an app, a game, or a traditional application. The student will then design and implement a normalized database to accommodate the application using best practices, including assuring database normalization and designing and implementing appropriate stored procedures and functions.

***Number of students needed:***

1

***Outcomes and Deliverable:***

A fully implemented database instance

***Skills Required:***

Database design skills Experience with a DDL and DML such as SQL

***Available Resources:***

***Program Goal:***

CISC 1.2: Sound Reasoning, CISC 1.3: Develop Solution, CISC 1.4: Deploy Solution, CISC 1.5: Secure Solution CISC 2.2: Software Platform CISC 4.1: Written Communication, CISC 4.2: Oral Communications

***Student Learning Outcomes:***

1a: The student should be able to analyze a problem in a manner that facilitates the design of its solution., 1b: The student should be able to apply relevant principles of computing during their analysis of a problem., 1c: The student should be able to apply relevant principles of related, non-computing disciplines during their analysis of a problem., 2a: Student is able to create a formal software design based on a given set of requirements., 2b.:Student is able to develop a software solution from a formal design specification., 2c: Student is able to evaluate a software solution to determine its compliance with the specification., 3a: Student will be able write in a standardized format in order to organize their thoughts and deconstruct their ideas at a level appropriate for the desired audience., 3b: Student will be able to verbally communicate effectively with an advisor, group of colleagues or an audience to express a thought or idea at a level appropriate for the desired audience., 6a: Student will be able to produce computer-based solutions by applying applicable computer science theory and software development fundamentals