



Cambridge International AS & A Level

INFORMATION TECHNOLOGY

9626/02

Paper 2 Practical

May/June 2023

2 hours 30 minutes

You will need: Candidate source files (listed on page 2)

INSTRUCTIONS

- Carry out every instruction in each task.
- Save your work using the file names given in the task as and when instructed.
- You must **not** have access to either the internet or any email system during this examination.
- You must save your work in the correct file format as stated in the tasks. If work is saved in an incorrect file format, you will **not** receive marks for that task.

INFORMATION

- The total mark for this paper is 90.
- The number of marks for each question or part task is shown in brackets [].

This document has **4** pages.

You have been supplied with the following source files:

j23cars.csv
j23clip1.mp3
j23clip2.mp3
j23extras.csv
j23paint.csv

You will create a database to store details of electric cars for Tawara Eco-Cars.

You must use the most efficient method to solve each task. All documents produced must be of a professional standard and suit the business context.

The company has provided the following information:

Each car has a unique registration number.

The company manufactures 7 different models of car.

The company has vehicles with the following drive types:

- *Electric Cell*
- *Dynamic Electric*
- *Quantumdrive*
- *Hydrodrive*
- *Residual Battery.*

The company manufactures cars in 8 different colours.

The only extras available are cruise control, LED lighting and satellite navigation. Each extra has a different cost. Cars can have 1, 2 or all 3 extras.

The manufacturing cost and the sale price for each car will be calculated at run-time in a query called Finance.

The manufacturing cost is calculated at run-time by adding the costs of the:

- *car body (determined by the model)*
- *drive type*
- *extras*
- *paint.*

The cost of the paint will be calculated as 200 multiplied by the Colour Factor.

The sale price of the car is:

(1000 plus the manufacturing cost) multiplied by 1.8

Use your local currency where appropriate. Store and display this to 2 decimal places.

All field names must be consistent, short and meaningful and contain no spaces. Set referential integrity where appropriate.

1 Examine the files:

j23cars.csv
j23extras.csv
j23paint.csv

Use the data from these files and the information provided to create a relational database, normalised to third normal form (3NF). Use appropriate data types, field lengths and validation routines.

Save your database with the file name **cars_** followed by your centre number_candidate number
e.g. cars_ZZ999_9999 [65]

Please turn over for Question 2.

- 2 Create a report showing details of cars made in 2019 that have LED lighting (they may also have other extras), where the colour of the car contains the words black, grey or blue. The report must be grouped by colour and model. It must be formatted to look like this:

| Black, grey or blue models from 2019 by A Candidate ZZ999_9999 | | | | | | |
|--|---------|--------|---|----------------------|--------------------|------------|
| Colour | Model | Reg_No | Year | Drive type Extras | Body_Style Cost | Price |
| Black | | | | | | |
| Alphadrive | | | | | | |
| | AS515PH | 2019 | Electric Cell LED lighting, Satellite navigation | Coupe | £5,820.00 | £12,276.00 |
| Comfortdrive | | | | | | |
| | BU939JN | 2019 | Hydrodrive LED lighting | Hatchback | £6,340.00 | £13,212.00 |
| Ecodrive | | | | | | |

Export this report in **.pdf** format with the file name **step_2_** followed by your centre number_ candidate number
e.g. step_2_ZZ999_9999 [11]

Tawara Eco-Cars is developing a short audio clip to advertise the company on the radio.

All audio clips produced must be of a professional standard and suit the business context.

- 3 Open the file **j23clip1.mp3**

Add reverberation to the clip. Amplify the sound to the maximum volume without the waveform being clipped. Apply noise reduction to the clip.

Export the clip in **.mp3** format as **23clip1_** followed by your centre number_candidate number
e.g. 23clip1_ZZ999_9999 [5]

- 4 Open the file **j23clip2.mp3**

Split the clip at 6.8 seconds. Do **not** edit the first 6.8 seconds. Move the audio from 6.8 seconds onwards so that it starts at 8.25 seconds. The clip between 6.8 and 8.25 seconds must be silent.

Add the stereo clip exported in step 3 to your editor. Mix both tracks down from stereo to mono.

Set the mono track from step 3 as the left channel and the other voice clip as the right channel of stereo output.

Export the clip in **.mp3** format as **j23sound_** followed by your centre number_candidate number
e.g. j23sound_ZZ999_9999 [9]

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.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

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