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| Candidate surname | | | | | Other names | | | | |
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Pearson Edexcel International Advanced Level

Time 3 hours

Paper
reference

WIT12/01

Information Technology

International Advanced Subsidiary/Advanced Level
UNIT 2

You must have:

A computer workstation with a text editor, browser software and Questions folder (containing assets, HTML and CSS files).

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions **requiring a written answer** in the spaces provided – *there may be more space than you need.*
- Carry out the practical tasks on the computer workstation and save new or amended files using the file name given in the question.
- You must **not** use the internet during the examination.

Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Save your work regularly.
- Check your answers if you have time at the end.

Turn over ►

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SECTION A

You are advised to spend about 60 minutes on this section.

Answer ALL questions in this section.

Answer the questions requiring a written answer in the spaces provided.

Some questions will require you to save code in a specified format.

1 HTML is used to structure web pages.

(a) HTML elements can belong to different content models, e.g. **flow**.

Give the name of **one other** content model.

(1)

(b) **Figure 1** shows how an inline frame (iframe) should be displayed in a browser.

The HTML code should:

- display the contents of `iframeText.html` in the `iframe`
- remove the vertical scrollbar from the `iframe`.

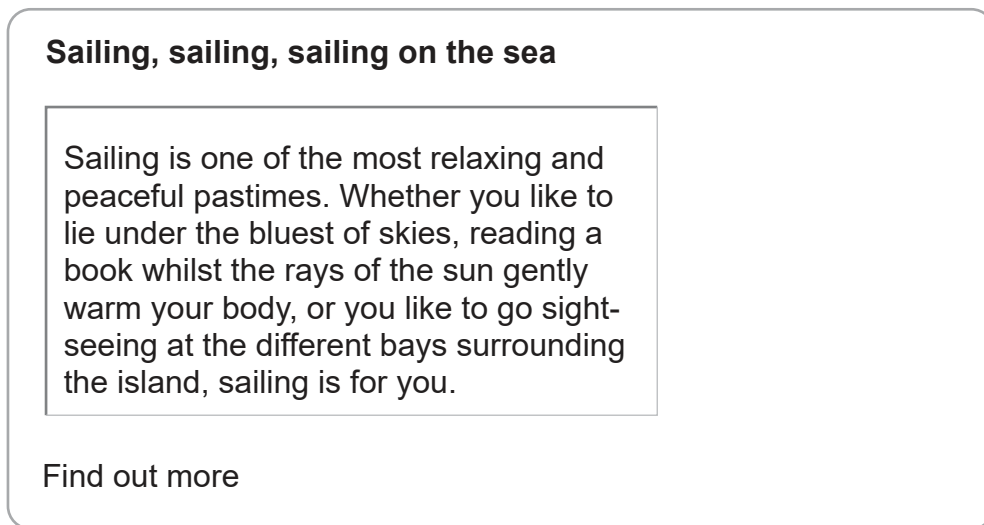


Figure 1

(i) The page does not display as intended because there are **two** errors in the HTML code.

Open file **Q01b.html** in a browser and in your editor to identify the errors.

Amend the code to correct the **two** errors.

Save your amended code as **Q01bFINISHED.html**

(2)



(ii) The web page shown in **Figure 1** needs an external hyperlink to a specific part of the web page **sailing.html**

The code must:

- include an HTML5 <a> tag
- refer to the web page **sailing.html**
- refer to the anchor named **yachts**
- use the text **Find out more** for the hyperlink.

Write the HTML code to insert the external hyperlink.

(4)

Use this space to write your code.

(c) Explain **one** difference between an HTML tag and an HTML attribute.

(2)

.....

.....

.....

.....

(Total for Question 1 = 9 marks)

DO NOT WRITE IN THIS AREA



2 CSS is used by browsers to style HTML elements.

(a) A child selector can be used in CSS.

Name **one other** selector that can be used in CSS.

