**Computer Lab 2 – Sequence Editing**

**Conservation Genetics (BIOL 4174 / 5174)**

Due Date: **2/9/2016 at Midnight**

Submit via Blackboard

Questions – Part I

1. There should be only one base that varies between the two individuals – find it.
   1. At which **codon position** does it occur?
   2. Is this a transition or transversion?
   3. Provide two additional terms that could describe this mutation.
2. Gene A is in which reading frame?
3. Gene B is in which reading frame?
4. Provide the last 5 amino acids of Gene A. The stop codon does not code for an amino acid. Abbreviations are acceptable.
5. Locate the beginning of Gene B. Provide the first five amino acids of this sequence (abbreviations are acceptable). Reminder: Genes A and B overlap one another.
6. What is the importance of selecting the correct genetic code when translating sequences?

Questions – Part II

1. How many bases vary among the two individuals?
2. Do you think the two individuals from Part II represent the same species?

Questions – Parts III and IV

1. Why would attempting to translate these sequences be unhelpful?

When finished, save this file as **username\_lab\_02.docx** and upload it to Blackboard