**B8IT105 – Programming for Big Data – CA4: Notes**

PartA

I reproduced the 10 function I used in CA1 in RStudio. The user must enter the parameter, e.g. in reciprocal, 3 is the parameter which must be entered in line 19.

I have entered sample numbers in each case - the results are correct! Note also that I have supplied more than one example in some cases (using vector c(a,b,c,..,etc.))

However, the last function, the exponential function does not seem to be working.

PartB

I adjusted my two original programs. CA4\_calculator\_JFraser.py contains the 10 functions. Below the 10 functions, I have set out code to call each one in turn and print answers for several inputs.

I have made heavy use of the “map” function. I have used “filter” in the production of log (base e) numbers, more for illustration purposes (to demonstrate useof”filter”) than because it is particularly necessary in this case – could have allowed “Value Error” to be returned.

I used generator comprehension (Pythagorean triplets) in the production of log (base 10) numbers, again to demonstrate this more than anything else.

Finally, I attempted to use generator comprehension in the “y\*\*x” function. I managed to generate a set of couples, (y,x), but I could not manage to get the y\*\*x invoked for a sequence of these couples; I have left (some of) the attempted programming in, but kept it as comments to allow program to function.

Finally, the CA4\_test-calculator\_JFraser.py function, which does a number of tests, also seems to automatically cause the other program to run, before the tests are invoked. I had also hoped to do something with the option to allow the user to enter test data him/her self, but I only got something working for the reciprocal function and left it at that because of little time and because it did not really look to be part of the request.

John Fraser

16/07/2017