# Homework 6

There are two parts to Homework 6:

## Part 1: Flask-SQLAlchemy

The goal for this lab is to get you comfortable translating your database models into actual code. We will be using [ORMs](https://en.wikipedia.org/wiki/Object-relational\_mapping) to help us. The particular ORM that we will be using is SQLAlchemy (the flask implementation is called [Flask-SQLAlchemy](http://flask-sqlalchemy.pocoo.org/2.1/)).

We'll walk through the example together in class which will give you an idea of how this all works together. Your goal for this lab and homework is to create the remaining models, forms, and routes as specified below.

This means that you must:

* Create the following tables with the properties listed (with appropriate data types) and relationships:
  + customer: (id, first\_name, last\_name, company, email, phone)
  + address: (id, street\_address, city, state, country, zip\_code)
  + order: (id, total\_spent, num\_parts\_ordered)
  + customer has a one-to-many relationship to address
    - a customer can have many addresses
    - an address can only have one customer
  + customer has a many-to-many relationship to order
    - a customer can have many orders
    - an order may have many customers
* Create the forms, templates, routes, etc necessary to input this data into the database.
* Create a view to showcase the data into your database (see the current implementation of "home.html" for example).

The following documentation will help answer any questions you may have.

Helpful Documentation

Remember to run update\_database.py whenever you make changes to the models.py file. This will update the database with your changes. However, **it will delete any data in the database**.

- [Flask-SQLAlchemy](http://flask-sqlalchemy.pocoo.org/2.1/))

- [Accessing SQLite3 Command Shell](https://www.sqlite.org/cli.html)

- [Flask-WTF](https://flask-wtf.readthedocs.org/en/latest/)) (flask plugin for creating forms easily)

## Part 2: Final Project Data Model

Please submit a diagram of your data model. If you are going to be using a relational database, please submit an ER diagram. If you are using any other type of database, you must submit the equivalent modelling diagram fit for the type of database that you are planning to use.

You will submit a PDF that includes your diagrams, a table that lists the properties that will be stored in each of your database tables, and a short summary (one paragraph) explaining your choice of database and justification for your data model (Why did you design it in this particular way? Which actions are you trying to enable by storing your data in this model?).