



# Cambridge IGCSE™

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## INFORMATION AND COMMUNICATION TECHNOLOGY

0417/31

Paper 3 Data Analysis and Website Authoring

May/June 2022

2 hours 30 minutes

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

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### INSTRUCTIONS

- Carry out **all** instructions in each step.
- Enter your name, centre number and candidate number on every printout before it is sent to the printer.
- Printouts with handwritten candidate details will **not** be marked.
- At the end of the examination, put all your printouts into the Assessment Record Folder.
- If you have produced rough copies of printouts, put a cross through each one to indicate that it is not the copy to be marked.
- You must **not** have access to either the internet or any email system during this examination.

### INFORMATION

- The total mark for this paper is 80.
- The number of marks for each question or part question is shown in brackets [ ].

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This document has **8** pages.

You have been supplied with the following source files:

j31balloon.csv  
j31balloon.jpg  
j31balloon.mp4  
j31banner.jpg  
j31kenya.htm  
j31maasai.jpg  
j31serengeti.jpg  
j31stylesheet.css  
j31tables.csv  
j31tanzania.htm  
j31text.txt

### Task 1 – Evidence Document

Create a new word-processed document.

Make sure your name, centre number and candidate number will appear on every page of this document.

Save this Evidence Document in your work area as **j2231evidence\_** followed by your centre number\_ candidate number, for example, j2231evidence\_ZZ999\_9999

You will need your Evidence Document during the examination to place screenshots when required.

**Task 2 – Image Editing and File Management****1** Create a new folder called **j2231**

Locate the following files and store them in your *j2231* folder.

**j31balloon.jpg**  
**j31balloon.mp4**  
**j31banner.jpg**  
**j31kenya.htm**  
**j31maasai.jpg**  
**j31serengeti.jpg**  
**j31stylesheet.css**  
**j31tanzania.htm**  
**j31text.txt**

Open the file **j31balloon.jpg** in a graphics package. Edit the image by:

- rotating it 90 degrees clockwise
- reflecting (flipping) it horizontally.

Save this new image in your *j2231* folder, in **.png** format, using the file name **balloon\_** followed by your candidate number, for example, **balloon\_9999**

Display the contents of your *j2231* folder showing the folder name, all file names, file extensions, file sizes, image dimensions and, for the video, the frame height and frame width.

Take a screenshot of this folder making sure that the required information is clearly visible. Place this screenshot in your Evidence Document.

[4]

**EVIDENCE 1**

A screenshot of your *j2231* folder with the required information clearly visible.

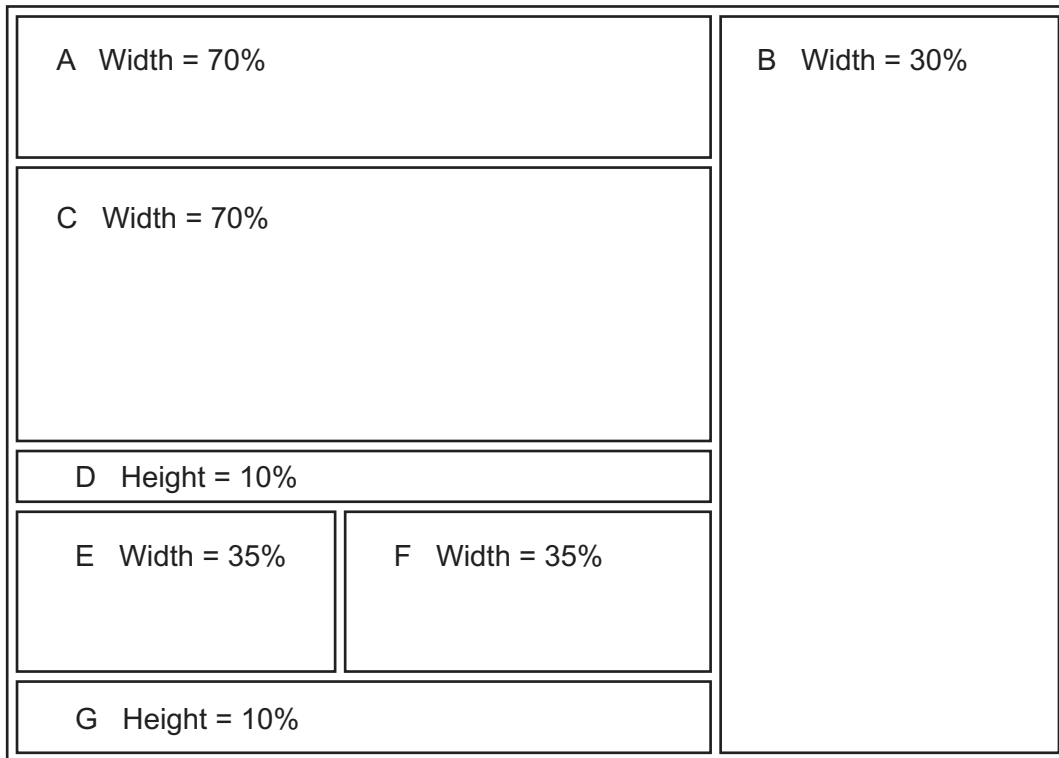
[Total: 4]

### Task 3 – Web Page

You are going to create a web page for *Tawara Balloon Safaris*. The web page and stylesheet must work in any browser. Make sure that your stylesheet contains no HTML. Make sure your HTML and stylesheet are as efficient as possible.

- 2 Create, in your *j2231* folder, a web page called **tbs.htm**

This web page must be created using a single table and must work in all browsers. The table must fit 90% of the width and height of the browser window. The table must have a structure as shown in this diagram:



Each table cell is identified with a letter. Some dimensions are shown. These must be set as percentage values. Do **not** set the height of cells A, B, C, E or F.

