



Cambridge IGCSE™

INFORMATION AND COMMUNICATION TECHNOLOGY

0417/31

Paper 3 Data Analysis and Website Authoring

May/June 2021

2 hours 30 minutes

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

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 [].

This document has **12** pages. Any blank pages are indicated.

You have been supplied with the following source files:

j2131bg.png
j2131bhh.css
j2131bhh1.jpg
j2131bhh2.jpg
j2131bhh3.jpg
j2131bhh4.jpg
j2131contact.htm
j2131home.csv
j2131jungle.jpg
j2131list.csv
j2131logo.jpg
j2131rate.csv
j2131text.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 **j2131evidence_** followed by your centre number_ candidate number, for example, j2131evidence_ZZ999_9999

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

Task 2 – File Management

You are going to create a web page and stylesheet for Bali Holiday Homes. The web page and stylesheet must work in any browser. All colour codes except those provided in the source files must be in hexadecimal. Make sure that your stylesheet contains no HTML. Make your HTML and stylesheet as efficient as possible.

1 Create a new folder called *bhh*

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

j2131bg.png
j2131bhh.css
j2131bhh1.jpg
j2131bhh2.jpg
j2131bhh3.jpg
j2131bhh4.jpg
j2131contact.htm
j2131jungle.jpg
j2131logo.jpg
j2131text.txt

Display the contents of your *bhh* folder showing the folder name, all file names, file extensions, image dimensions and file sizes. [1]

EVIDENCE 1

Take a screenshot of your *bhh* folder and place this in your Evidence Document. Make sure that the folder name, all file names, file extensions, image dimensions and file sizes are clearly visible.

[Total: 1]

Task 3 – Web Page

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

This web page must be created using a single table and must work in all browsers. The table must fit 80% of the browser window. The table must have a structure as shown in this diagram:

A height = 20%				
B width = 20% height = 20%	C width = 20%	D width = 20%	E width = 20%	F width = 20%
G	H	I	J	
K height = 40%			L	

Each table cell is identified with a letter. Some dimensions are shown. These must be set as percentage values and **not** in pixels.

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

Table borders must **not** appear on the final web page.

[10]

- 3 Set the title of the web page to **Bali Holiday Homes Homepage**

[1]

- 4 Set the name of the default target window to **_self**

[1]

- 5 Place in cell:

- A the image **j2131logo.jpg**
- B the image **j2131bhh1.jpg**
- C the image **j2131bhh2.jpg**
- D the image **j2131bhh3.jpg**
- E the image **j2131bhh4.jpg**
- F the image **j2131jungle.jpg**

[3]

- 6 Place inline style attributes into the HTML, so that each image fits the width of the table cell, with its aspect ratio maintained. [3]
- 7 Add appropriate alternate text to all images. [1]
- 8 Place in cell:
- G the text **Compact**
 - H the text **Larger**
 - I the text **Secluded**
 - J the text **With a view**
- Apply style h2 to all this text. [3]
- 9 Place in cell K the contents of the file **j2131text.txt**
- Apply paragraph style to this text. [2]
- 10 Enter in cell L the text:
- Last edited by:**
- On a new line below this, place your name, centre number and candidate number.
- On a new line below this, enter the text:
- Contact BHH**
- Apply style h3 to all text in cell L. [3]
- 11 Create a hyperlink from the text *Contact BHH* to open the web page **j2131contact.htm** in a new browser window called **_blank** [3]
- 12 Attach the stylesheet **j2131bhh.css** to this web page.
Save your web page. [1]

13 Open and edit the stylesheet **j2131bhh.css** to meet the following specifications:

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

- blue component of **36**
- red component of **21**
- green component of **2f**

Set the background for the web page so that the image **j2131bg.png** is placed in **only** the top left corner of the window.

Set the font for styles h1, h2, h3 and for the paragraph style, so that the browser selects and displays the font **San Francisco**. If this font is **not** available, the browser selects and displays the font **Calibri**. If neither of these fonts are available, the browser should display its default sans-serif font.

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

Right align all tables in the browser window.

