www.dynamicpapers.com

Cambridge Assessment International Education

Cambridge International AS & A Level

INFORMATION TECHNOLOGY **9626/04**

Paper 4 Advanced Practical **February/March 2024**

2 hours 30 minutes

0238975475

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 question is shown in brackets [ ].

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

DC (DE/SW) 327691/3
© UCLES 2024

[Turn over

www.dynamicpapers.com

You have been supplied with the following source files:

2021_OrderData.csv
2022_OrderData.csv
2023_OrderData.csv
Bakery.jpg
Chocolate.png
Cupcake.js
Hat.svg
Llfan.html
Orange.png
Vanilla.png
WireFrame.png

Create a folder called **Examination**.
You must save all your work in this folder.

Copy the source files into this folder.
Do **not** delete these files when submitting your work.
Do **not** tidy the folder by deleting files created at any stage of attempting the tasks.

You must use the most efficient methods to solve each task. All work produced must be of a professional standard and contain your candidate details.

© UCLES 2024

www.dynamicpapers.com

Task 1

Open and examine the files **2021_OrderData.csv**, **2022_OrderData.csv** and **2023_OrderData.csv**. These files contain details of cake sales to business customers of Llfan Bakery.

Use these files to create a single spreadsheet named **CakeSales21-23**_centre number_candidate number. For example, CakeSales21-23_ZZ999_9999

Remove rows containing *Gratis*.

Add these calculated columns:

- the profit per order (*Revenue minus Cost to produce and ship*)
- the month of the order
- the number of days taken to ship the order (*Date shipped minus Order date*)

Edit and format the spreadsheet so it looks like this:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Order ID	Customer_ID	Customer name	Cakes shipped	Revenue	Cost to produce and ship	Profit per order	Order date	Month of order	Quarter	Date shipped	Order status	Days to ship
14	400187	785432	Drive Thro Centres	679	£3,395.00	£1,697.50	£1,697.50	19/11/2023	November	2023 4th Qtr		Open	
15	279099	985245	Star Stores	77	£385.00	£154.00	£231.00	18/11/2023	November	2023 4th Qtr	21/11/2023	Shipped	3 days
16	221661	152689	Burger Beast	910	£4,550.00	£1,365.00	£3,185.00	16/11/2023	November	2023 4th Qtr	21/11/2023	Shipped	5 days
17	196228	325698	Peri-Buys	300	£1,500.00	£450.00	£1,050.00	18/11/2023	November	2023 4th Qtr	20/11/2023	Shipped	2 days
18	499944	325698	Peri-Buys	511	£2,555.00	£1,277.50	£1,277.50	18/11/2023	November	2023 4th Qtr	20/11/2023	Shipped	2 days
19	462194	985245	Star Stores	97	£485.00	£145.50	£339.50	17/11/2023	November	2023 4th Qtr	20/11/2023	Shipped	3 days
20	288845	785432	Drive Thro Centres	868	£4,340.00	£2,170.00	£2,170.00	16/11/2023	November	2023 4th Qtr	20/11/2023	Shipped	4 days
21	408539	452584	Ace Stores	211	£1,055.00	£527.50	£527.50	17/11/2023	November	2023 4th Qtr	19/11/2023	Shipped	2 days
22	962242	985245	Star Stores	549	£2,745.00	£1,372.50	£1,372.50	16/11/2023	November	2023 4th Qtr	19/11/2023	Shipped	3 days
23	559502	985245	Star Stores	469	£2,345.00	£1,172.50	£1,172.50	15/11/2023	November	2023 4th Qtr	19/11/2023	Shipped	4 days
24	936106	152689	Burger Beast	878	£4,390.00	£2,195.00	£2,195.00	14/11/2023	November	2023 4th Qtr	19/11/2023	Shipped	5 days
25	716031	985245	Star Stores	701	£3,505.00	£1,402.00	£2,103.00	14/11/2023	November	2023 4th Qtr	18/11/2023	Shipped	4 days
26	410303	785432	Drive Thro Centres	198	£990.00	£297.00	£693.00	14/11/2023	November	2023 4th Qtr	18/11/2023	Shipped	4 days
27	634504	452584	Ace Stores	415	£2,075.00	£830.00	£1,245.00	15/11/2023	November	2023 4th Qtr	17/11/2023	Shipped	2 days
28	718857	152689	Burger Beast	995	£4,975.00	£1,492.50	£3,482.50	12/11/2023	November	2023 4th Qtr	17/11/2023	Shipped	5 days
29	478868	985245	Star Stores	885	£4,425.00	£2,212.50	£2,212.50	13/11/2023	November	2023 4th Qtr	16/11/2023	Shipped	3 days

© UCLES 2024

[Turn over

www.dynamicpapers.com

Create a new worksheet in your workbook.

