OCR
Oxford Cambridge and RSA

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GCSE (9–1) Computer Science

J276/03 Programming project –Task 1

Sample Non-Exam Assessment

- Please check on **OCR Interchange** that you have the Non Examined Assessment material valid for the appropriate assessment series.

INSTRUCTIONS TO TEACHERS

- Please refer to Section **3f** of the GCSE (9–1) Computer Science specification for instructions on completing the Non-Exam Assessment tasks.
- The marking criteria should be available to candidates whilst completing the task.
- The quality of extended response will be assessed in the 'Development and Testing' and 'Evaluation and Conclusions' sections.
- Teachers are responsible for ensuring that the Non-Exam Assessment Material completed is valid for the appropriate assessment series.

INFORMATION FOR CANDIDATES

- The total number of marks for this component is **40**.
- This document consists of **4** pages.

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

For the following scenario analyse the detailed requirements and using suitable algorithms, design a solution to be coded in a suitable high-level programming language.

Show the iterative development of the individual solutions with suitable testing throughout the process.

Test the final product and evaluate your solution against the detailed requirements you identified in the analysis.

The non-exam assessment must be done using a suitable high level language such as:

- Python
- C family of languages (for example C# C++ etc.)
- Java
- JavaScript
- Visual Basic/.Net
- PHP
- Delphi
- SQL
- BASH

You may use a combination of programming languages to produce a solution to the task.

Teachers **may:**

- explain the task
- advise on resources
- provide the support described within the 'Permitted Support' section of the Specification
- interrogate learners to ensure that the work is their own
- provide a copy of the mark scheme to candidates

Teachers **must not:**

- give detailed advice and suggestions as to how the work may be improved in order to meet the assessment criteria. This includes indicating errors or omissions and personally intervening to improve the presentation or content of the work.
- practise the task with the learners
- practise tasks which are similar in nature with the learners
- provide templates, model answers or feedback on drafts
- produce templates or model answers and publish them online.

Teachers **must** ensure that:

- learners do not access the internet*
- learners are not allowed to take the NEA tasks home with them.
- all work presented for submission must have been completed under supervised conditions.
- accounts associated with the NEA tasks must be locked between sessions to ensure that learners cannot access them outside of the supervised conditions.
- learners do not access online file storage accounts or email during the supervised conditions in order to prevent learners from completing work at home and bringing it into the supervised conditions.

*unless the centre is using an online IDE, in which case, only access to the IDE website is allowed.

Scenario

When new students arrive at Tree Road School, they are assigned:

- a unique ID number
- a tutor group
- a unique school email address

A tutor group contains approximately 25 male and female students.

Mr Leeman is a form tutor and wants a simple computer system to manage his tutor group.

Mr Leeman wants to be able to have a user friendly interface that allows him to log into the system and carry out the necessary administration.

The details of the students that Mr Leeman needs are:

- unique ID number
- surname
- forename
- date of birth
- home address
- home phone number
- gender
- tutor group
- unique school email address.

Analyse the requirements for this system and design, develop, test and evaluate a program that allows Mr Leeman to:

1. log in with a username and password
2. access a menu system
3. enter and store the students details
4. log out
5. retrieve and display the details of any student when Mr Leeman enters the student's unique ID number.*
6. create at least three different reports that Mr Leeman might need, and describe how he would use each one.
7. produce these reports when selected from a menu.

***Note for candidates:**

In order to test this program, you will need a data file containing the details of at least 25 students.