Add your name, centre number and candidate number as a comment at the end of the stylesheet.

All colour codes must be displayed in hexadecimal. Make sure that your stylesheet contains no HTML or scripting language. Save this stylesheet in your *bhh* folder.

Take a screenshot to show the file name and all the contents of your stylesheet.

[14]

EVIDENCE 2

Place this screenshot in your Evidence Document. Make sure that the contents of your stylesheet can be easily read.

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

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

EVIDENCE 3

Place in your Evidence Document screenshot(s) showing the web page in your browser. Make sure that the table contents and background elements are visible.

Display the HTML source in your editor.

EVIDENCE 4

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

[Total: 45]

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 – Data Analysis

You are going to use a spreadsheet to list properties in Bali that match the location and room type entered by the user.

- 14** Open and examine the files **j2131home.csv** and **j2131rate.csv** in a spreadsheet package. Row 2 in the file *j2131home.csv* contains the location of the properties and rows 3 to 8 contain the names of properties. These files will be used to provide data for your spreadsheet and must **not** be changed.

Open and examine the file **j2131list.csv** in a spreadsheet package.

Data has been placed into cells B4 and B5 to help you test your model.

Place in the header, left aligned, the text **List prepared by:** followed by a space, your name, centre number and candidate number, then a space followed by **on** followed by a space and today's automated date.

Save this as a spreadsheet with the file name **j2131bhh_**centre number_**_**candidate number, for example, **j2131bhh_ZZ999_9999**

[3]

15 Format the spreadsheet to look like this:

	A	B	C
1	Bali Holiday Homes		
2			
3	List of suitable properties for your chosen location		
4	Location:	Ubud	
5	Room type:	Q	
6			
7	Number of persons	3	
8	Breakfast provided	Yes	
9			
10	1	Taman Villas	
11	2	Samara Villas	
12	3	Adiwanna Arya Villa	
13	4	Alaya Resort	
14	5	Adiwanna Resort	
15	6		
16			

Format the merged cell A1:B1 to contain white 28 point text on a black background.

[7]

16 Enter a function in cell B7, which depending on the room type, looks up the number of persons from the file *j2131rate.csv* [5]

17 Enter a function in cell B8, which depending on the room type, displays whether breakfast is provided, using the file *j2131rate.csv* [1]

18 Cells B10 to B15 must display the names of all properties in the location entered in B4 by the user. If there are less than 6 properties available in that location, cells not displaying a property name should be blank. Enter a formula in cell B10 that displays the first property, and then replicate this formula into cells B11 to B15. [11]

19 Save your spreadsheet.

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 and can be easily read.

[2]

PRINTOUT 2

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

20 Print your spreadsheet showing the values. Make sure the:

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

[1]

PRINTOUT 3

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

21 Change the data to produce a list of properties with a room type of **G** in **Nusa Lembongan**

Print your spreadsheet showing the values. Make sure the:

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

[4]

PRINTOUT 4

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

[Total: 34]

BLANK PAGE

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Cambridge IGCSE™

INFORMATION AND COMMUNICATION TECHNOLOGY

0417/31

Paper 3 Practical Test B

May/June 2021

MARK SCHEME

Maximum Mark: 80

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2021 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

This document consists of **11** printed pages.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

