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|  | **CSCI/ISAT B320**  **Database Management Systems I**  **Fall 2023**  **Project Contributions by Team Member** |

**Purpose:**

Document the contributions of each team member over the course of the project.

**Members and their Contact Information**

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| **Member** | **Email** | **Text** |
| Michael Murray | Mam95@email.uscb.edu | (843) 597-5859 |
| Jacob Mitchell | JAM77@email.uscb.edu | (912) 247-9843 |

**Overall**

Relative Contribution of each member over the course of the entire project

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| --- | --- | --- |
| **Member** | **Contribution** | **Total Hours** |
| Michael Murray | 48.6% | 99 |
| Jacob Mitchell | 51.4% | 105 |

**Data Design (i.e., ERD Creation & Revisions)**

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| **Member** | **Contribution** | **Hours** | **Components** |
| Michael Murray | 47.5% | 28 | Attribute Identification, 0NF-3NF, ERD Revision (Table Relationships), Documentation & Assumptions. ERD Review and Documentation. ERD Revisions and brainstorming table relationships and potential new needed tables. |
| Jacob Mitchell | 52.5% | 31 | Document Creation, Attribute Identification, 0NF-3NF, ERD Creation + Revision & Documentation. Finalize ERD + review relationships. Create assumption for our database. Created new lookup tables Grades and Course Evaluations Questions. Created new required courses and Student Major tables. |

**Create & Populate Script: Entity Creation (i.e., Table, View, Constraint, etc.)**

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| **Member** | **Contribution** | **Hours** | **Components** |
| Michael Murray | 60% | 33 | Mock and populated Student Data. Creation of tables, Student, Instructor, Location, & Student Info. Created and populated the CourseCatalog table, Prerequisites table, and the EnrolledCourses table. |
| Jacob Mitchell | 40% | 22 | Creation of tables, ClassMeetingTime, Prerequisites, Course & Campus. Documentation of data & Queries used in SQL. Created and populated the CourseOffering table, Required courses tables, StudentMajor, and Grades table. Created Check constraints. |

**Create & Populate Script: Entity Population (i.e., Table Inserts)**

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| **Member** | **Contribution** | **Hours** | **Components** |
| Michael Murray | 44.4% | 28 | Edited ap script, continued to mock student data. Script testing in SQL Create tables Prerequisites, instructors. Created insert for the prerequisite table. |
| Jacob Mitchell | 55.6% | 35 | Created base for the script (Drop, Create tables). Added the drop tables and Inserted a couple of the finished inserted data. Script testing in SQL and debugged errors in our table data. Created identity inserts in the script. Revised and converted csv data into sql inserts. |

**Query Script: Query Development**

Note: include here any Views created to support your queries

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| **Member** | **Contribution** | **Hours** | **Components** |
| Michael Murray | 28.6% | 6 | Created queries to filter results for testing and table population purposes. |
| Jacob Mitchell | 71.4% | 15 | Created queries to filter results for testing and table population purposes. Started working on the Calculated GPA view. Started working on the base of the Instructors view. |

**Presentation Preparation**

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| **Member** | **Contribution** | **Hours** | **Components** |
| Michael Murray | 66.6% | 4 | Worked on PowerPoint slides and presentation preparation. |
| Jacob Mitchell | 33.3% | 2 | Reviewed and revised PowerPoint slides and presentation preparation. |

B320\_Team12\_Assumptions & Clarifications

Assumptions:

- We assume that all students are going by the corresponding major 4-year sample schedule depending on the major they are assigned, so ISAT majors will go by the ISAT course plan and CSCI majors will go by the CSCI course plan.

- We will make the assumption that Sophomores, Juniors, and Seniors are on track to graduate and have a good academic standing. We assume that all students (Sophomore-Alumni) pass their completed courses with a C or better.

- We will assume that there are no transfer or double major students for our sample students in our database. We also make the assumption that no students who are majoring in Information technology are taking the Cybersecurity concentration.

- We are going to make the assumption that the newly enrolled high school seniors have no prior college credits going into USCB from dual enrollment or AP exams. No high school students have their course schedules yet.

- We are going to assume that all our students will be able to fit into a required course once we enroll a student into a required course.

- We are going to assume that there are no time conflicts with a course that a student needs to take.

- We are going to assume that all students meet the course prerequisites for a required course a student needs to take that corresponds to the course sample.

- We are going to assume that a course that requires 2 or more prerequisites will only require one or the other prerequisites.

