**OCR-set Assignment**

**Sample Assessment Material**

OCR Level 1/Level 2 Cambridge National in IT Sample Set Assignment

Unit R060: Data manipulation using spreadsheets

Scenario Title: Westwood Dog Training

This is a sample OCR-set assignment which should only be used for practice**.**

This assignment **must not** be used for live assessment of students.

The live assignments will be available on our secure website, ‘Teach Cambridge’.

**The OCR administrative codes associated with this unit are:**

* unit entry code R060
* certification code J836

**The regulated qualification number associated with this unit is:**

603/7115/8

**Duration: Approximately 10-12 hours**

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# **Information for Teachers**

# **Using this Assignment**

You **must**:

* Make sure you are familiar with the Assessment Guidance relating to the tasks. This is with the unit content in [Section 4](https://www.ocr.org.uk/Images/610951-specification-cambridge-nationals-it-j836.pdf) of the Specification.
* Make sure that you have read and understood **all** the rules and guidance provided in [Section 6](https://www.ocr.org.uk/Images/610951-specification-cambridge-nationals-it-j836.pdf) of the Specification **before** your students complete and you assess the set assignments.
* Make sure that completion and assessment fully adhere to the rules and guidance provided in [Section 6](https://www.ocr.org.uk/Images/610951-specification-cambridge-nationals-it-j836.pdf) of the Specification.
* Provide students with the IT [Student guide to NEA assignments](https://www.ocr.org.uk/Images/620513-student-guide-to-nea-assignments.pdf) before they start the assignments.
* Allow students approximately 10-12 guided learning hours (GLH) to complete all tasks.

You **must not**:

* Change or modify this assignment in any way.

## Scenario for the assignment

Westwood Dog Training

Westwood Dog Training is an organisation that runs dog training classes on a Monday. It offers classes at different levels to suit each dog. Westwood Dog Training is owned by Zac, who wants to introduce a new computer system, using spreadsheet software, to help manage the business.

Zac wants the new computer system to:

* Store details about the owners and the dogs that attended each class
* Work out the income generated from each dog that attended classes
* Work out the income from each category of dog training class
* Produce visual representations of the data manipulated using the spreadsheet software.

The system **must** be able to allow Zac and his staff to:

* Navigate the system via an easy to use Human Computer Interface (HCI)
* Minimise errors in the data
* Record class attendance
* Calculate and output the income from each dog that attended classes
* Calculate and output the income for each dog training class
* Produce charts of the data held, such as the number of dogs that attended each class
* Produce lists, such as those dogs that have attended specific classes.

**Assets**

The following assets have been provided for use in and testing of the new computer system.

* Fees.csv – contains details about the type and cost of each class
* Monday Dogs.csv – contains details of the dogs that attended Monday classes
* Owners.csv – contains the details of the owners of each dog
* Westwood Dog Training logo.jpg – the logo for Westwood Dog Training
* Westwood Test Plan.rtf – the test plan for the new computer system.

**Discount information**

Westwood Dog Training offers a fee discount of 25% for dog owners that meet any one of the following criteria:

* Under 16
* In receipt of benefits
* Over 65.

The charge for the dog will be shown as either F (full price) or R (reduced price).

If a dog has attended classes in each of the four weeks, the owner is eligible for a special promotion at a local pet shop.

**Read through all of the tasks carefully, so that you know what you will need to do to complete this assignment.**

**Important:**

* You will need to refer to the marking criteria grid. Your teacher can explain the marking criteria if you need further clarification.
* You will need to draw upon relevant skills/knowledge/understanding from other units you have studied in this qualification.
* You **must** use the files provided in the given OCR Asset file.

## Your Tasks and Marking Grids

### Task 1 – Planning and designing a spreadsheet solution

Topic Area 1 is assessed in this task.

Using design tools, including Human Computer Interface (HCI) design conventions and principles, you **must** plan the new computer system for Westwood Dog Training.

Your plan can be produced hand-drawn/sketches, electronic, or both.

You will use your planning documentation to create this computer system, using spreadsheet software, in task 2.

You will need to open the data files to look at the data that Westwood Dog Training has provided.

You **must** plan a solution that:

* Opens with an easy-to-use HCI with all the data manipulation hidden from view
* Contains measures that ensure that integrity of the data using validation techniques and security measures
* Shows how to calculate:
  + the income generated from each dog
  + the income received from each category of dog training class
  + the income received over a four-week period
  + the attendance figures for each class over different two-week periods
  + the non-attendance figures, including which dogs have not attended for each class over different two-week periods
  + which dog owners are eligible for the special promotion at the local pet store.
* Outputs the results of each of the data manipulation in a range of suitable formats for the staff at Westwood Dog Training including:
  + appropriate lists
  + appropriate charts.
* Allows Zac to see the effect on the business income if he stopped offering 25% discount
* Allows Zac to see the effect on the business income if he increased the cost of each class by £0.50.

