|  |  |
| --- | --- |
|  | **Year 11** |
|  | Controlled Assessment Traditional Scenario Template  Computer Science GCSE - Mrs Spencer |

|  |
| --- |
| **[traditional]** |
| 2016 Controlled Assessment Task |

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**Traditional Scenario 2016**

Encryption and decryption

Instructions

1. *Read the 10 Tasks in the candidate booklet.*
2. *Create a new word processor document called* ***Controlled Assessment 2– your name.docx****. Put your candidate name, centre number and page numbering in a header and footer. Save it in your Y: drive in a folder called* ***Controlled Assessment****. Any written parts need to be typed into this document for marking purposes.*
3. *In your word document create four headings on four different pages:*

***Design of the solution***

***Solution Development***

***Programming techniques used***

***Testing and evaluation***

1. *This assessment has been broken down into STEPS. You will work through all the steps.*
2. *You will need to do your own research. This includes searching the internet, speaking to friends, adults who can help you, etc, just NOT THE TEACHER!*
3. *If you find something on the internet and you wish to use it, you must reference the link where you got it from in your report (or in the Python code) AND be able to explain how it works. If you see a piece of code on the board or on the monitor of someone else, don't copy it word for word, but apply the coding in your own words.*
4. *If I believe any of your code is not your own work, I will ask you a question on one of your code blocks and you must be able to explain to me how it works and why it is there.*

How to tackle the tasks

***Overview of how to tackle the controlled assessment:***

*1. Re-write the problem definition with reference to the user*

*2. Create a test plan and start to complete it*

*3. Code the main parts of the program first (Tasks 1 – 9) and get it working*

*4. Write about your code as you complete each task*

*5. Finally code the menu and test your program still works*

*6. Code Task 10 and add this option to the menu*

*7. Complete overview of whole game*

*8. Print out the final code and assemble your portfolio*

***So broken down into STEPS the Task order is:***

*Step 1: Do Task 1 - Re- write the problem definition*

*Step 2: Create a test plan table using the headings provided (it will be empty to begin with and then you will fill it out as you code all the tasks)*

*Step 3: Do Task 2 – just use a variable*

*Step 4: Do Task 3 ignoring using file objects – save the sample as a variable*

*Step 5: Do Task 4*

*Step 6: Do Task 5a/b – save the output as a variable*

*Step 7: Do Task 7 ignoring using file objects – use a variable for now*

*Step 8: Do Task 8a/b/c*

*Step 9: Do Task 9*

*Step 10: Do Task 1*

*Step 11: Task 2 and Task 7 file objects – reading in, writing out, saving*

*Step 12: Task 6 - file object, writing, saving*

*Step 13: Task 10 plus add menu option*

*Step 14: Create an overview of the WHOLE game using a flowchart/structured English/pseudocode*

*Step 15: Print out the whole python code*

*Step 16: Assemble the portfolio for marking*

**STEP 1**

Step 1. Do Task 1 - Re- write the problem definition

First, have you created all four headings required? See page 1!

*Under the* ***Design of the Solution*** *heading: What you need to do:*

1. Open your ***Controlled Assessment 2 – your name.docx***. In the **Design of the Solution** section, type in the title **Explanation of the Problem**.
2. Now write about each Task and make sure the following questions have been answered:

* How does the program start?
* What choices does the user have?
* How will the user input their choices?
* What does the user see?
* What does the user need the program to do?
* How does the user know the program has worked correctly?

1. Now print it out.
2. Show it to someone else in the class who can give you feedback.

5. Print out a corrected copy and put it in your folder.

**STEP 2**

Step 2. Create a test plan table under the Testing and Evaluation heading

*Under the* ***Testing and Evaluation*** *heading, create a new heading called* ***Test Plan****: Use the Test plan column headings as shown below – copy the table below and place in your document under this heading:*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test ID | Description of test | User Input | Expected outcome | Actual outcome | Action Taken |
|  |  |  |  |  |  |

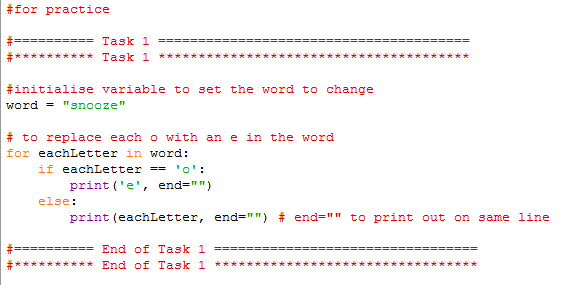
**Notes on sections before you start programming:**

**Design of the Solution**

You may use pseudocode, structured English or a flowchart.

