

Sample assessment material

LEVEL 3 ALTERNATIVE ACADEMIC QUALIFICATION  
CAMBRIDGE ADVANCED NATIONAL IN

# COMPUTING: APPLICATION DEVELOPMENT

**Certificate H029**

**Extended Certificate H129**

For first teaching in 2025

**F160: Fundamentals of application development**

## Introduction

This is Sample Assessment Material (SAM) which has been produced for the OCR Level 3 Alternative Academic Qualification Cambridge Advanced National in Computing: Application Development (Certificate) and the OCR Level 3 Alternative Academic Qualification Cambridge Advanced National in Computing: Application Development (Extended Certificate).

The SAM is an example exam paper that we publish alongside a new specification to help illustrate its intended style and structure when a qualification is first launched. We wanted to share the story of our assessment approach with you so when you look through the paper you will find we have pointed out certain features and explained the decisions we have made.

Resources to help support in teaching different areas of content can be found on the OCR Level 3 Alternative Academic Qualification Cambridge Advanced Nationals in Computing: Application Development webpage under '[Planning and teaching](#)'.

Our exam papers are developed with accessibility in mind. The [Understanding the assessment guide](#) tells you a little more about the principles and rationale underpinning our approach for the qualifications. The 'Command Words' are in both the Understanding the Assessment guide and the specification. These tell you what we mean by each command word and how students should approach the question and understand its demand.

Appendix B of the specification: Command Words, gives detail about what is expected of each command word that will be included in exams and mark schemes. You can include teaching around the expectations of these as part of your teaching.

## You said, we did

During the development of these qualifications, we talked extensively with teachers, subject experts, higher education institutions and our senior assessment teams to influence their structure, content and assessment materials. We then shared our final materials with teachers to make sure that they met their needs.

You told us that you wanted the exam to take similar approaches to the exam in the current Cambridge National in Information Technology qualification. We have tried to do this by using a familiar tone and style of questioning.

You told us to keep this exam as short as possible but retain time to allow students to read the scenario and respond to questions. We have done this by reducing the number of available marks to 60 and setting this exams duration to 1 hour 15 minutes.

You told us that you wanted the exam to be based on a single context, that develops through the paper, so that is what we've done.

You told us that scenarios used in the exam should be accessible and easy for students to understand. We have done this by only using scenarios with things that students will have encountered.

Examples of comments received are placed against the relevant sections/questions.

All students will sit the exam at the same time on the same day.



<<Date>> – <<Morning/Afternoon>>

**Level 3 Alternative Academic Qualification Cambridge  
Advanced Nationals in Computing: Application Development**

**H029/H129** Unit F160: Fundamentals of application development

**Sample Assessment Material (SAM)**

**Time allowed: 1 hour 15 minutes**

No extra materials are needed.

Please write clearly in black ink. Do not write in the barcodes.

Centre number       Candidate number

First name(s) \_\_\_\_\_

Last name \_\_\_\_\_

Date of birth

This unit is part of the Certificate and Extended Certificate qualifications.

This exam will always be set and marked by us. Exams will be available in January and June each year. Students can resit this unit and the best result will be used to calculate the certification result.

The time allowed is designed to give students approximately one minute per mark plus reading time.

If students require additional space to write their response(s), lined paper may be available at the end of the exam paper in a live exam. Remember the question number(s) **must** be clearly shown.

**INSTRUCTIONS**

- Use black ink.
- Write your answer to each question in the space provided. You can use extra paper if you need to, but you must clearly show your candidate number, the centre number and the question numbers.
- In the live exam there might be lined pages at the end of the question paper for you to use if you need extra space. Remember, you must clearly show the question numbers.
- Answer **all** the questions.

**INFORMATION**

- The total mark for this paper is **60**.
- The marks for each question are shown in brackets [ ].
- This document consists of **16** pages.

**ADVICE**

- Read each question carefully before you start your answer.

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Turn over

The exam will always have 60 marks. There are no sections in this exam.

This exam will have between nine and eleven mandatory questions. Question types include:

- Forced choice/controlled response questions. These are typically worth 1 to 4 marks.
- Short answer, closed response questions. These are typically worth 1 to 4 marks.
- Extended constructed response questions with points-based marks schemes. These are typically worth 1 to 4 marks.
- Extended constructed response questions with levels of response marks schemes. These are typically worth 6 or 9 marks.

These allow us to assess the following Performance Objectives:

- PO1 – Show knowledge and understanding
- PO2 – Apply knowledge and understanding
- PO3 – Analyse and evaluate knowledge, understanding and performance.

The questions will sample content from across all Topic Areas. At least one question (or sub-part) will relate to each Topic Area. Sub-content topic areas will be sampled across exam papers, over time.

1 Progress Walk is developing a smartphone health application to encourage adults to exercise by walking around their local town instead of driving. They will call their application ProgressWalk.

(a) Outline **two** characteristics of an application.

1 .....

.....

2 .....

.....

[2]

(b) Complete the table to match the correct application software category to each characteristic.

Write the name of **one** application software category in each of the **two** spaces in the table.

