![AQA logo]

GCSE
Computer Science
Scenario 3 – Traditional Application
Landscape Gardening
Controlled Assessment Exemplar Marking
Grid

GCSE Computer Science (4512)
Component 1 Practical Programming (4512/1)

These grids should be completed and securely attached as a separate document to the front of the candidate's work.
They should be sent to the moderator if the candidate's work is requested or retained at the Centre.
If sent to the moderator they will be retained and not returned with the coursework.

Centre Name:	**Specimen Controlled Assessment 2**	Centre Number:	**00000**
Candidate Name:	**A. N. Other**	Candidate Number:	**0000**

Scenario Used (Please Tick):

Mobile:		Web:		Gaming:		Traditional:	✓

Programming Language(s) Used:	**Python 2.7**

Assessment criteria		Maximum mark	Mark awarded	Moderator mark
1.	Design of Solution	9	**8**	
2.	Solution Development	9	**7**	
3.	Programming Techniques Used	36	**30**	
4.	Testing and Evaluation	9	**6**	
	Total	63	**51**	

Additional comments for the moderator (optional):

The candidate has attempted all 4 of the tasks within this scenario.

1 Design of Solution (9 marks)

Row	1 mark	2 marks	3 marks	Total for row
1	Produced a **minimal outline** of what the problem involves with minimal or no reference to the user's needs.	Produced evidence showing a **good understanding** of what the problem involves with reference to **most of the user's needs**.	There is evidence showing a **thorough understanding** of what the problem involves with reference **to all or almost all of the user's needs**.	3
Teacher comments	The candidate has explained the tasks in some detail, including a description of the assumptions being made in order to create a solution.			
2	Produced a **minimal** high level overview plan that may contain a **minimal attempt** to show how the problem is to be solved.	Produced a **good** high level overview plan that contains a **reasonable attempt** to show how the problem is to be solved.	Produced a **thorough** high level overview plan that **clearly shows** how the problem is to be solved.	2
Teacher comments	The plan is very good but is lacking in a couple of key areas with reference to this scenario. There is no explanation of the data types that will be used, they just appear. Also the SQL statements required are simply stated with no explanation of why they are there or what they will do.			
3	Produced **minimal** pseudocode (or suitable alternative) showing **a few of the main blocks** within the proposed solution.	Produced **annotated** pseudocode (or suitable alternative) showing **most of the main blocks** within the proposed solution.	Produced **well annotated** pseudocode (or suitable alternative) showing **all or almost all of the main blocks** within the proposed solution.	3
Teacher comments	The pseudocode is comprehensive and well annotated.			
			Total for Design of Solution	8

Please make any additional comments for the moderator below. This is optional.

Additional comments for the moderator (optional):

2 Solution Development (9 marks)

Row	1 mark	2 marks	3 marks	Total for row
1	There is minimal evidence showing a **minimal understanding** of how the final solution meets the needs of the user.	There is some detailed evidence showing a **good understanding** of how the final solution meets the needs of the user.	There is detailed evidence showing a **thorough understanding** of how the final solution meets the needs of the user.	1
Teacher Comments	Although evidence of the program running has been provided it is not clear how it relates to the needs of the user.			
2	A **few** of the original problem tasks have been catered for in the final solution.	**Most** of the original problem tasks have been catered for in the final solution.	**All or almost all** of the original problem tasks have been catered for in the final solution.	3
Teacher Comments	All aspects of the original scenario have been catered for in this solution.			
3	There is a **partially annotated** code listing that **may be incomplete.**	There is a **well annotated** and **mostly complete** code listing.	There is a **fully annotated** and **complete** code listing.	3
Teacher Comments	The code listing is comprehensive and well annotated.			
			Total for Solution Development	7

Please make any additional comments for the moderator below. This is optional.

Additional comments for the moderator (optional):

Note:
In this solution the candidate has chosen to create the database in code. This is not a requirement and candidates who created the database using the appropriate DBMS IDE and then used it within their code could still access the highest marks.

3   Programming Techniques Used (36 marks)

Row	1 mark	2 marks	3 marks	4 marks	5 marks	6 marks	Total for row
1	A **few** of the programming techniques used have been **stated** showing **no or very little** understanding.	A **few** of the programming techniques used have been **stated** showing a **minimal** understanding.	**Most** of the programming techniques used have been **stated** showing a **reasonable** understanding.	There is a **description of a few** of the programming techniques used that shows a **good** understanding.	There is a **description of most** of the programming techniques used that shows a **very good** understanding.	There is a **discussion of most** of the programming techniques used that shows a **thorough** understanding.	**5**
Teacher Comments	The candidate has described most of the techniques used. However, there are no real discussions taking place.						
2	The few techniques used show how **one or two** of the different parts of the solution work together.	The techniques used show how **a few** of the different parts of the solution work together.	The techniques used show how **most** of the different parts of the solution work together.	The **description** shows how a **few** of the different parts of the solution work together.	The **description** clearly shows how **most** of the different parts of the solution work together.	The **discussion** clearly shows how the different parts of the solution work together.	**5**
Teacher Comments	The diagram used to show the way the different parts of the system interact is detailed and accompanied by a good description. Again, this candidate has not provided any discussion of the way the different parts work together.						
3	Only **one** area of the solution works as intended.	Only **two** areas of the solution work as intended.	A **few** areas of the solution work as intended	**Some** areas of the solution work as intended.	**Most** areas of the solution work as intended.	**All or almost all** areas of the solution work as intended.	**6**
Teacher Comments	The evidence for this element can be found throughout the portfolio. It is clear that all or almost all areas of the solution do work.						
4	There is a **statement** about the choice of **one or two** of the programming techniques used in an attempt to create a solution in which **parts** have been efficiently coded.	There is a **statement** about the choice of **a few** of the programming techniques used to create a solution in which **parts** have been efficiently coded.	There is a **statement** about the choice of **most** of the programming techniques used to create an efficiently coded solution.	There is a **description** of the choice of **a few** of the programming techniques used to create an efficiently coded solution.	There is a **description** of the choice of **most** of the programming techniques used to create an efficiently coded solution.	There is a **discussion** justifying the choice of programming techniques used to create an efficiently coded solution.	**4**
Teacher Comments	The solution is pretty efficient and the candidate has attempted to explain it. They have referred to the use of a text file and a database and explained how that improves efficiency. They have also briefly explained how functions and procedures can assist in this area. To gain the higher marks there would need to be a description or discussion of the other various elements that make it efficient, such as the use of built in libraries to simplify coding, the use of constants to aid changes at a later date that do not require values to be changed in several places, the use of error catching routines as opposed to attempting to trap errors themselves and so forth.						