The cell contents shown in the diagram must **not** appear on your final web page.

Table borders must appear on the final web page.

[8]

- 3 Set the title of the web page to **Tawara Balloon Safaris** [1]
- 4 Set, in the HTML, the name of the default target window to **\_new** [1]

- 5 Place in cell:
- A the image **j31banner.jpg**
  - B the balloon image saved in step 1
  - C a video tag to display **j31balloon.mp4** so that it fits the width of this cell. Display an automated text-based error message if the browser does **not** support this video type
  - E the image **j31serengeti.jpg**
  - F the image **j31maasai.jpg**
- [9]
- 6 Place inline style attributes into the HTML so that each image, with its aspect ratio maintained, fits the width of the table cell. [1]
- 7 Add appropriate alternate text to all still images. [1]
- 8 Place in cell D the text from the file **j31text.txt**
- Set this text as style h2
- [2]
- 9 Enter in cell G the text:
- Click on the images above to enjoy the wonders of Kenya and Tanzania.**
- Web page last edited by:** followed by a space, your name, centre number and candidate number.
- Display the text you have entered as two paragraphs.
- Set all text in cell G as style h3
- [4]
- 10 Create a hyperlink from the image *j31maasai.jpg* to open the web page **j31kenya.htm** [2]
- 11 Create a hyperlink from the image *j31serengeti.jpg* to open the web page **j31tanzania.htm** in the browser window that is currently in use. [3]
- 12 Rename the stylesheet **j31stylesheet.css** to **j31stylesheet\_** followed by your centre number\_ candidate number, for example, **j31stylesheet\_ZZ999\_9999**
- Make sure this stylesheet is still in cascading stylesheet file format.
- Attach this stylesheet to your web page.
- [2]

A trainee has attempted to create the stylesheet for this website. This file contains a number of errors and omissions. All colour codes must be displayed in hexadecimal. Your stylesheet must **not** contain HTML or scripting language.

13 Open and edit the stylesheet you saved in step 12 to meet the following specifications:

Set the background for the web page so that it has a colour with a:

- blue component of **d2**
- red component of **74**
- green component of **ab**

Set the font for styles h1, h2 and h3 so that the browser selects and displays the font **Times CY**. If this font is not available, the browser selects and displays the font **Times New Roman**. If neither of these fonts are available, the browser must display its default serif font. Set the text in styles h1, h2 and h3 to black.

Set style h1 so the text is centre aligned with a 16-point font.

Set style h2 so the text is fully justified with a 12-point font.

Set style h3 so the text is left aligned with a 10-point font.

Set each table margin individually to 5% of the width and height of the browser window.

Set all table cell padding to 10 pixels.

Set all table borders and gridlines to be:

- visible
- separated
- solid
- black
- 1 pixel wide.

Set the spaces between the borders of all table elements to 10 pixels.

Correct and edit the comment at the start of the stylesheet to contain your name, centre number and candidate number.

Save this stylesheet in your *j2231* folder.

Take a screenshot to show the file name and all contents of your stylesheet and place this in your Evidence Document. Make sure the file name and all contents are clearly visible.

[27]

## EVIDENCE 2

A screenshot of your stylesheet with the required information clearly visible.

**14** Save your web page.

Display your web page in a browser. If necessary resize it so that:

- all the page can be seen
- all text can be easily read
- the address bar is visible.

Take screenshot evidence showing your web page in the browser. Place this in your Evidence Document.

**EVIDENCE 3**

Screenshot evidence of your web page in the browser with the table contents and background elements clearly visible.

Take a copy of the HTML source and place this in your Evidence Document.

[1]

**EVIDENCE 4**

A copy of your HTML source.

[Total: 62]

**Task 4 – Printing the Evidence Document**

Save and print your Evidence Document.

**PRINTOUT 1**

Make sure your **name**, **centre number** and **candidate number** appear on every page of your Evidence Document.

**Task 5 – Spreadsheet**

*You are going to create a spreadsheet to display data about safety equipment required for a hot air balloon.*

**15** Open and examine the file **j31tables.csv** in a spreadsheet package. This file will be used but must **not** be edited.

Open and examine the file **j31balloon.csv** in a spreadsheet package. Save this as a spreadsheet with the filename **Balloon\_** followed by your centre number\_candidate number, for example, **Balloon\_ZZ999\_9999**

Place in the header:

- left aligned, your name, centre number and candidate number
- right aligned, the automated file name with no file path.

[2]

16 Enter a formula in cell B5 to look up the equipment item using the item number in cell B4 for the value and the external file *j31tables.csv* for the array. [5]

17 Enter a formula in cell B7 to display the date and name of the employee who checked the item of safety equipment, using the balloon name, item number and external file *j31tables.csv* [4]

18 Print your spreadsheet showing the formulae.  
Make sure:

- it is in landscape orientation
- the row and column headings are displayed
- the contents of all cells are fully visible.

[1]

**PRINTOUT 2**

Make sure that you have entered your **name**, **centre number** and **candidate number** on the spreadsheet showing the formulae.

19 Enter into cell B3 the text **Beta**

Enter into cell B4 the number **2**

Save your spreadsheet.

Print the entire spreadsheet showing the values.

Make sure the:

- printout fits on a single page
- contents of all cells are fully visible
- row and column headings are **not** displayed.

[2]

**PRINTOUT 3**

Make sure that you have entered your **name**, **centre number** and **candidate number** on the spreadsheet showing the values.

[Total: 14]

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