**Python – Assignment 22**

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| **S. No.** | **Question / Answer** |
| 1 | What is the result of the code, and explain?  >>> X = 'iNeuron'  >>> def func():  print(X)  >>> func() |
|  | iNeuron  The function is responsible to print X’s contents. |
| 2 | What is the result of the code, and explain?  >>> X = 'iNeuron'  >>> def func():  X = 'NI!'  >>> func()  >>> print(X) |
|  | iNeuron  This happens because of local scope is prioritised over global scope within the function. Within the function there is a local variable declaration X. But when a print() is called from outside the function it is accessing the global X instead of the function local X, and we get global X which has not changed. |
| 3 | What does this code print, and why?  >>> X = 'iNeuron'  >>> def func():  X = 'NI'  print(X)  >>> func()  >>> print(X) |
|  | NI  iNeuron  As described earlier, within the function’s local scope, we are able to access and print the local X (NI). While outside the function we access global X (iNeuron) |
| 4 | What output does this code produce? Why?  >>> X = 'iNeuron'  >>> def func():  global X  X = 'NI'  >>> func()  >>> print(X) |
|  | NI  Here since we are using keyword ‘global’ within the function we are able to access global X from within the function. Thus the function is able to update the global X to ‘NI’, which is printed at last. |
| 5 | What about this code—what’s the output, and why?  >>> X = 'iNeuron'  >>> def func():  X = 'NI'  def nested():  print(X)  nested()  >>> func()  >>> X |
|  | NI  iNeuron  For the function nested(), it is accessing it’s immediate nonlocal scope variable, which is X = ‘NI’, which is local to the function func(). So, first print returns ‘NI’. Finally, the global scope X remains unchanged, and prints ‘iNeuron’. |
| 6 | How about this code: what is its output in Python 3, and explain?  >>> def func():  X = 'NI'  def nested():  nonlocal X  X = 'Spam'  nested()  print(X)  >>> func() |
|  | Spam  Using the ‘nonlocal’ keyword is able to access the immediate non-local variable to nested() in func(), X = ‘NI’. Here the X, which is local to func(), is updated as ‘Spam’. |