

Cambridge IGCSE®

CANDIDATE NAME			
CENTRE NUMBER		CANDIDATE NUMBER	
COMPUTER SO	CIENCE	0478	/02
Paper 2 Problem-solving and Programming		For examination from 20)2(
SPECIMEN PR	E-RELEASE MATERIAL		
No additional m	aterials are required.		

READ THESE INSTRUCTIONS FIRST

To be given to candidates on receipt by the centre.

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

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

A teacher needs a program to record marks for a class of 30 students who have sat three computer science tests.

Write and test a program for the teacher.

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

You will need to complete these **three** tasks. Each task must be fully tested.

TASK 1 – Set up arrays

Set-up one dimensional arrays to store:

- · Student names
- Student marks for Test 1, Test 2 and Test 3
 - Test 1 is out of 20 marks
 - Test 2 is out of 25 marks
 - Test 3 is out of 35 marks
- · Total score for each student

Input and store the names for 30 students. You may assume that the students' names are unique.

Input and store the students' marks for Test 1, Test 2 and Test 3. All the marks must be validated on entry and any invalid marks rejected.

TASK 2 - Calculate

Calculate the total score for each student and store in the array. Calculate the average total score for the whole class.

Output each student's name followed by their total score. Output the average total score for the class.

TASK 3 - Select

Select the student with the highest total score and output their name and total score.

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

Cambridge Assessment International Education is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© UCLES 2017 0478/02/SL/20