5	The purpose and choice of **one or two** of the data structures used have been **stated**.	The purpose and choice of **a few** of the data structures used have been **stated**.	The purpose and choice of **most** of the data structures used have been **stated**.	The purpose and choice of **a few** of the data structures used have been **explained**.	There is evidence for an appropriate use of data structures with an **explanation** of the purpose of **most** of them.	There is evidence for an appropriate use of data structures with a **discussion** of the purpose of **all or almost all** of them.	5
Teacher Comments	The data structures used are good choices but they are not all discussed or explained. The candidate has given a good explanation of the choice of lists and provided examples of where these are used within their code. They have also referred to the database and csv file and explained them elsewhere. The dictionary is not explained. To turn the list explanation into a discussion the candidate would need to compare how the use of a list is superior to the use of an alternative structure for the chosen use.						
6	There is a **statement** of **one or two** of the techniques used (appropriate to the language chosen) within the code to make **parts of** the solution as robust as possible.	There is a **statement of a few** of the techniques used (appropriate to the language chosen) within the code to make the solution as robust as possible.	There is a **statement of most** of the techniques used (appropriate to the language chosen) within the code to make the solution as robust as possible.	There is a **description of a few** of the techniques used (appropriate to the language chosen) within the code to make the solution as robust as possible.	There is a **description of most** of the techniques used (appropriate to the language chosen) within the code to make the solution as robust as possible.	There is a **discussion of all or almost all** of the techniques used (appropriate to the language chosen) within the code to make the solution as robust as possible.	5
Teacher Comments	The code has used robust measures some of which are explained on pages 31 and 32. The explanation of the try catch structure with reference to this actual solution is very good. To move to a discussion the candidate would need to talk about an alternative method they could have used to try and capture errors of this nature. The alternative method does not need to be better than the one they have chosen, and in this case would be very unlikely to be better. The discussion is an opportunity for the candidate to show that they understand there is always more than one way to accomplish something and to give reasons why they have chosen their method over others.						
	Total for Programming Techniques Used						30

Please make any additional comments for the moderator below. This is optional.

Additional comments for the moderator (optional):

4   Testing and Evaluation (9 marks)

Row	1 mark	2 marks	3 marks	Total for row
1	There is a **minimal test plan** that shows **a few** of the expected tests and **includes a few examples** of the test data to be used **and/or** the expected results.	There is a test plan that shows **most** of the expected tests and includes **most** of the test data to be used **and** the expected results.	There is a **full or nearly full** test plan that shows **all or nearly all** of the expected tests and includes the **full** test data to be used **and** the expected results.	**2**
Teacher Comments	The test plan shows most of the elements you would expect to see. There is no mention of testing user input.			
2	There is evidence that a **few** of the planned tests have been carried out and a record of the results has been produced. There is minimal evidence that **an attempt** to carry out any required remedial action has been taken.	There is evidence that **most** of the planned tests have been carried out and a record of the results has been produced showing whether each test was successful or not. There is evidence that **most** of the required remedial action has been carried out.	There is evidence that **all or almost all** of the planned tests have been carried out and a detailed record of the results has been produced showing the extent to which every test was successful. There is evidence that **all or almost all** of the required remedial action has been carried out.	**2**
Teacher Comments	Test 2 is not evidenced and the record of results is not totally clear. A closer link between the plan and the evidence would be required for 3 marks. The required remedial action has been documented, which is good.			
3	There is an evaluation **stating** how the final solution meets **a few** of the original needs of the user. There is a significant number of errors in the use of spelling, punctuation and grammar. The form and style of writing is only partially appropriate. Information is not always organised and the use of specialist vocabulary is minimal.	There is an evaluation **describing** how the final solution meets **most** of the original needs of the user. Most of the evidence is accurately spelt, punctuated and grammatically correct to make most of the meaning clear. The form and style of writing is mostly appropriate. Information is organised and specialist vocabulary has been mostly used appropriately.	There is an evaluation **discussing** how the final solution meets **all or nearly all** of the original needs of the user. The evidence is accurately spelt, punctuated and grammatically correct to make the meaning clear. The form and style of writing is appropriate. Information is clearly organised and specialist vocabulary has been used appropriately.	**2**
Teacher Comments	The evaluation describes how the solution meets most of the user's needs and there is recognition of the weak areas and how to improve it further.			
			Total for Testing and Evaluation	6

Please make any additional comments for the moderator below. This is optional.

Additional comments for the moderator (optional):