#Starter - Files

These tasks are designed to refresh the reading and research you have undertaken at home prior to this lesson. If you have not completed the R&R assignment then please speak to your teacher before attempting these exercises.

##Modes and encoding

You have been introduced the the various file opening modes that are used in Python. Refresh your knowledge of these concepts by attempting the below tasks.

###Task 1

|Mode|Explanation|

|----|-----------|

|`a`|Opens a file to append data to it |

|`w`|Opens a file for writing (this will replace existing data on the files) or creates a new files if one doesn't exist |

|`r`|Opens a file for reading |

###Task 2

You must set the encoding parameter when opening a file. Identify the encoding method you should use and in the space provided explain why:

|Encoding|Explanation|

|--------|-----------|

|utf-8| You need it because it determines the character set that is available. It will also stop the file being platform dependent|

##Reading from a file

The screenshot below shows the result of reading in the names of students from a file and then printing them to the screen.

![](https://www.dropbox.com/s/ds7b5mddim5z4fh/students.jpg?dl=1)

The code for printing the students to the screen is shown below:

```python

for index, student in enumerate(student\_file):

print("{0:>2}. {1}".format(index+1, student))

```

###Task 3

For the above code, explain what each of the following sections of code do:

|Section|Explanation|

|-------|-----------|

|`index`|This keeps count of the number of loops |

|`{0:>2}`|Generates a column that is 2 spaces wide |

###Task 4

In the above screenshot there are gaps between each student in the list. It should look like the screenshot below.

![](https://www.dropbox.com/s/ozsch3ylpr4prrh/students2.jpg?dl=1)

\*\*Attempt\*\* to explain why there are gaps between each student and then suggest how the above code could be improved to remove them.

\*\*Space for your answer:\*\*

Because the print statement adds a new line so you get 2 new lines instead of one.

```python

for index, student in enumerate(student\_file):

print("{0:>2}. {1}".format(index+1, student),end ="")

```

##Exception Handling

Exception Handling is used to deal with \*\*known errors\*\* in a more elegant manor than crashing the program. Take a look at the following code:

```python

try:

score = int(input(“Please enter your score: “)

except:

print(“Please enter an integer value only”)

print(Your score was {0}”.format(score))

```

###Task 5

\*\*Identify\*\* and \*\*explain\*\* (without running the code) all of the errors in this code

|Error|Explanation|

|-----|-----------|

| |Speech mark missing in the last print statement |

| |Missing bracket in the input statement |

| |Speech marks need to be changed |

| | |

| | |