Total marks for Task 1: 23 marks

**Task 1 Tips**

* Use design tools to show your planning of the spreadsheet solution (see Topic Area 1.1)
* Apply design conventions and principles to show functionality, outputs and HCI of the spreadsheet solution (see Topic area 1.2)
* Your plans **must** be clear for another person to use.

**Topic Area 1: Planning and designing the spreadsheet solution**

|  |  |  |
| --- | --- | --- |
| **MB1: 1-3 marks** | **MB2: 4-6 marks** | **MB3: 7-10 marks** |
| **Limited** use of design tools and features used to plan the solution, which are under-utilised for the intended purpose | **Adequate** use of design tools and features used to plan the solution, which are mostly utilised for the intended purpose | **Effective** use of design tools and features used to plan the solution, which are fully utilised for the intended purpose |
| **MB1: 1-4 marks** | **MB2: 5-8 marks** | **MB3: 9-13 marks** |
| **Limited** functional design of spreadsheet solution  **Limited** design of system output(s) produced  **Limited** design of the Human Computer Interface | **Adequate** functional design of spreadsheet solution  **Adequate** design of system output(s) produced  **Adequate** design of the Human Computer Interface | **Effective** functional design of spreadsheet solution  **Effective** design of system outputs produced  **Effective** design of the Human Computer Interface |

If your work does not meet Mark Band 1 criteria, you will be awarded zero marks for this task.

### Task 2 – Creating a spreadsheet solution

Topic Area 2 is assessed in this task.

You **must** use spreadsheet software to create the new computer system, that you planned in Task 1.

To do this you will need to use the asset files provided.

Total marks for Task 2: 23 marks

**Task 2 Tips**

* Create the spreadsheet solution based on your planning documents
* Model each scenario separately
* Effective testing is started during development, look at the test plan provided

**Topic Area 2: Creating the spreadsheet solution**

|  |  |  |
| --- | --- | --- |
| **MB1: 1-3 marks** | **MB2: 4-6 marks** | **MB3: 7-10 marks** |
| **Limited** use of tools and techniques used to create the solution which are under-utilised for the intended purpose | **Adequate** use of tools and techniques used to create the solution which are mostly utilised for the intended purpose | **Effective** use of tools and techniques used to create the solution which are fully utilised for the intended purpose |
| **MB1: 1-4 marks** | **MB2: 5-8 marks** | **MB3: 9-13 marks** |
| The solution allows **limited** interaction between user and spreadsheet to meet the needs of the scenario  The solution contains **inefficient** processes that affects the accuracy and quality of the data produced  The information presented is **limited** in relevance and accuracy | The solution allows **adequate** interaction between the user and spreadsheet to meet the needs of the scenario  The solution contains some **inefficiencies**, but these do not affect the accuracy and quality of the data produced.  The information presented is **partly** relevant and clear, but is open to misinterpretation  Data integrity is preserved using a **limited range** (one or two) tools and techniques  Future predictions are **partially** generated using the solution developed | The solution allows **effective** interaction between the user and spreadsheet to fully meet the needs of the scenario  The solution contains **efficient** processes that generates accurate and high-quality data  The information presented is **fully** relevant to the scenario needs and clear in its message  Data integrity is preserved using a **range** of tools and techniques.  Future predictions are **fully** generated using the solution developed |

If your work does not meet Mark Band 1 criteria, you will be awarded zero marks for this task.

### Task 3 – Testing and Evaluating a spreadsheet solution

Topic Areas 3 and 4 are assessed in this task.

You **must** test and evaluate the new computer system that you have created for Zac in task 2.

**Testing**

* How well the system works as a whole using the test plan provided:
  + the Human Computer Interface (HCI) displays when software is loaded
  + ease of use of HCI:
    - Navigation between elements
    - Ability to go back to main interface screen
  + data integrity:
    - Validation techniques
    - Security measures
  + accuracy of data manipulation
  + information outputs.
* Only complete the tests listed in the test plan provided

**Evaluating**

* The success of the solution against the requirements given by Zac
* The effectiveness of the Human Computer Interface (HCI) you have created.

