Key Stage 4 – Truth, Trust and Twitter

Student worksheet

What is an algorithm?

An algorithm is a set of instructions that can be followed in order to carry out a task. Often these are written in a similar language to a computer program but are usually more general and easier for a person to understand.

Example: Algorithm to eat a packet of crisps

> Open packet of crisps
> Repeat instructions below
> > Eat crisp
> Until there are no more crisps left

Data Files

One way to get information into a computer program is to ask a user to type the information in. So, for instance, a program might ask us to type our name. However, this is not always the best way to collect information. If we need to collect a lot of information or if we want to use information produced by another computer program, it is often easier to *read* the information from a file. Similarly if you have a computer program which creates a lot of information you might want to

write that information to a file. Information on files is often referred to as *data*.

Files can be created in lots of different formats some which can only be read and understood by other computer programs, but it is often convenient to create data files that use text.

Handling Data Files

In order to use data files you will normally need to tell the computer to **open** the file and then either **read** data from or **write** data to the file.

Example: Algorithm to add a column of numbers stored in a file (numbers.txt) and store the result in another file (answers.txt)

Set initial value of *answer* to zero
Open file numbers.txt
Repeat the following:
> Read the number on the current line
> Add that number to *answer*
> Move to the next line
Until you get to the end of the file numbers.txt
Open file answers.txt
Write answer in answer.txt

Your task

A computer program has assigned a trust level (from 1-3) to a set of tweets and stored the tweets and their trust level in a file. You need to write an algorithm that reads the tweet and displays each tweet differently depending on its trust level.

http://www.oxfordsparks.ox.ac.uk/content/keeping-social-media-social

Algorithm Writing Sheet

What does the algorithm have to do?

A computer program has assigned a trust level (from 1-3) to a
set of tweets and stored the tweets and their trust level in a file.
You need to write an algorithm that reads the tweet and
displays each tweet differently depending on its trust level.

Tweet data file

The data file you will be using with your algorithm has every
tweet on a new line followed by a trust level either 1,2 or 3 on
the next line. 1 is the lowest trust level and 3 is the highest

```
tweetandtrust.txt
Tiger escaped from London Zoo #getinsidequick
1
Animal escaped from London Zoo
2
London Zoo announces penguin has escaped
3
Penguin escaped from Whipsnade Zoo
2
#gopenguingo Percy the Penguin escapes zoo
3
```

Displaying the tweets

What could you change about the way the word 'Penguin' is
displayed on a screen? Write three different things you could
change about the way the word looks.

Write your algorithm here

UNIVERSITY OF
OXFORD