**Solution Development**

Your code needs to be sufficiently annotated and broken up into sections, like this:



**Programming Techniques, Testing and Evaluation**

Answer the questions in the checklists in section A, B, C, D and E for each task.

**STEPS 3 & 4**

Step 3. Do Task2 ignoring using file objects – save the sample as a variable

Task 2: Read in a message (file) to encrypt– use sample.txt

Set the sample as a variable until the program code for this whole block works – you will come back to this.

No writing to be done.

Step 4. Do Task 3 ignoring using file objects – use the sample variable

Task 3: Generate an eight character key to encrypt a message

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*so your first test will be numbered 3.1*

*Now conduct the Research below and then go to checklist B.*

***Research****: You will need to find out how to:*

*Write pseudocode / use structured English/ draw a flowchart!*

*How to get a random integer between 33 and 126*

*How to convert integers into their ASCII characters*

*Choose a loop to run 8 times*

*Display the key to the user (and they know what it is)*

*Now follow the checklists B – E – print off a copy.*

**Checklists B – E must be completed for each Task**

*B: Under the* ***Design of the Solution*** *heading: Use a Flowchart / Pseudocode / Structured English for THIS CODE BLOCK*

|  |  |  |
| --- | --- | --- |
|  | ***Design of the Solution Checklist*** | ***Done?*** |
| 1. | Have you used a Flowchart/Pseudocode/Structured English for this code block? |  |
| 2. | Give your code block a 'name' so that you can use it in the last section |  |

*C: Under the* ***Solution Development*** *heading: Now do some Python Programming. When you have finished programming the block, check the checklist:*

|  |  |  |
| --- | --- | --- |
|  | ***Solution Development Checklist*** | ***Done?*** |
| 1. | Have you coded this task? |  |
| 2. | Have you clearly defined this section in Python using #===? See example below |  |
| 3. | Have you fully annotated this section of code? |  |
| 4. | Have you printed this section of code out? Copy it into Notepad and print (Don't print from Python – you have no control over the number of pages it prints out) |  |
| 5. | Is your name on each page of the printout somewhere? Hand written? In the code as a comment? |  |

*D: Under the* ***Programming Techniques*** *heading: Now write about why you have done what you have done. The following questions will help you:*

|  |  |  |
| --- | --- | --- |
|  | ***Section Checklist: Discussing Programming techniques involves:*** | ***Done?*** |
| 1. | - Why that loop? Why not another loop?  Refer to the section name when writing about it. |  |
| 2. | - Why import that library? For what purpose? |  |
| 3. | - What constants and variables did you use? What are their data types? You can list these in a table if you want, so that you can add more to it as you work through the coding. |  |
| 4. | - Did you use any arrays (or other data structures?). Why? You can copy and paste this array (other data structure) into your document if it helps to describe it. |  |
| 5. | - What text files did you use, if any. For what purpose? |  |
| 6. | - What functions did you use/create? For what purpose? |  |
| 7. | - What did you use for validation (making sure the user can't input silly inputs!)? How did you catch any input errors? And what did you do about this? This is called robustness. |  |
| 8. | - Have you explained how the programming technique is efficient? (Repetitive code has been minimised) ie did you use a function? |  |
| 9. | - How have you considered the needs of the user – answer the following: What does the user need to input? Where does this happen? Does your program display messages? Does the program state what is going to happen next – is this clear? |  |
| 10. | Have you referenced any internet sources /other sources in your write up? |  |

*E1: Under the* ***Testing and Evaluation*** *heading, complete the test table:*

|  |  |  |
| --- | --- | --- |
|  | ***Testing Checklist...*** | ***Done?*** |
| 1. | *Have you copied the the test table headings? Step 2* |  |
| 2. | Have you described and created tests in this section in the table? |  |
| 3. | Every test needs a Test ID - have you given every test a Test ID?? **Task No.Test No** |  |
| 4. | Have you used actual user input? ie 5, No, n, ## |  |
| 5. | If actual output = expected output, have you typed in **As expected**?  Have you screenshotted your input and output? – For tests that are hard to describe |  |
| 6. | If actual output != expected output, have you typed in what you need to do to fix it in the Action Taken column? Have you screenshotted your input and output? |  |

*E2: Under the* ***Testing and Evaluation*** *heading, under the test table:*

|  |  |  |
| --- | --- | --- |
|  | ***Evaluation Checklist...*** |  |
| 1. | Have you evaluated this section? Answer the following questions:  Have you solved the task?  Have you coded the task successfully? If not, why not?  Could you have coded it in a different way if you had had more time?  Was there anything else you think you should have done (more testing, more validation) |  |

Copies of this checklist can be found in the W:/Computer Science/Year11/Controlled Assessment Resources.