(1)

(b) **Figure 2** shows some CSS and HTML code.

```
2     header > p {  
3         font-family: "Times New Roman";  
4     }  
5 </style>  
6 </head>  
7 <body>  
8     <header>  
9         <p>Sailing boat holidays</p>  
10    </header>  
11  
12    <p>Contact us for more information</p>
```

Figure 2

Describe the effect of the CSS code in lines 2 to 4.

(2)

(c) A web page contains a square.

When a mouse hovers over the square it should take one second to transition into a circle.

Open file **Q02c.html** in your editor.

Amend the CSS code to implement the hover effect.

Save your amended code as **Q02cFINISHED.html**

(2)



(d) A web page contains an image and some text.

The image and text are combined to resemble a sticky note.

The image should:

- be 200 pixels wide by 200 pixels high
- have a 3-pixel black border.

The sticky note should:

- have a yellow (#FEFE33) background
- be rotated by 7 degrees.

Open file **Q02d.html** in your editor.

Amend the CSS code to implement the styling of the image and the styling of the sticky note.

Save your amended code as **Q02dFINISHED.html**

(4)

(e) A web page uses margins and padding.

Describe **one** difference between margins and padding.

(2)

(Total for Question 2 = 11 marks)



3 JavaScript provides interactivity for web pages.

(a) **Figure 3** shows the JavaScript used to calculate a grade for a test.

```

1 var mark = prompt("Enter the mark for the test")
2 if (mark < 40) {
3     alert("Student needs to take the test again")
4 } else if (mark < 60) {
5     alert("Student achieved a D grade")
6 } else if (mark < 70) {
7     alert("Student achieved a C grade")
8 } else if (mark < 80) {
9     alert("Student achieved a B grade")
10 } else {
11     alert("Student achieved an A grade")
12 }

```

Figure 3

Figure 4 shows how the grades are calculated.

| | |
|------------------|-----------------------|
| Under 40 marks | Retake of test needed |
| 40 to 49 marks | E grade |
| 50 to 59 marks | D grade |
| 60 to 69 marks | C grade |
| 70 to 79 marks | B grade |
| 80 or more marks | A grade |

Figure 4

Inputting a mark of 40 should produce this result: Student achieved an E grade.

It produces this result: Student achieved a D grade.

Explain why the code produces the incorrect result.

(2)

.....

.....

.....

.....



(b) Open file **Q03b.html** in your editor.

The HTML code displays a table.

When the page loads the JavaScript code, it should:

- calculate:
 - the lowest mark in the test
 - the highest mark in the test
 - the average mark in the test
- display the results of the calculations in the HTML table.

The JavaScript code is incomplete. This means that the highest mark and the average mark are not calculated.

Amend the JavaScript code so that the calculations are carried out.

Save your amended code as **Q03bFINISHED.html**

(3)

(c) Open **Q03c.html** in your editor.

The JavaScript code generates a random number.

The user clicks the **Guess** button when they think that the number of seconds passed matches the random number.

A message is displayed to let them know if they have guessed correctly or not.

Amend the code so that:

- when the user clicks the **Guess** button the **checkGuess** function is called
- the **checkGuess** function:
 - determines whether the number of seconds that have passed matches the random number
 - displays **You guessed correctly** if they match
 - displays **You guessed incorrectly at # seconds. Game over** if they don't match (# is the number of seconds that have passed)
 - disables the **Guess** button.

Save your amended code as **Q03cFINISHED.html**

(4)



(d) HTML code and JavaScript code can interact using events and event handlers.

(i) Give **one** example of an event.

(1)

.....

.....

(ii) Give the purpose of an event handler.

(1)

.....

.....

(Total for Question 3 = 11 marks)



SECTION B

You are advised to spend about 120 minutes on this section.

Answer ALL questions in this section.

Answer the questions requiring a written answer in the spaces provided.

Some questions will require you to save code in a specified format.