Total marks for Task 3: 14 marks

**Task 3 Tips**

* Any screen print evidence should be clear and easy to read
* Refer to the scenario for the requirements given by Zac when completing the evaluation

**Topic Area 3: Testing the spreadsheet solution**

|  |  |  |
| --- | --- | --- |
| **MB1: 1-2 marks** | **MB2: 3-4 marks** | **MB3: 5-7 marks** |
| **Limited** technical and/or usability testing undertaken | **Adequate** technical and usability testing undertaken with results partly documented | **Effective** technical and usability testing undertaken with results thoroughly documented |

**Topic Area 4: Evaluating the spreadsheet solution**

|  |  |  |
| --- | --- | --- |
| **MB1: 1-2 marks** | **MB2: 3-4 marks** | **MB3: 5-7 marks** |
| **Basic** evaluation which states which parts of the solution meet the client requirements  **Basic** evaluation which states which parts of the Human Computer Interface worked well/ did not work well | **Adequate** evaluation which describes the effectiveness of the solution to meet the client requirements  **Adequate** evaluation which describes the effectiveness of the Human Computer Interface to meet the client requirements | **Comprehensive** evaluation which explains the effectiveness of the solution to meet the client requirements  **Comprehensive** evaluation which explains the effectiveness of the Human Computer Interface to meet the client requirements |

If your work does not meet Mark Band 1 criteria, you will be awarded zero marks for this task.

## Marking Criteria Command Words

The tables below show the command words that will be used in the NEA Marking Criteria grids. They explain the type of evidence that you should expect to see to meet each command word.

**Mark Band (MB1) Words:**

|  |  |
| --- | --- |
| **Command word** | **Meaning** |
| **Basic** | * Work includes the minimum required. It is a starting point but is simplistic and not developed. * Understanding and skills are applied in a way that partly achieves the wanted or intended result, but it would not be useable without further input or work. |
| **Brief/Briefly** | * Work includes a small number of relevant facts or concepts but lacks detail, contextualisation or examples. |
| **Dependent** | * The student can perform a task when given regular assistance or help. |
| **Few** | * Work produced is restricted or narrow. It includes less than half of the information or examples expected for a full response. |
| **Inefficient** | * Outputs are produced but with great expense or effort because of poor organisation or design and not making the best use of available resources. |
| **Limited** | * Work produced is restricted in range or scope and includes only some of the information required. It evidences partial rather than full understanding. * Work produced is a starting point rather than a developed process, concept or output. |
| **Minimal** | * Includes very little in amount or quantity required. |
| **Simple** | * Includes a small number of relevant parts, which are not related to each other. |
| **Superficial** | * Work completed lacks depth and detail. |

**Mark Band (MB2) Words:**

| **Command word** | **Meaning** |
| --- | --- |
| **Adequate(ly)** | * Work includes the appropriate number of relevant facts or concepts but does not include the full detail, contextualisation or examples. |
| **Assisted** | * The student can perform a task with occasional assistance or help. |
| **Part(ly)/Partial** | * To some extent but not completely. * Work produced is inclusive in range and scope. It evidences a mainly developed application of understanding, performance or output needed. * Work produced results in a process, concept or output that would be useable for its purpose. |
| **Some** | * Work produced is inclusive but not fully comprehensive. It includes over half the information or examples expected for a full response. |
| **Sound** | * Valid, logical, shows the student has secured most of the relevant understanding, but points or performance are not fully developed. * Applies understanding and skills to produce the wanted or intended result in a way that would be useable. |

**Mark Band (MB3) Words:**

| **Command word** | **Meaning** |
| --- | --- |
| **Accurate(ly)** | * Acting or performing with care and precision. * Correct in all details. |
| **All** | * Work produced is fully comprehensive and wide-ranging. It includes almost all, or all the information or examples expected for a full response. |
| **Clear(ly)** | * Focused and accurately expressed, without ambiguity. |
| **Complex** | * Includes many relevant parts, all of which relate to each other logically. |
| **Comprehensive(ly)** | * The work produced is complete and includes everything required to show depth and breadth of understanding. * Applies the understanding and skills needed to successfully produce the wanted or intended result in a way that would be fully fit-for-purpose. |
| **Consistent(ly)** | * A level of performance which does not vary in quality over time. |
| **Critical** | * Objective analysis and evaluation in order to form: a judgement, evaluation of the evidence or effective trouble shooting/fault finding. |
| **Detailed** | * Gives point by point consideration of all the key information. |
| **Effective** | * Applies the skills required to the task and is successful in producing the desired or intended result. * The work produced is effective in relation to a brief. |
| **Efficient** | * Able to produce results or outputs with the minimum expense or effort, because of good organisation or design and making the best use of available resources. |
| **Full(y)** | * Work produced is comprehensive in range and scope. It evidences a fully developed application of understanding, performance or output needed. * Work produced results in a process, concept or output that would be fully fit-for-purpose. |
| **Independent(ly)** | * The student can perform a task without assistance or reliance on others. |
| **Justify/Justified** | * The reasons for doing something are explained in full. |
| **Most(ly)** | * Includes nearly all of what is expected to be included. |
| **Wide (ranging)** | * Includes many relevant details, examples or contexts; all of which are fully detailed, contextualised or exemplified. |