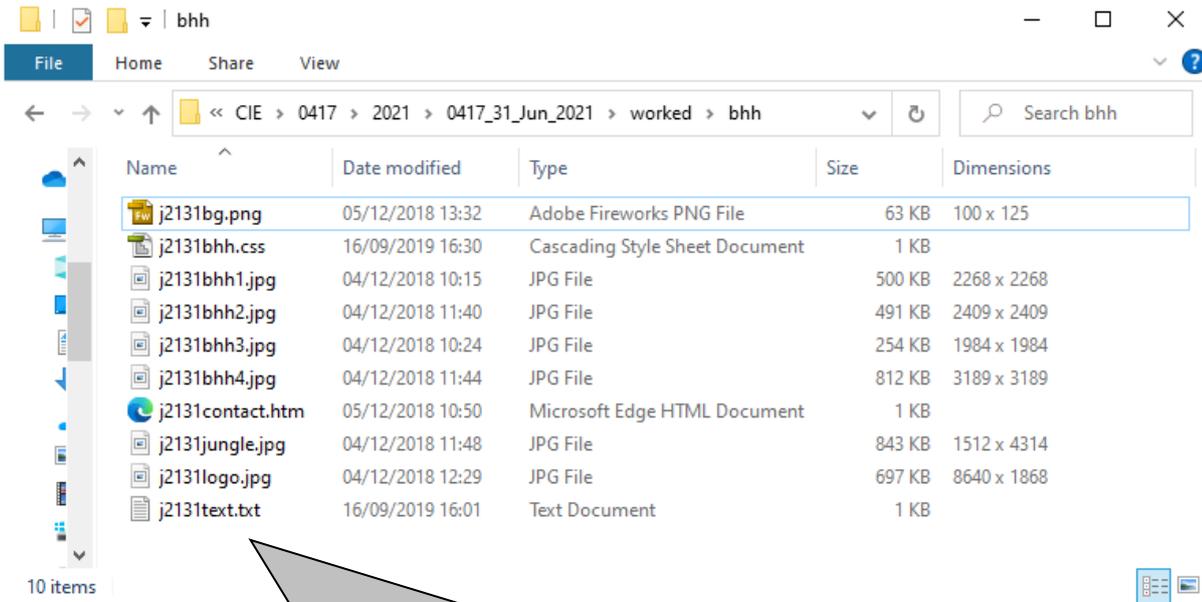
Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.



Screen shot folder name **bhh**, file names, dimensions, file extensions, file sizes 1 mark

```

j2131bhh.css - Notepad
File Edit Format View Help
table      { border: 0px solid white;
            border-collapse: separate;
            border-spacing: 20px;
            min-width: 400px;
            margin-left: auto; }

td         { border: 0px solid white; }

h2         { text-align: center;
            color: white; }

h3         { text-align: center;
            color: white; }

p          { color: white;
            text-align: justify;
            font-size: 12pt; }

body       { background-color: #212f36;
            background-image: url('j2131bg.png');
            background-repeat: no-repeat;
            background-position: left top; }

h1,h2,h3,p { font-family: "San Francisco", Calibri, sans-serif; }

/* A Candidate ZZ999 9999 */

```

table	margin-left:auto;	1 mark
body	background-color: #212f36;	1 mark
	background-image: url('j2131bg.png');	1 mark
	background-repeat: no-repeat;	1 mark
	background-position: left top;	1 mark
h1,h2,h3,p	font-family: San Francisco	1 mark
	"San Francisco" in speech marks	1 mark
	, Calibri	1 mark
	,sans-serif	1 mark
	All using single selector	1 mark
p	text-align:justify;	1 mark
	font-size: 12pt	1 mark
	Correct css syntax	1 mark
	/* Candidate details at bottom */	1 mark

Bali Holiday Homes Homepage

File | C:/Users/Graham/Desktop/2021/0417_31_Jun_2021/worked/bhh/bhh.htm

BHH

Bali Holiday Homes

Compact Larger Secluded With a view

At Bali Holiday Homes, we specialise in finding the right holiday properties for you. Bali suits multi-stay holidays as there is so much diversity in different parts of the island. Tailor your holiday to visit the bustling resorts in Seminyak, or small homes with swim up pools surrounded by jungle in Ubud. Venture further north to Lavina Beach and watch wild dolphins, or try our lakeside huts in Batur, surrounded by the volcanic Mount Agung and Mount Batur. Wherever you want to go, we have the place for you.

