15.11: STORING THE FRIEND RELATIONSHIP

Contributed by Chuck Severance
Clinical Associate Professor (School of Information) at University of Michigan

Once we know the key value for both the Twitter user and the friend in the JSON, it is a simple matter to insert the two numbers into the `Follows` table with the following code:

```
cur.execute('INSERT OR IGNORE INTO Follows (from_id, to_id) VALUES (?, ?)',
    (id, friend_id) )
```

Notice that we let the database take care of keeping us from "double-inserting" a relationship by creating the table with a uniqueness constraint and then adding `OR IGNORE` to our `INSERT` statement.

Here is a sample execution of this program:

```
Enter a Twitter account, or quit:
No unretrieved Twitter accounts found
Enter a Twitter account, or quit: drchuck
Retrieving http://api.twitter.com/1.1/friends ...
New accounts= 20  revisited= 0
Enter a Twitter account, or quit:
Retrieving http://api.twitter.com/1.1/friends ...
New accounts= 17  revisited= 3
Enter a Twitter account, or quit:
Retrieving http://api.twitter.com/1.1/friends ...
New accounts= 17  revisited= 3
Enter a Twitter account, or quit: quit
```

We started with the `drchuck` account and then let the program automatically pick the next two accounts to retrieve and add to our database.

The following is the first few rows in the `People` and `Follows` tables after this run is completed:

```
People:
(1, 'drchuck', 1)
(2, 'opencontent', 1)
(3, 'lhawthorn', 1)
(4, 'steve_coppin', 0)
(5, 'davidkocher', 0)
55 rows.
Follows:
(1, 2)
(1, 3)
(1, 4)
(1, 5)
(1, 6)
60 rows.
```

You can see the `id`, `name`, and `visited` fields in the `People` table and you see the numbers of both ends of the relationship in the `Follows` table. In the `People` table, we can see that the first three people have been visited and their data has been retrieved. The data in the `Follows` table indicates that `drchuck` (user 1) is a friend to all of the people shown in the first five rows. This makes sense because the first data we retrieved and stored was the Twitter friends of `drchuck`. If you were to print more rows from the `Follows` table, you would see the friends of users 2 and 3 as well.

Updated 5/5/2019