-We are going to assume that CSCI and ISAT students takes and complete Introduction to Technical Writing in the spring since neither Introduction to Technical Writing or Technical Writing is offered in the Fall as shown in the 4-year course plan.

- We will make the assumption that the InstructorID is a unique identifier since there are no two instructors with the same and last name.

- We make the assumption that there are no students or instructors will have a name change and no student from any classification have dropped from college during any academic term. We will also make the assumption that no instructor has left the university throughout the Fall of 2023.

- We will make the assumption that WEB, WEB2, and 2WEB is the same type of lecture type. We have added a WEB section on our Campuses table to group these 3 types of lectures together.

- We will make the assumption that the course UNIV999 is a placeholder course so that the real information that can be inserted. No students in the database will be enrolled in this placeholder course.

- We will make the assumption that if there two duplicate courses with the same time.

- We will make the assumption that courses with prerequisites that are explicitly identified are one distinct CourseID (ex: Prerequisite, Any HIST course, HISTB111).

- We are making the assumption that undergraduate students are able to take a graduate level course as an ISAT or CSCI free elective. (Ex.

- We will make the assumption that if freshman, sophomore, and junior students are not on track with the amount of credits they need to graduate they will make the credits up in there later years.

- We are making the assumption that if the alumni credit hours are over 120 they are over achievers.

- We are making the assumption that alumni ISAT majors changed their majors from CSCI to ISAT.

- We are making the assumption that students information doesn’t change

* Alumni: We are going to assume that the credithours earned for Internship is 5 to equal to 120 credit hours.

Clarifications:

- We have two Course Evaluation response tables for both in-person and online and we are going to use a lookup table for the evaluation questions.

- Prerequisites table: There are two references to the CourseCatalog, PrereqFor, and PrereqIs. The PrereqFor section is the given course in a course catalog and the PrereqIS section is the courseID from a course in the catalog that is required for a given course.

- EnrolledCourses: The junction table that connects the student to a course being offered. This is how we can enroll a given student In an offered course.

- CourseOfferings: There are duplicate courses with the same course name and the same time. We are going to assume that these duplicate course offerings are extra seats for the class.

- Spring 2020: Are classes are listed face to face after spring break but are moved to online after the pandemic lockdown. We will make the assumption that the course evaluations for Spring 2020 are still in the face-to-face format.

- ISAT Majors: We have assigned ISAT Alumni (2022-2023) to the CSCI counterpart course since there was no Information Technology major for the year 2018 and earlier.

- Grades Table: Pass and Fail columns, SQL server does not support a Boolean data type, so we will identify if a student has passed or failed by using 0 and 1. 1 for if the condition is true and 0 for if the condition is false.

- All enrolled students are enrolled at the University of South Carolina Beaufort and no other USC campus options such as USC Aiken, USC Columbia, etc.

document your databases design's **naming conventions/standards**. For example:

* what are your rules for naming tables?
* what are your rules for naming columns within tables?
* does every table employ an identity column as its primary key? if so, what are the rules for naming them?
* what are the naming standards for your constraints? If they employ abbreviations to identify the type of constraint, what are they (i.e., FK, CHK, UX, DF, etc.)
* what are your rules for naming other database objects, such as views, triggers, and indexes?

The rules that we made while naming our tables are having plural table names that are all CamelCase and we try to keep the naming of our tables descriptive of what is actually included in the tables.

Our rules for naming columns within tables are all singular and consist of camelCase. In our script, we name the columns in brackets followed by the given data type. (Ex: [StudentID] INT IDENTITY (1,1) NOT NULL)

All of our Tables employ a primary key. The rules that we have for naming them is that we keep it closely related to the table name, while keeping it singular since an ID is a unique identification for the data. In for ERD, we identity the primary key using the PRIMARY KEY identifier. (Ex: PRIMARY KEY ([EnrollmentID])

Our naming standards for our foreign key constrains are identifies as FK while the our check constraints are identified as CHK. (Ex: CHK\_Semester Check (Semester IN (‘Spring’, ‘Summer’, ‘Fall’)

Our rules for naming other database objects such as our views is that we create the view as a camelCase.

Ex: CREATE VIEW [StudentInfoView] AS

Acknowledgments:

Sqlizer: <https://sqlizer.io/#/>

CSV to SQL Converter: <https://www.convertcsv.com/csv-to-sql.htm>

prerequisitesParser.py By: Eisa Chaudhary