**Quiz/HW 4 – *\_local\_variables*, *UIDandMetaInfo, XNATConnection*, & *ImageHash***

* *See utilities.py*

1. [Recap] There is a new resident performing DHS surgeries at UIowa. Detail the process for registering them with the database. Hint: You will need to run code and change a document.
2. Explain why some python class methods begin with an underscore (\_) and some do not.
3. Given that \_local\_variables Is effectively a dictionary of global variables, how would you add a new variable called ‘*my\_special\_variable’* with a corresponding value of a list of integers, 1 to 10? Should you change anything in UIDandMetaInfo to reflect this new variable?
4. What is the difference between our system’s UIDs and those generated by pydicom? Hint: See ‘generate\_*uid*()’
5. If there were a variable in \_local\_variables called ‘*doms\_variable’*, are you able to retrieve its value when working within an XNATConnection method? How? Can you call generate\_uid() from within an XNATConnection method, too?
6. Which property of XNATConnection shows you why a connection to the XNAT server might have failed?
7. Explain the short algorithm for generating a hash string for an image, and why this algorithm is necessary. Hint: see ImageHash.
8. Explain how ImageHash checks whether a particular image has already been uploaded to the datebase. Hint: see the \_init\_() method.

**Answers:**