

COSC 251 – Lab #5

Problems, always problems.

Purpose: A glimpse into what your project will entail.

Task: Utilizing IDLE (or your IDE of choice), you will complete the following two problems that were part of the problem set for the SMCM Programming Competition held last Saturday. You may want to code your problem solutions as a separate file by opening IDLE then going to File->New Window. You may work in pairs on this lab.

1.) Write a program that will take two integers (a base and an exponent), compute $\text{base}^{\text{exponent}}$, then add up the individual digits of the resulting number.

Example output:

```
Enter an integer: 2
Enter the exponent: 15
Result: 32768
Addition of digits: 26
```

2.) You have intercepted several encoded messages from evil overlords. Fortunately, they weren't very bright and you've figured out the encoding without problem. However, it is tedious to convert these messages by hand so you've decided to write a program that will take in a string and then output the decoded version of that string.

The encoding:

A = Q	B = W	C = E	D = R	E = T	F = Y
G = U	H = I	I = O	J = P	K = A	L = S
M = D	N = F	O = G	P = H	Q = J	R = K
S = L	T = Z	U = X	V = C	W = V	X = B
Y = N	Z = M				

Example output:

```
Enter a string: pcssi bidsm
Decoded: hello world
```

Deliverable: the py file that contains your source. It should be well commented.

Due: By the start of class Monday. No exceptions. To be turned in via Digital Dropbox.