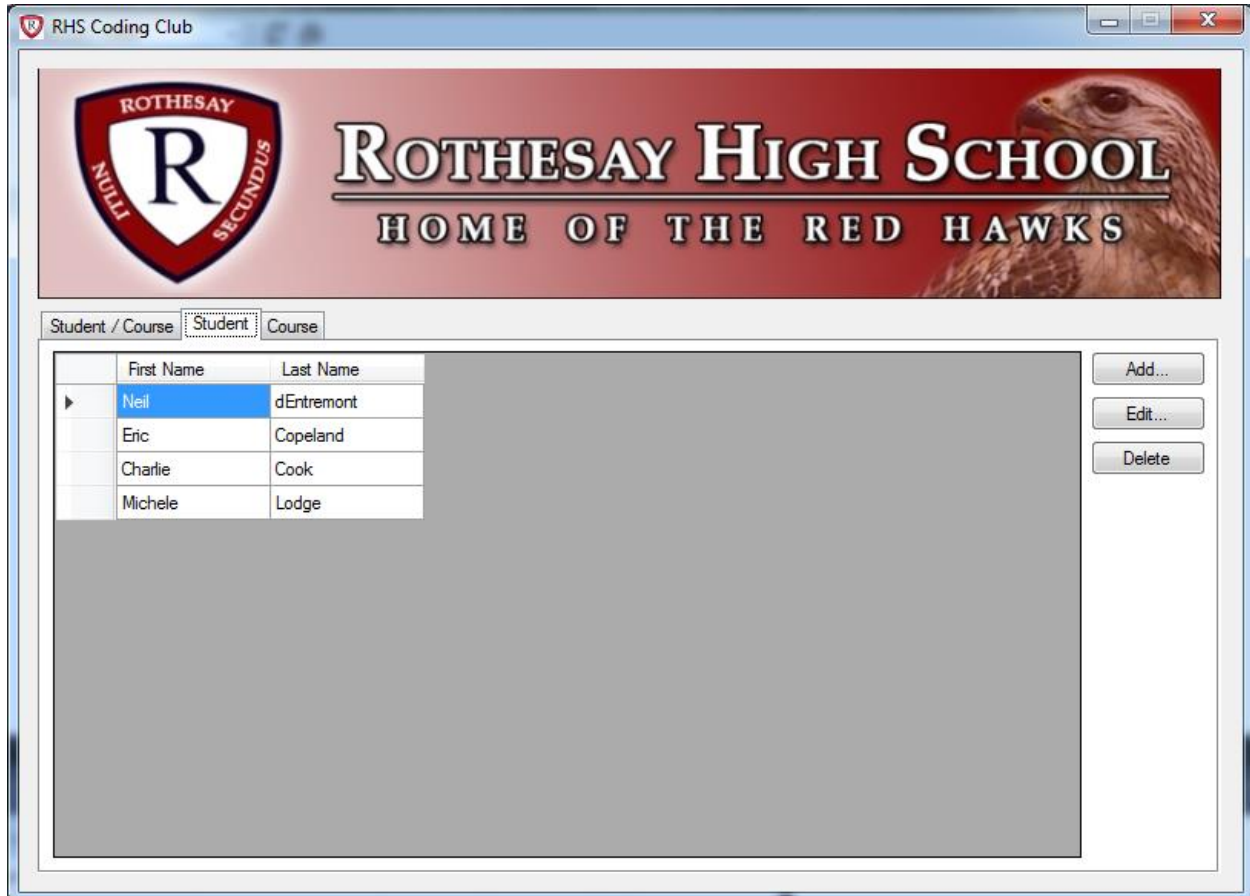# RHS Coding Club

Put together a small app the that allows the developer to work with databases, visual development use the development language C# (C-Sharp).



In order to put an application together, a good place to start is from the ground up, so we'll begin with the data and database.

## Database

The database we are using is SQL Server.  SQL Server is a relational database.  A relational database management system (RDBMS) is a database management system (DBMS) that is based on the relational model as invented by E. F. Codd, of IBM's San Jose Research Laboratory. Many popular databases currently in use are based on the relational database model.

RDBMSs are a common choice for the storage of information in new databases used for financial records, manufacturing and logistical information, personnel data, and other applications since the 1980s. Relational databases have often replaced legacy hierarchical databases and network databases

because they are easier to understand and use. However, relational databases have been challenged by object databases, which were introduced in an attempt to address the object-relational impedance mismatch in relational databases, and XML databases.

http://en.wikipedia.org/wiki/Relational_database_management_system

W3Schools.com is a great site for SQL documentation.

http://www.w3schools.com/sql/

## Tables

We created tables last class.  In this class use the SQL provided to regenerate your table and level set with the rest of the class.

## Inserting Data

Use the SQL provided to load data into your Student and Course tables

## Querying Data

Using the W3Schools site, research how to select (query) data.

### Exercise:

- Select all Student records.
- Select the first name and last name of all Student records.
- Select (and combine) the first name and last name of all Student records.
- Select Student records whose last name begins with 'C'.
- Select all Course records.
- Select all Computer Science courses.
- Select all 112 courses.
- Select all Computer Science 112 courses.
- Select all Computer Science OR 112 courses.

## Stored Procedures

http://databases.about.com/od/sqlserver/a/storedprocedure.htm

https://www.youtube.com/watch?v=fjNsRV4zLdc – by WiseOwl (there are my other good videos)

http://stackoverflow.com/questions/459457/what-is-a-stored-procedure - StackOverflow is another great technical resource.

### Exercise:

- Create a stored procedure to select all student records.