4 We Love Sailboats needs a responsive web page.

Two mock-ups, a style guide and some initial code have been provided.

The initial code can be found in **Q04.html** and **Q04.css**

Figure 5 shows a mock-up for screen sizes less than 600 pixels wide.

Figure 6 shows a mock-up for screen sizes of 600 pixels or more wide.

PDF versions of the mock-ups can be found in the assets folder.



Figure 5

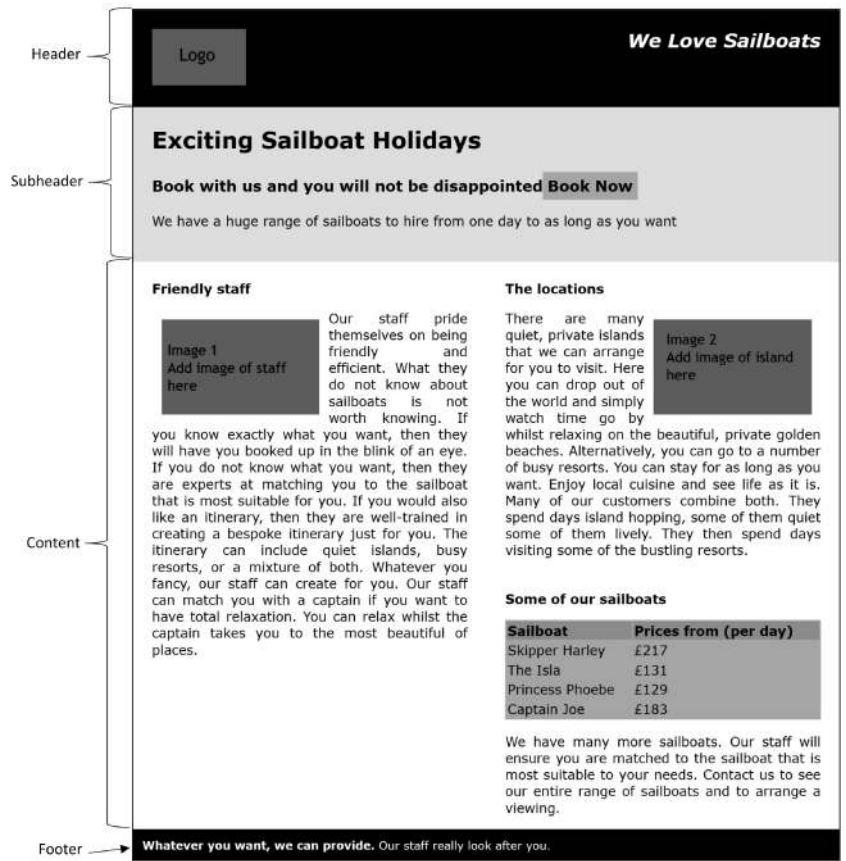


Figure 6



Overall page requirements

- Use HTML5 elements to define the different parts of the page.
- Use a responsive layout, with the breakpoint provided, to target screens at 600 or more pixels wide.
- Use Verdana font style.
- Use an external style sheet.
- Use suitable padding and/or margins.

Web Design Style Guide – less than 600 pixels wide (Figure 5)

Header

- Set background colour to black (#000000).
- Insert the text **We Love Sailboats** as shown.
- Set font size of **We Love Sailboats** to 16 pixels.
- Set font colour to white (#FFFFFF).
- Italicise the text.
- Insert the logo image as shown. The image can be found in the assets folder.
- Set width of logo image to 100 pixels.

Subheader

- Set background colour to light blue (#BFEFFF).
- Insert the text **Exciting Sailboat Holidays** as shown.
- Insert the text **Book with us and you will not be disappointed** as shown.
- Insert the text **We have a huge range of sailboats to hire from one day to as long as you want** as shown.
- Set font size of **Book with us and you will not be disappointed** to 16 pixels.
- Centre align all text.

