**Course Objectives**

In this course, we are going to focus on **three** learning objectives:

1. *Transfer entities and attributes from an ERD into a Relational Model.*
2. *Resolve one-to-many and many-to-many relationships in a Relational Model.*
3. *Draw a Relational Model Using the Dia diagramming tool.*

By the end of this course, you will be able to **use the Dia diagramming tool to generate an Relational Model Diagram to document the physical design of a database.**

**Course Structure**

**This course is divided into 3 parts:**

1. Course Overview: This introductory reading material.
2. Relational Modeling in Dia: This is the hands on project that we will work on in Rhyme.
3. Graded Quiz: This is the final assignment that you need to pass in order to finish the course successfully.

**Project Structure**

The hands on project in **Relational Modeling in Dia** is divided into following tasks:

**Task 1: ERD Revisited**

**Task 2: Relational Model Components**

**Task 3: Entities and Attribute**

**Task 4: Adding Tables and Primary Keys**

**Task 5: One-to-Many Relationships**

**Task 6: Many-to-Many Relationships**

**Task 7: The Complete Relational Model**

**Meet the Instructor**

*I'm your instructor, Judy Richardson. It's my pleasure to work with you as you add to your database design and diagramming skills. My career began in Information Technology, working with databases, programming, and web development. I also have some years of experience in higher education, where I put those IT skills to work for my students. It is my hope that you enjoy the course and develop a new appreciation for databases and the technical and creative talent it takes to design them.*

**Relational Modeling in Dia**

In Relational Modeling in Dia you will learn to document a database design using an Entity Relationship Diagram by completing:

* ERD Revisited - You will review the components in the ERD as you familiarize yourself with the specific ERD that will be used in the database design process in this course.
* Relational Model Components - In preparation for a conversion from the ERD to the Relational model, you will take a look at the components of a Relational Model and the Dia tool set required to create the Relational Model diagram.
* Entities and Attributes - You will use Dia to create a new relational model and begin the processing of converting the entities and applicable attributes from the ERD into the model.
* Adding Tables and Primary Keys - You will continue the process of converting the entities and applicable attributes from the ERD into the Relational Model in Dia.
* One-to-Many Relationships - You will use Dia to show the common columns that represent one-to-many relationships between relational tables.
* Many-to-Many Relationships - You will use Dia to add a bridge table to your Relational Model to show the common columns between two tables with a many-to-many relationship.
* The Complete Relational Model - You will use Dia to explore additional options for foreign keys, eventually completing the Relational Model diagram.

While you are watching me work on each step, you will get a cloud desktop with all the required software pre-installed. This will allow you to follow along the instructions to complete the above mentioned tasks. After all, we learn best with active, hands-on learning experiences.