Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

Cambridge
IGCSE

CANDIDATE
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COMPUTER SCIENCE **0478/22**

Paper 2 Problem-solving and Programming **May/June 2015**

PRE-RELEASE MATERIAL

No Additional Materials are required.

This material should be given to candidates on receipt by the Centre.

READ THESE INSTRUCTIONS FIRST

Candidates should use this material in preparation for the examination. Candidates should attempt the practical programming tasks using their chosen high-level, procedural programming language.

This document consists of **2** printed pages.

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Candidates' preparation for the examination should include attempting the following practical **program coding tasks**.

Write and test a program to complete the **three** tasks.

TASK 1

A school keeps records of the weights of each pupil. The weight, in kilograms, of each pupil is recorded on the first day of term. Input and store the weights and names recorded for a class of 30 pupils. You must store the weights in a one-dimensional array and the names in another one-dimensional array. All the weights must be validated on entry and any invalid weights rejected. You must decide your own validation rules. You may assume that the pupils' names are unique. Output the names and weights of the pupils in the class.

TASK 2

The weight, in kilograms, of each pupil is recorded again on the last day of term. Calculate and store the difference in weight for each pupil.

TASK 3

For those pupils who have a difference in weight of more than 2.5 kilograms, output, with a suitable message, the pupil's name, the difference in weight and whether this is a rise or a fall.

Your program must include appropriate prompts for the entry of data. Error messages and other outputs need to be set out clearly and understandably. All variables, constants and other identifiers must have meaningful names. Each task must be fully tested.