# Homework 04

Submit Assignment

**Due** Wednesday by 11:59pm **Points** 100 **Submitting** a file upload
**Available** Feb 24 at 9am - May 5 at 11:59pm 2 months

## Instructions

So far this semester, you have reshaped, reorganized, grouped, and aggregated data. You have created your own databases and queried data within the tables of the database. However, it's now time to consider designing a database following a formal process. In this assignment you will develop the DATA MODEL starting from the CONCEPTUAL model, expand it in more detail with the LOGICAL model, and formulate the PHYSICAL model of the database. You will then discuss if your database is compliant with the 1st, 2nd, and 3rd NORMAL FORMS.

As your application, you will consider the 538 Bob Ross data set that we organized into a "tidy" form in the third week of the semester. Your data model should capture the relevant ENTITIES, ATTRIBUTES, and RELATIONSHIPS that we discussed in lecture. Specifically, your data model should allow a database to store the following information:

- The season number
- The episode number in the season
- The episode title
- The artist for that episode
- The features included in the painting for that episode

You **must** turn in the Entity Relationship (ER) diagram for your Conceptual Model **and** Logical Model. You **must** include an image showing the diagram of your Physical Model. Your diagrams may be turned in as Powerpoint presentations, PDFs, or Word documents. You may include your discussion of the NORMAL FORMS in your slides/PDF/Word document. You **MUST** also turn in a MySQL script which creates your database from your Physical model. Lastly, you must submit a script which queries the episodes including at least one mountain painted by Bob Ross.

For context, if you have never watched an episode of the Joy of Painting, here is a nice mountain scene from **Season 20 Episode 1** **(https://youtu.be/VlucWfTUo1A?t=1)** .