Initial planned Database Design (Tables) for Release 1:

Student	
First_Name:	STRING
Last_Name:	STRING
DOB:	VARCHAR
Gender:	STRING
Address:	STRING
Facebook ID:	STRING
Mobile Number:	VARCHAR
Email:	STRING
Password:	STRING
Parent_Name:	STRING
Parent Mobile:	VARCHAR
Parent_Email:	STRING

Admin	
First_Name:	STRING
Last_Name:	STRING
DOB:	VARCHAR
Gender:	STRING
Address:	STRING
Mobile Number:	VARCHAR
Email:	STRING
Password:	STRING

Teacher	
First_Name:	STRING
Last_Name:	STRING
DOB:	VARCHAR
Gender:	STRING
Address:	STRING
Facebook ID:	STRING
Mobile Number:	VARCHAR
Email:	STRING
Password:	STRING
Qualifications:	STRING

As shown above, this was the initial database design (Tables) planned for release 1. In release 1 there were no planed relationship models and all three tables were independent of another. As shown below, this initial design was substantially altered by the end of release 1.

Database Design (Table) from online tutorial:

User	
Name:	STRING
Email:	STRING
Created_at:	DATETIME
Updated_at:	DATETIME
Password_digest:	STRING
Admin:	Bool

After completion of the online tutorial by Micheal Hart, the foundation of the website contained this database model. Although this table was missing much of the content required for release 1, we decided to follow the design seen in the tutorial and combine all of our initial planned tables into one table.

Database Design (Table) Finalized for Release 1:

User	
First_Name:	STRING
Last_Name:	STRING
DOB:	VARCHAR
Gender:	STRING
Address:	STRING
Facebook ID:	STRING
Mobile Number:	VARCHAR
Email:	STRING
Created_at:	DATETIME
Updated_at:	DATETIME
Password_digest:	STRING
Parent_Name:	STRING
Parent Mobile:	VARCHAR
Parent_Email:	STRING
Teacher_qualifications:	STRING
Teacher:	Bool
Admin:	Bool

The above table was the agreed upon database design for release 1. As can be seen it follows the design of the table seen in the online tutorial by Micheal Hart and combines all Students, Teachers and Admins into one table. This reduces the amount of tables needed for this project however adds fields that are potentially not needed for different user types (ie, teacher does not need to add parent details). In order to prevent teachers from having to put in unrequired fields, the fields not shared have been made unrequired and will be hidden from the form once the teacher checkbox is clicked. Besides the problems encountered by adding these forms, this was agreed upon by both the development team and the client team.

Database Design released at the end of Release 1:


```
12
13  ActiveRecord::Schema.define(version: 20160904031918) do
14
15    create_table "users", force: :cascade do |t|
16      t.string   "name"
17      t.string   "email"
18      t.datetime "created_at",              null: false
19      t.datetime "updated_at",              null: false
20      t.string   "password_digest"
21      t.string   "last_name"
22      t.string   "gender"
23      t.text     "dob"
24      t.string   "facebook_ID"
25      t.string   "remember_digest"
26      t.string   "teacher_qualifications"
27      t.boolean  "teacher"
28      t.boolean  "admin"
29      t.index ["email"], name: "index_users_on_email", unique: true
30    end
31  end
32
```

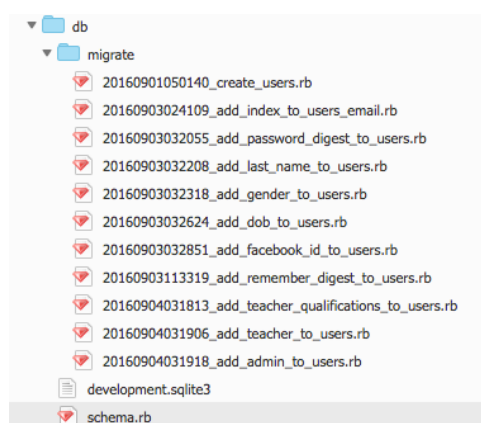**Figure 1: Final Table for release 1.**

Figure 2: All Migrations Made during release 1.

By the end of release 1 almost all fields were added to the form. Some fields remain missing. These fields will be added in future releases but were removed from the table for release 1 to both make the table creation and troubleshooting quicker, but also as release 1 acceptance criteria did not include these fields. As can be seen, the final state of the table in ruby was not structured as designed. In the end this table worked fine and allowed users to be created, edited and deleted. However, it is planned in the next release to have a complete overhaul of the table and database design, ensuring the neatness of the tables and making sure that all specified fields are added.