**Modifying a Database Design**

Name: Kennedy Kabaso.

Strayer University.

Week 3 Lab 2

CIS 111

Intro To Relat Dbase Mgt Syst

Professor: Besharatian Hossein.

October 30, 2017

**Table of Content.**

**Cover Page -------------------------------------------------------------------------------------- Page 1**

**Lab Report --------------------------------------------------------------------------------------- Page 3**

**Bibliography ------------------------------------------------------------------------------------- Page 5**

**Modifying a Database Design**

The Database which I have designed is about the topic of **Business Rules and Data Models. In this lab, I have just modifying the already designed database by adding some updated to the student attributes such as** addresses, start date, phone numbers, email addresses, gender, and birth date. Then, the professor attributes, address, phone numbers, email addresses, gender, birth date, and the courses that each professor is qualified to teach. And lastly, the course attribute with course ID, course name, department, quarters offered, sections, and professor teaching each course. I would like to describe the lab report of the database, the entities of the database and the attributes of each entity.

The designed database is made up of five entities which are the Student, the class, the course, the enroll and the professor. The entities are characterized by the following. The Student entity is characterized by their identification number, first name, last name addresses, start date, gender, and birth date, phone numbers and the email addresses. The phone number can be a mobile, home or work and the email addresses can be a personal, school or work. The Enroll entity is characterized by their class code, student identification number and the grade of the students. The Professor entity is characterized by their name, professor identification number, address, phone numbers, email addresses, gender, birth date, the department Identification and the courses that each professor is qualified to teach. The course entity is characterized by their course code, course title, course description, course credits, course ID, course name, department, quarters offered, sections, and instructor in the course. And finally, the class entity is characterized by their course code, class section, class time and course credits. Moreover, there are primary keys which is a unique identified in each table which is represented by the PK. In addition, there is a foreigner key which is a primary key found in another table. It is represented by the FK which can be seem in the tables as well.

The last part of the database design is the relationships between tables. I will start with Course to Class which is a one to many. Then a Student to Class is are many to many and the Professor to Student is a one to many This is shown by the lines which joined each of them. It can be a one to many, many to many or many to one. They can be seen in the design shown by those arrows at the beginning or the end of each line.

The business rules which has made me to create the diagram and the associated relationships are explained as follows: Each Course may generate many Classes at the campus. Some Courses may generate some Classes. Moreover, each Class is generated by one Course and Many Students may be enroll in many Classes.

**Bibliography**

1. <https://strayer.vitalsource.com/#/books/9781305886841/cfi/99!/4/4@0.00:0.00>
2. <http://www.dbforums.com/showthread.php?1661762-How-to-Design-Relationships-for-School-Enrollment-Grades-Database>