**STEP 5**

Step 5. Do Task 4

Task 4: Calculate the offset factor from the eight character key

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*Now conduct the Research below:*

*Research: You will need to find out how to:*

*Convert ASCII characters into equivalent ASCII code (number)*

*Round down to an integer*

*Now follow the checklists B – E – print off a copy.*

**STEP 6**

Step 6. Do Task 5a/b – save the output as a variable

Task 5a: Convert each character in the message (file) into its ASCII code and encrypt it by adding the offset factor to each ASCII code– do not encrypt spaces.

Task 5b: Convert each result from Task 5a into its equivalent ASCII character to create a string of characters

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*Now conduct the Research below:*

***Research****: You will need to find out how to:*

*Deal with the spaces – suggestions?*

*Deal with the limited number of codes you can use*

*Append the results to a string or array*

*Now follow the checklists B – E – print off a copy.*

**STEP 7**

Step 7: Do Task 7 ignoring using file objects – use a variable for now

Task 7: From the menu, read in a message2 to decrypt – ask the user for the filename and read it in. Ask the user for the eight character key that was used to encrypt the message.

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*Now conduct the Research below:*

***Research****: You will need to find out how to:*

*Convert characters into ASCII code*

*Deal with spaces*

*Now follow the checklists B – E – print off a copy.*

Step 8: Do Task 8a/b/c

**STEP 8**

Task 8a: Calculate the offset factor from the eight character key given in Task 7.

Task 8b: Decrypt each character in the message2 by converting each character into its ASCII code, then after subtracting the offset factor, convert it into its ASCII character. Do not decrypt spaces.

Task 8c: Create a string of characters from 8b.

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*Now conduct the Research below:*

***Research****: You will need to find out how to:*

*Deal with the spaces – suggestions?*

*Deal with the limited number of codes you can use*

*Append the results to a string or array*

*Now follow the checklists B – E – print off a copy.*

Step 9: Do Task 9

**STEP 9**

Task 9: Display the decrypted message2 to the user.

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*Now conduct any Research you need to – write in the box:*

***Research****:*

*Now follow the checklists B – E – print off a copy.*

Step 10: Do Task 1

**STEP 10**

Task 1: The menu – 3 options Encrypt, Decrypt, Exit

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*Now conduct the Research below:*

***Research****: You will need to find out how to:*

*Use a while loop / if else / case*

*Now follow the checklists B – E – print off a copy.*

**STEP 11**

Step 11: Task 2 and Task 7 file objects – reading in, writing out, saving

Task 2: Read in a message (file) to encrypt– use sample.txt

Task 7: From the menu, read in a message2 to decrypt – ask the user for the filename and read it in. Ask the user for the eight character key that was used to encrypt the message.

**Edit existing code done in Step 3 and Step 7**

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*Now follow the checklists B – E – print off a copy.*

**STEP 12**

Step 12: Do Task 6 – file object, writing, saving

Task 6: Save this encrypted string into a text file – the program should ask the user for a filename

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*Now conduct the Research below:*

***Research****: You will need to find out how to:*

*Write to a file*

*Now follow the checklists B – E – print off a copy.*

**STEP 13**

Step 13: Task 10 plus add menu option

Task 10: Make the code harder to decipher – remove any spaces in the message to be encrypted. Encrypt in blocks of 5 characters separated by a space. The decrypted message will display in blocks of 5 characters separated by a space.

*A: Under the* ***Testing and Evaluation*** *heading: Think of some tests and start to complete the Test Plan table (you won't be able to test yet).*

*Use this format for Test ID:*

**Task No.Test No**

*Now conduct any Research you need – write in the box below:*

***Research****:*

*Now follow the checklists B – E – print off a copy.*

**STEP 14**

Step 14. Create an overview of the WHOLE game using a flowchart/structured English/pseudocode

*i) Under the* ***Design of the Solution*** *heading, at the beginning, create a new heading called* ***Overview****:*

**This overview is placed at the front of this section**

Now draw ONE flowchart of how all the different parts of the game work together – see notes below for more help. If you prefer to use pseudocode or structured English, you will need to read section 7iii

*ii) Still under the* ***Overview*** *heading:*

Write in your own words how the different parts of the solution work together. Make sure you refer to the user's experience.

|  |  |  |
| --- | --- | --- |
|  | ***Checklist*** | ***Done?*** |
| 1. | Have you created a Flowchart/Pseudocode/Structured English to show how the game works for the WHOLE game? |  |
| 2. | Have you discussed/explained how the different parts of the solution work together. State if the program works. Or does most of it work? |  |
| 3. | Have you covered all the user requirements – check your game definition and make sure you have! |  |
| 4. | Finally will the user enjoy playing your game? Why? |  |
| 5. | Have your friends tested your game? What was their feedback? |  |

*iii)*

**If using flowcharts**: Each code block already done can be named as a sub-routine in your overview flowchart.

**If using structured English/pseudocode**: Your overview will be all the pseudocode code blocks listed together. You can use the existing code blocks as sub-routines in your overview pseudocode.