Last edited by:
A Candidate
ZZ999 9999
Contact BHH

In browser, address visible, no letters visible	1 mark
No external table border visible	1 mark
j2131logo.jpg visible	1 mark
4 correct images placed in row 2	1 mark
Jungle image placed in right column	1 mark
Aspect ratio of all images maintained	1 mark
Compact Larger	1 mark
Secluded With a view	1 mark
In h2	1 mark
Text placed from source file	1 mark
In style p	1 mark
Last edited by: A Candidate ZZ999 9999 Contact BHH	1 mark
Line breaks in correct place	1 mark
in h3	1 mark

```

<!DOCTYPE html>
<html>
  <head>
    <link rel="stylesheet" type="text/css" href="j2131bhh.css">
    <Title>Bali Holiday Homes Homepage</title>
    <base target="_self">
  </head>
  <body>
    <table style="width:80%;">
      <tr>
        <td colspan="5" style="height:20%;">
          
        </td>
      </tr>
      <tr>
        <td style="width:20%; height:20%;">
          
        </td>
        <td style="width:20%;">
          
        </td>
        <td style="width:20%;">
          
        </td>
        <td style="width:20%;">
          
        </td>
        <td style="width:20%" rowspan=3>
          
        </td>
      </tr>
      <tr>
        <td style="height:20%;">
          <h2>Compact</h2>
        </td>
      </tr>
    </table>
  </body>

```

Stylesheet	j2131bhh.css attached	1 mark
Title	Bali Holiday Homes Homepage	1 mark
Target	Base target="_self"	1 mark

Table	width=80%	1 mark
Row 1	height=20%	1 mark
	colspan=5	1 mark

Row 2	height:20%	1 mark
-------	------------	--------

Row 2	rowspan=3 in last cell	1 mark
Rows 2/3	width:20% for all cells	1 mark

Images	width of all images 100%	1 mark
	Using inline style attributes	1 mark
	Appropriate alt text for all 6 images	1 mark

```

</td>
<td>
  <h2>Larger</h2>
</td>
<td>
  <h2>Secluded</h2>
</td>
<td>
  <h2>With a view</h2>
</td>
</tr>

```

Row 4	height:40% colspan=3 in first cell	1 mark 1 mark
-------	---------------------------------------	------------------

```

<tr style="height:40%;">
  <td colspan="3">
    <p>At Bali Holiday Homes, we specialise in finding the right holiday
properties for you. Bali suits multi-stay holidays as there is so much
diversity in different parts of the island. Tailor your holiday to visit
the bustling resorts in Seminyak, or small homes with swim up pools
surrounded by jungle in Ubud. Venture further north to Lavina Beach and
watch wild dolphins, or try our lakeside huts in Batur, surrounded by the
volcanic Mount Agung and Mount Batur. Wherever you want to go, we have the
place for you.
    </p>
  </td>
  <td>
    <h3>Last edited by:</h3><h3>A Candidate ZZ999 9999</h3>
    <a href="j2131contact.htm" target="_blank">
      <h3>Contact BHH</h3>
    </a>
  </td>
</tr>
</table>
</body>
</html>

```

Hyperlink	anchor around Contact BHH only	1 mark
	href="j2131contact.htm"	1 mark
	target="_blank"	1 mark

Header **List prepared by:** space Name & numbers 1 mark
 ...space on space automated date 1 mark
 Left aligned 1 mark

List prepared by: A Candidate ZZ999 9999 on 06/11/2020

	A	B
1	Bali Holiday Homes	
3	List of suitable properties for your chosen location	
4	Location:	Ubud
5	Room type:	Q
6		
7	Number of persons	=VLOOKUP(B5,'D:\CIE\0417\2021\0417_31_Jun_2021\SF\j2131rate.csv',2,TRUE)
8	Breakfast provided	=VLOOKUP(B5,'D:\CIE\0417\2021\0417_31_Jun_2021\SF\j2131rate.csv',4,TRUE)
9		
10	1	=IF(HLOOKUP(B5,j2131rate.csv,2,TRUE)=B5,=VLOOKUP(B5,j2131rate.csv,\$A\$2:\$B\$27,2,TRUE),0)
11	2	=IF(HLOOKUP(B5,j2131rate.csv,2,TRUE)=B5,=VLOOKUP(B5,j2131rate.csv,\$A\$2:\$B\$27,2,TRUE),0)
12	3	=IF(HLOOKUP(B5,j2131rate.csv,2,TRUE)=B5,=VLOOKUP(B5,j2131rate.csv,\$A\$2:\$B\$27,2,TRUE),0)
13	4	=IF(HLOOKUP(B5,j2131rate.csv,2,TRUE)=B5,=VLOOKUP(B5,j2131rate.csv,\$A\$2:\$B\$27,2,TRUE),0)
14	5	=IF(HLOOKUP(B5,j2131rate.csv,2,TRUE)=B5,=VLOOKUP(B5,j2131rate.csv,\$A\$2:\$B\$27,2,TRUE),0)
15	6	=IF(HLOOKUP(B5,j2131rate.csv,2,TRUE)=B5,=VLOOKUP(B5,j2131rate.csv,\$A\$2:\$B\$27,2,TRUE),0)

