GCSE

4343/01

COMPUTER SCIENCE CS3
CONTROLLED ASSIGNMENT

For submission in May 2017

(15 hours)

INSTRUCTIONS TO CANDIDATES

This is one of two scenarios available. Each scenario is available separately. You may choose either of the two scenarios. You will have 15 hours to complete your chosen task.

Research tasks can be carried out outside timed conditions.

Read the scenario carefully to make sure that you understand what is needed.

It is important that you work independently from other candidates and make sure that what you hand in is your own unaided work.

Your report should be about 2,000 words.

Make sure that you check your work carefully to ensure that the work you produce is accurate and correct.

Save your work regularly.

INFORMATION FOR CANDIDATES

Teachers and candidates will be required to sign a declaration that all work presented is the work of the candidate alone. Failure to authenticate the work may result in grades being delayed or refused.

The quality of written communication will be assessed in your evaluation.

Lucky Name Numbers

Many ancient philosophers believed that everything in the universe is made up of and affected by numbers. Different societies developed different methods of analysis to calculate if individual pieces of information such as name and birthdate could be used to predict how lucky someone would be in life.

One of the greatest mathematicians, Pythagoras developed a method that could be applied to anyone's name to calculate their lucky name number.

The Pythagorean system allocated a number to each letter of the alphabet and these numbers were used to calculate a single digit number from the letters in a person's name:

1	2	3	4	5	6	7	8	9
A	B	C	D	E	F	G	H	I
J	K	L	M	N	O	P	Q	R
S	T	U	V	W	X	Y	Z	

Figure 1: Grid used to assign numbers to letters

For example, Eleanor Wiseman would be:

E	L	E	A	N	O	R		W	I	S	E	M	A	N
5	3	5	1	5	6	9		5	9	1	5	4	1	5

To carry out the calculation all the numbers for the first name are added together as are all the numbers for the surname.

= {5 + 3 + 5 + 1 + 5 + 6 + 9} + {5 + 9 + 1 + 5 + 4 + 1 + 5}

= 34 + 30

These numbers are added again until the answer is a single digit.

= 7 + 3 = 10 = 1

So Eleanor's lucky name number would be 1.

Your task is to write an application that will:

- Input a person's name
- Calculate their lucky name number using the grid in **Figure 1** above
- Display the names
- Display the lucky name number
- Display the meaning of their lucky name number

Produce a report fully documenting your solution to automate this process. Credit will be given for the quality of your solution. Your report should be about 2,000 words.

What do the Lucky Name Numbers mean?

Number	Meaning
1	Natural leaders
2	Natural peacemakers
3	Creative and optimistic
4	Hard workers
5	Value freedom
6	Carers and providers
7	Thinkers
8	Have diplomatic skills
9	Selfless and generous

Figure 2: Table of meanings of each lucky number