OCR
RECOGNISING ACHIEVEMENT

Released June 2011
For Assessment Submission
January 2012 and June 2012
January 2013 and June 2013

GCSE COMPUTING

A453 Programming Project

CONTROLLED ASSESSMENT MATERIAL 1

This assessment may be periodically reviewed. Please check on OCR Interchange that you have the Controlled Assessment material valid for the appropriate assessment session.

A453

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INSTRUCTIONS TO TEACHERS

- Please refer to Section 4 of the GCSE Computing specification for instructions on completing this controlled assessment task.
- Each task can be contextualised appropriately to suit facilities available in your centre.
- The marking criteria should be available to candidates whilst completing the tasks.
- The quality of written communication will be assessed in the testing section.
- The total number of marks for this unit is **45**.

INFORMATION FOR CANDIDATES

- This document consists of **4** pages. Any blank pages are indicated.

Teachers are responsible for ensuring that assessment is carried out against the Controlled Assessment set for the relevant examination series (detailed above).

Assessment evidence produced that does not reflect the relevant examination series will not be accepted.

This scenario consists of three tasks.

Candidates should complete all tasks and provide evidence to meet all the marking criteria.

The tasks are set so as to enable all the techniques identified in the specification to be demonstrated in their solution. The tasks provide opportunities to demonstrate a range of skills and all three tasks contribute to the overall mark awarded for this assessment. Marks are awarded for using the appropriate skills and techniques effectively and efficiently to produce a solution to these three tasks. Not all techniques will be required for each of the subtasks.

Task 1 Calculator

Create a simple calculator interface with the digits 0–9, a plus sign, a minus sign, a clear button, an equals sign and a display. The calculator should be able to perform addition and subtraction of integer values. These integer values should be input by pressing the keys on your calculator interface. The system need only work with values up to 999.

Task 2 Recipe

Create a program that will store the ingredients for a recipe.

- The program should ask the user to input:
    - the number of people the recipe will serve
    - a list of ingredients: item, quantity and units for example *flour, 150, grams*
    - the program should store the recipe name, number of people and the list of ingredients with their quantities and units.

The user should be able to retrieve the recipe and have the ingredients recalculated for a different number of people.

- The program should ask the user to input the number of people.
- The program should output:
    - the recipe name
    - the new number of people
    - the revised quantities with units for this number of people.

Task 3 Hang Man

Create a simple hang man game with a set of related words in an array. These words should be selected randomly from the array and the correct number of characters in the selected word should be indicated on the screen. The player guesses letters from the word and, if these are in the word they are placed in the correct position, otherwise one life is lost. The player has six lives.

The system should:

- record the letters that have been used by the player and not accept these again during the play
- record the number of lives left after the word has been guessed and use these as a score
- allow an end user to enter new sets of words.