B7 =VLOOKUP(...) 1 mark
 B5 or \$B\$5 1 mark
 ,j2131rate.csv!\$A\$2:\$B\$27 or D27 1 mark
 ,2 1 mark
 ,FALSE 1 mark
B8 =VLOOKUP(B5,j2131rate.csv!\$A\$2:\$D\$27,4,0) 1 mark

List prepared by: A Candidate ZZ999 9999 on 06/11/2020

	A	B
1	Bali Holiday Homes	
3	List of suitable properties for your chosen location	
4	Location:	Ubud
5	Room type:	Q
6		
7	Number of persons	=VLOOKUP(B5,'D:\CIE\0417\2021\0417_31_Jun_2021\SF\j2131rate.csv',2,TRUE)
8	Breakfast provided	=VLOOKUP(B5,'D:\CIE\0417\2021\0417_31_Jun_2021\SF\j2131rate.csv',4,TRUE)
9		
10	1	=IF(HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A10+1,FALSE)=0,"",HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A10+1,FALSE))
11	2	=IF(HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A11+1,FALSE)=0,"",HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A11+1,FALSE))
12	3	=IF(HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A12+1,FALSE)=0,"",HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A12+1,FALSE))
13	4	=IF(HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A13+1,FALSE)=0,"",HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A13+1,FALSE))
14	5	=IF(HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A14+1,FALSE)=0,"",HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A14+1,FALSE))
15	6	=IF(HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A15+1,FALSE)=0,"",HLOOKUP(\$B\$4,j2131home.csv!\$H\$8:A15+1,FALSE))

B10 core	HLOOKUP(...)	1 mark
	B4	1 mark
	...absolute reference	1 mark
	,j2131home.csv!\$B\$2:\$H\$8	1 mark
	,A10+1	1 mark
	,FALSE or ,0	1 mark
B10 blank	IF (...)	1 mark
	...Test copy of core function	1 mark
	...Test for 0 / error	1 mark
	...Place blank cell	1 mark
Replication	All 6 formulae	1 mark
	Row and column headings displayed	1 mark
	Landscape & fully visible	1 mark

List prepared by: A Candidate ZZ999 9999 on 06/11/2020

Bali Holiday Homes	
List of suitable properties for your chosen location	
Location:	Ubud
Room type:	Q
Number of persons	3
Breakfast provided	Yes
1	Taman Villas
2	Samara Villas
3	Adiwanna Arya Villa
4	Alaya Resort
5	Adiwanna Resort
6	

Rows 1 & 3	Cells A1:B1 and A3:B3 merged	1 mark
Row 1	28 point	1 mark
	White sans-serif font	1 mark
	Black background	1 mark
Row 2	Half height of row 3	1 mark
Row 3	Bold	1 mark
Alignment	All centre aligned	1 mark
Values	Single portrait page no row and column headings, fully visible	1 mark

List prepared by: A Candidate ZZ999 9999 on 06/11/2020

Bali Holiday Homes	
List of suitable properties for your chosen location	
Location:	Nusa Lembongan
Room type:	G
Number of persons	2
Breakfast provided	Yes
1	Sunset Garden
2	Sunset Villas
3	Sunset View
4	Sunset Vista
5	Ombak Bay
6	

Modelling	Room type set to G	1 mark
	Location Nusa Lembongan	1 mark
	2 people & Yes for breakfast	1 mark
	Only 5 correct results with blank cell	1 mark