Inft1004 Visual Programming – Lab for week 2

1. Do the quiz for week 2. (Under the "Assessment/Quizzes" folder on blackboard)

NOTE: E – Easy, M – Medium, H – Hard, T - Tricky

2. (E) Use **pickAFile()** and **makePicture()** to read in a file from the mediasources-4ed folder (the pictures that come with JES). Print out the details of the picture - how big is it? Try the **show()** function so you can look at the picture.

3. (E) Use the picture from question 2 and use the **explore** () function to investigate these pixel positions.

> x=0, y=0
>
> x=250, y=0
>
> x=0, y=250
>
> (middle pixel – or almost middle)

What colour are they? What are their red, green and blue values.

4. (M) Download the example code from the week 1 lecture (Mod02_01_HelloWorld.py).

Modify this program by adding in another function called helloSuperHeroes(). This function should print a hello message to 3 of your favourite super heroes. For example.

```
Hello Spiderman
Hello Superman
Hello Wonder Woman
```

Test your function by calling it from the existing helloAll function. (That is add the call to your helloSuperHeroes() to the end of the helloAll() function that already exists).

5. (E) Write a function called sumThree(a, b, c) This function should print the result of adding these three numbers (a, b, c) together. (They could be integers or floats). To start with just print the answer e.g.

```
>>>sumThree(4,3,2)
9
```

6. (M) Modify question 5 so that the function now prints an answer like this..

```
>>>sumThree(4,3,2)
result =  9
```

then change it again so it prints an answer like this…

```
>>>sumThree(4,3,2)
```

```
4 + 3 + 2 = 9
```

HINT: you will need the **str()** function if you want to turn numbers to strings

7. (M) Write a function called divideBy(top, bottom). This function should work with integers. The function should report how many times the bottom number goes into the top number and the remainder.. eg.

```
>>> divideBy(10,3)
   10 divided by 3 is 3 with a remainder of 1


>>> divideBy(28,11)
   28 divided by 11 is 2 with a remainder of 6
```

8. (M) Write a function that counts how many vowels there are in string.

HINT: We did something similar in the code from Mod2_2_QuickStart.py

9. (H) Write a function that mirrors a string. (eg "abc" mirrored is "abccba")

HINT: For a start look at the code from Mod2_2_QuickStart.py

10. (H) Write your own madStory function. Decide what parameters you will change in the story.

HINT: For a start look at the code from Mod2_2_QuickStart.py

11. (T) Write a function that calculates your Star Wars name given the required parameters. (You will have to do some research to find out how you do this)