Application software categories:

- **Embedded**
- **Freeware**
- **Open**
- **Shareware**

Characteristics of application software categories	Application software category
Specialised for a particular device or machine that may not be considered as a computer.	
Developer retains the right to control, distribute modify and sell the software.	

[2]

All questions in this exam will relate to a single scenario. The scenario will always be introduced at the start of this exam and will develop throughout.

When we ask a **complete the table** question, we may give a list of words in alphabetical order for students to choose from. Students choose their response(s) and write it/them in the space given.

The mark scheme will allow any other indicator of the word chosen, for example, an arrow pointing to it.

The number of marks for each question will always be given at the end of the question and will always be right aligned.

3

The number of points needed will always be **emboldened**.

(c)  
(i) Identify **one** type of operating system that the ProgressWalk application could run on.

.....[1]

(ii) Explain **one** reason why the type of operating system you have chosen in 1(c)(i) is suitable for the ProgressWalk application.

.....  
.....[2]

The scenario will develop throughout this exam.

2  
(a) Players will score points when using the application. Players can exchange their points for healthy food and drink in local shops. Players will be able to compete and share their progress with their peers and monitor their weekly scores.

(i) Identify **one** application type that the ProgressWalk application could be included in.

.....[1]

(ii) Describe the purpose of the application type you have chosen in 2(a)(i).

.....  
.....[1]

(iii) Explain **one** reason why the application type you have chosen in 2(a)(i) is appropriate for the ProgressWalk application.

.....  
.....  
.....  
.....[2]

When a question assesses PO2 (apply knowledge and understanding) student responses **must** be applied to the scenario. The question wording will always indicate when a question assesses PO2.

Appendix B in the Specification contains a glossary of **Command Words** which could be used in this exam. The glossary tells you what we mean by each command word.

Where a response must relate to a response given in another question, this will be clearly indicated.



(b) When planning the ProgressWalk application, success criteria were defined.

Explain why success criteria are important.

.....  
.....  
.....  
.....[2]

In this question, students need to show their understanding (PO1) by explaining, generically, why success criteria are important when developing an application

(c) Document analysis is one way of gathering a client's requirements.

State **one other** method of gathering a client's requirements.

.....[1]

This **state** question assesses PO1 (show knowledge and understanding).

4 When planning the project, client requirements must be considered.

Identify **one** suitable storage location for the data collected by the application.

.....[1]

This **identify** question assesses PO2 (apply knowledge and understanding). Student responses **must** be applied to the scenario.

This question refers to using SWOT analysis generically, rather than specifically using SWOT analysis in the development of ProgressWalk's new application. This question assesses PO1 (show knowledge and understanding). Student responses will **not** need to be applied to the scenario.

5 At the start of development, a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis is completed.

(a) Outline **two** advantages of using SWOT analysis.

1 .....  
.....  
2 .....  
.....[2]





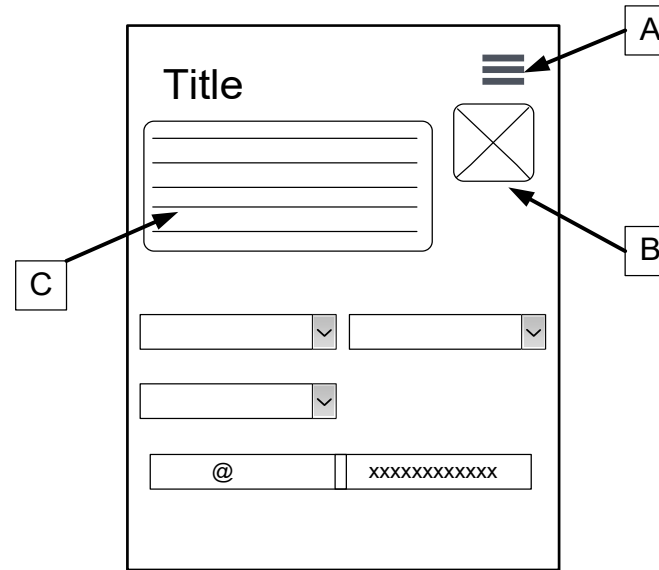
7

**PLEASE TURN OVER FOR QUESTION 7**

Where a question requires students to use a visual stimulus, we may leave a blank page and ask them to turn to the next page, so the stimuli is on view for all question parts.

7 Players will score points by uploading photos of themselves outside local buildings. Players can add text to the images. The images can also be posted on players' personal social media accounts.

- (a)
  - (i) This is a wireframe of the main screen human computer interface.



Complete the table using the letters (A-C) from the wireframe.

Wireframe component	Letter
Text box	
Image	
Menu	

[3]

When we ask a **complete the table** question, we may use letters to label components and conventions. Students choose their response(s) and write the letter in the space given.

The mark scheme will allow any other indicator of the word chosen, for example, an arrow pointing to it.





Where an acronym is first used in the scenario or question, we will always expand it and give the acronym in brackets afterwards. Then only the acronym will be used.

9 The wireframe will be used by a User Interface Designer (UID) to gather feedback from ProgressWalk.

(a) Explain **one** way the UID can use verbal communication skills to gather feedback about the wireframe.

.....

.....

.....

..... [2]

(b) Describe **one** responsibility of a UID, other than gathering feedback.

.....

.....

.....

..... [2]



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