Book Now button

- Insert the text **Book Now** as shown.
- Hyperlink the text **Book Now** to page booking_form.html
- Set background colour to grey (#BEBEBE).
- Set font size of the hyperlink to 16 pixels.
- Set font colour to black (#000000).
- Set hover font colour to white (#FFFFFF).

Content

- Insert the text **Friendly staff, The locations** and **Some of our sailboats** as shown.
- Insert the images and text as shown. The images and text can be found in the assets folder.
- Set font size of the text to 12 pixels.
- Justify the text.
- Set width of the images to 100% of the width of the page.

Table

- Insert the table as shown. The table text can be found in the assets folder.
- Set width of the table to 100% of the width of the page.
- Set background colour of the first row to dark grey (#A9A9A9).
- Set background colour of the rest of the table to grey (#BEBEBE).



Footer

- Set background colour to black (#000000).
- Insert the text **Whatever you want, we can provide.** as shown.
- Insert the text **Our staff really look after you.** as shown.
- Set font size to 14 pixels.
- Set font colour to white (#FFFFFF).
- Embolden the text **Whatever you want, we can provide.**

Web Design Style Guide – 600 or more pixels wide (Figure 6)**Header**

- Set text alignment for **We Love Sailboats** to right.

Subheader

- Set text alignment to left.

Content

- Set the width of both images to 50% of their associated paragraphs.
- Position the first image to appear to the left of the friendly staff paragraph.
- Position the second image to appear to the right of the locations paragraph.
- Wrap text around the images.
- Position the text **Some of our sailboats**, the table and the sailboat paragraph underneath the locations paragraph.

Develop a prototype for the responsive web page for We Love Sailboats using the mock-ups, style guide, images, text and initial code provided.

Save your files as **Q04FINISHED.html** and **Q04FINISHED.css**

(Total for Question 4 = 20 marks)



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5 We Love Sailboats wants to expand the functionality of its website.

It wants to implement:

- a review page that allows a user to submit a review
- a staff details page that allows a user to click on an image of a member of staff to see their details.

All of the required files are supplied in the Q05 folder.

No additional resources are required.

You only need to add HTML, JavaScript and comments to the existing files.

Review page

review.html contains an early prototype.

Complete the prototype to allow a customer to submit a review.

When the submit button is clicked an automated method must ensure that:

- an email address has been input
- review comments have been input
- today's date has been automatically generated
- the review details have been saved in the review array including:
 - the email address
 - today's date using the same format as the dates already in the array e.g. 19/8/2021
 - the review comments
- the review form is hidden
- the total number of reviews has been automatically generated
- the review details are displayed on the page.

Figure 7 shows how the review details must be displayed when valid data has been submitted.

Review details

Total reviews: 6

Email address: test@gmtestmail.com

Date: 21/3/2021

Review comments: Had a brilliant time and would highly recommend.

Figure 7

You must add suitable comments to your code to explain how it works.

Save your file as reviewFINISHED.html



Staff page

staff.html contains an early prototype.

Complete the prototype.

It must:

- use an automated method to display an image of each staff member when the staff page loads
- use an automated method to display the name and experience of a staff member when the user clicks on their image.

Figure 8 shows how the name and experience must be displayed when an image is clicked.

This is Maryam.
Maryam has been with us for three years. She is an expert in combining relaxing, private island holidays with the busier resorts.

Figure 8

You must add suitable comments to your code to explain how it works.

Save your file as staffFINISHED.html

(Total for Question 5 = 20 marks)



6 Websites can be developed using fixed width layout design, liquid layout design, and responsive design.

A company has carried out research into the type of devices used to access its website.

These are the results of the research shown from most used to the least used.

1. Smartphone
2. Tablet
3. Desktop PC
4. Games console

Assess the suitability of using fixed width layout design, liquid layout design, and responsive design for the website.

(9)

Ruled area for writing the assessment.



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(Total for Question 6 = 9 marks)

TOTAL FOR PAPER = 80 MARKS



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