**STEP 15**

Step 15. Print out the whole python code

You will need to print out the whole code – this will be your final code print.

|  |  |  |
| --- | --- | --- |
|  | ***Checklist*** | ***Done?*** |
| 1. | Have you printed out the whole code for this game? Copy it into Notepad and print it OR paste it into your word document – **Solution Development** section  (Don't print from Python – you have no control over the number of pages it prints out) |  |
| 2. | Have you clearly defined each section in Python using #===? |  |
| 3. | Have you fully annotated all sections of code? |  |
| 5. | Is your name on each page of the printout somewhere? Hand written? In the code as a comment? |  |
| 6. | If you have changed any section titles/names, you will need to address this in each task write-up. |  |
| 7. | You can remove any previous code listings – these will not be submitted |  |

Step 16: Assembling your final report (portfolio) for marking

**STEP 16**

The report should use the headings as shown in the Part section and assembled in this order ie:

**Design of Solution**

**Solution Development**

**Programming Techniques used**

**Testing and Evaluation**

Each page should have your name and page number shown on it. These can be handwritten on.

If you are inserting hard copy printouts in your report (flowcharts, coding) make sure that each page is numbered and fasten it all together IN THE RIGHT ORDER.

*For reference look in the Controlled Assessments Resources folder on the W: public drive to see how others have completed a live controlled assessment.*

|  |  |  |
| --- | --- | --- |
|  | ***Final checklist...*** | ***Done?*** |
| 1. | Have you printed off all of Step 1?  Have you provided all the evidence for this Step under ALL the headings? |  |
| 2. | Have you printed off all of Step 2?  Have you provided all the evidence for this Step under ALL the headings? |  |
| 3. | Have you printed off all of Step 3?  Have you provided all the evidence for this Step under ALL the headings? |  |
| 4. | Have you printed off all of Step 4?  Have you provided all the evidence for this Step under ALL the headings? |  |
|  | Have you printed off all of Step 5?  Have you provided all the evidence for this Step under ALL the headings? |  |
|  | Have you printed off all of Step 6?  Have you provided all the evidence for this Step under ALL the headings? |  |
|  | Have you printed off all of Step 7?  Have you provided all the evidence for this Step under ALL the headings? |  |
|  | Have you printed off all of Step 8?  Have you provided all the evidence for this Step under ALL the headings? |  |
| 5. | Have you placed them all in the right order of Headings? |  |
| 6. | Have you numbered all the pages? |  |
| 7. | Have you got your name on all the pages? |  |
| 8. | Have you looked at a sample controlled assessment task for help? |  |
| 9. | Have you looked at a live controlled assessment? |  |
| 10. | Have you looked at the Marking Grid that you will be assessed against? p18-22 |  |

Marking Grid used by examiners (1 per heading)

**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**. |  |
| Teacher comments |  | | | |
| **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. |  |
| Teacher comments |  | | | |
| **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. |  |
| Teacher comments |  | | | |
|  | **Total for Design of Solution** | | |  |

**2Solution 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. |  |
| Teacher Comments |  | | | |
| **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. |  |
| Teacher Comments |  | | | |
| **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. |  |
| Teacher Comments |  | | | |
|  | **Total for Solution Development** | | |  |

**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. |  |
| Teacher Comments |  | | | | | | |
| **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. |  |
| Teacher Comments |  | | | | | | |
| **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. |  |
| Teacher Comments |  | | | | | | |
| **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. |  |
| Teacher Comments |  | | | | | | |

This table is continued on the next page!

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Row** | **1 mark** | **2 marks** | | **3 marks** | | **4 marks** | | **5 marks** | | **6 marks** | | **Total for row** |
| **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. |  |
| Teacher Comments |  | | | | | | | | | | | |
| **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. |  |
| Teacher Comments |  | | | | | | | | | | | |
|  | **Total for Programming Techniques Used** | | | | | | | | | | |  |

**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. |  |
| Teacher Comments |  | | | |
| **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. |  |
| Teacher Comments |  | | | |
| **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. |  |
| Teacher Comments |  | | | |
|  | **Total for Testing and Evaluation** | | |  |

**OVERALL TOTAL = 63 marks**