Unit 6 Homework – Python database connectivity

1. Explain why this is dangerous code. How would you modify it to run safely?

   ```
   form = cgi.FieldStorage()
   acc = form.getfirst('accession')

   qry = "SELECT * FROM gene WHERE accession = '{0}'".format(acc)
   curs.execute(qry)
   ```

2. It is said you should 'clean up your connections' before ending your python scripts that connect to a database. What methods does this mean you should remember to call? (hint: think about your connection and cursor.)

   The following exercises should be performed on the class server and will be checked once the assignment is due.

1. (30 points) In Unit 4, we covered forms and CGI using python. In Unit 5 you learned about the Chado database and query in it. Finally, this week you learned how to use python to connect to a database.   It's time to combine these. If, for any reason, you need your database re-initialized and loaded for you because you had problems with it send me an e-mail.)

   Now, once you have this ready your assignment is to create a form to allow users to enter a search term and use this to search gene products in your database. You should take care to do this in a secure way that avoids SQL injection. I'll leave what you display about matches up to you, but it should at least include the feature.uniquename and gene product name for all matches. I should be able to access your form at:

   http://bfx3.aap.jhu.edu/$USER/unit06/search.html

   Where $USER is replaced with your user name.