Use this worksheet to display four charts showing:

- the total cakes sold in each year
- the total revenue for each year
- the total profit for each year
- the number of orders for each customer; the user must be able to select either 2021, 2022, 2023 or all the years.

The worksheet must look like this:



The title for the chart showing the number of orders for each customer must change to show the data selected. For example:



© UCLES 2024

www.dynamicpapers.com

In the Quarter column, the value of the quarter can be calculated by the formula

=ROUNDUP(MONTH(*Order date*)/3,0)

Amend the formula to display the results as shown here:

	A	B	C	D	E	F	G	H	I	J
1	Order ID	Customer_ID	Customer name	Cakes shipped	Revenue	Cost to produce and ship	Profit per order	Order date	Month of order	Quarter
2	577597	152689	Burger Beast	329	£1,645.00	£658.00	£987.00	23/11/2023	November	2023 4th Qtr
3	503658	985245	Star Stores	350	£1,750.00	£875.00	£875.00	23/11/2023	November	2023 4th Qtr
118	272980	985245	Star Stores	304	£1,520.00	£760.00	£760.00	30/09/2023	September	2023 3rd Qtr
119	397421	785432	Drive Thro Centres	914	£4,570.00	£1,828.00	£2,742.00	28/09/2023	September	2023 3rd Qtr
304	262822	985245	Star Stores	70	£350.00	£175.00	£175.00	29/06/2023	June	2023 2nd Qtr
305	881015	325698	Peri-Buys	909	£4,545.00	£1,818.00	£2,727.00	30/06/2023	June	2023 2nd Qtr
1322	389840	785432	Drive Thro Centres	225	£1,125.00	£450.00	£675.00	30/03/2022	March	2022 1st Qtr
1323	532788	985245	Star Stores	160	£800.00	£320.00	£480.00	30/03/2022	March	2022 1st Qtr

Insert a chart on your worksheet to display the sales per quarter. The user must be able to select the year 2021, 2022, 2023 or all the years and the quarter.

The chart must match this example:



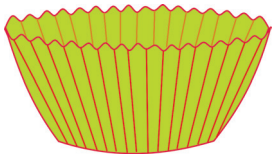
[30]

www.dynamicpapers.com

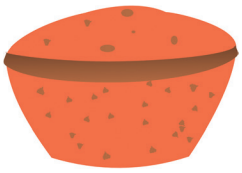
Task 2

You are required to create a vector image of a cupcake.

It must consist of three separate elements that closely match the following examples:



Case



Cake



Topping

Save each image as a scalable vector graphic (**.svg**) as image name_your centre number_candidate number.

For example, Case_ZZ999_9999, Cake_ZZ999_9999, Topping_ZZ999_9999

The image must be assembled to look like this.



Save the image as **Cupcake**_your centre number_candidate number.
For example, Cupcake_ZZ999_9999

[15]

© UCLES 2024

www.dynamicpapers.com

Task 3

You are required to create an animation of a cupcake being assembled.

In your animation application set the stage to 640 pixels by 480 pixels and use **Bakery.jpg** as the background.

The *Bakery.jpg* image shows two chutes and a nozzle.

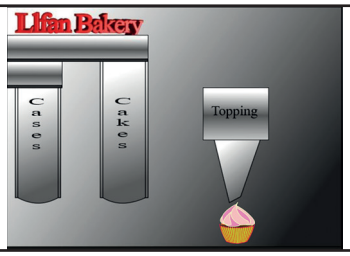


		
Start of animation	Your *Case* image must enter the frame from the left and take 1 second to reach the top of Chute 1.	It must then take 1.5 seconds to fall smoothly down Chute 1 to reach the bottom.
		
At 2.5 seconds the animation must look like this.	The case must then take 1.5 seconds to move to the position under Chute 2.	Your *Cake* image must then enter from the left and take 1.5 seconds to reach the position above Chute 2.
		
The cake must then take 1.5 seconds to fall smoothly down Chute 2 and fit in the case.	At 7 seconds the animation must look like this.	The cake must then take 1.5 seconds to move to the position under the nozzle and your topping must start to appear.

© UCLES 2024

[Turn over

www.dynamicpapers.com

	
The topping must take 1 second to grow to the size and position as shown.	The final image must then take 1.5 seconds to completely leave the stage to the right.

The animation must restart after 1 second and loop continuously.

Save the completed animation as an animated gif with the file name **Bakery**_your centre number_candidate number. For example, Bakery_ZZ999_9999

[30]

© UCLES 2024

www.dynamicpapers.com

Task 4

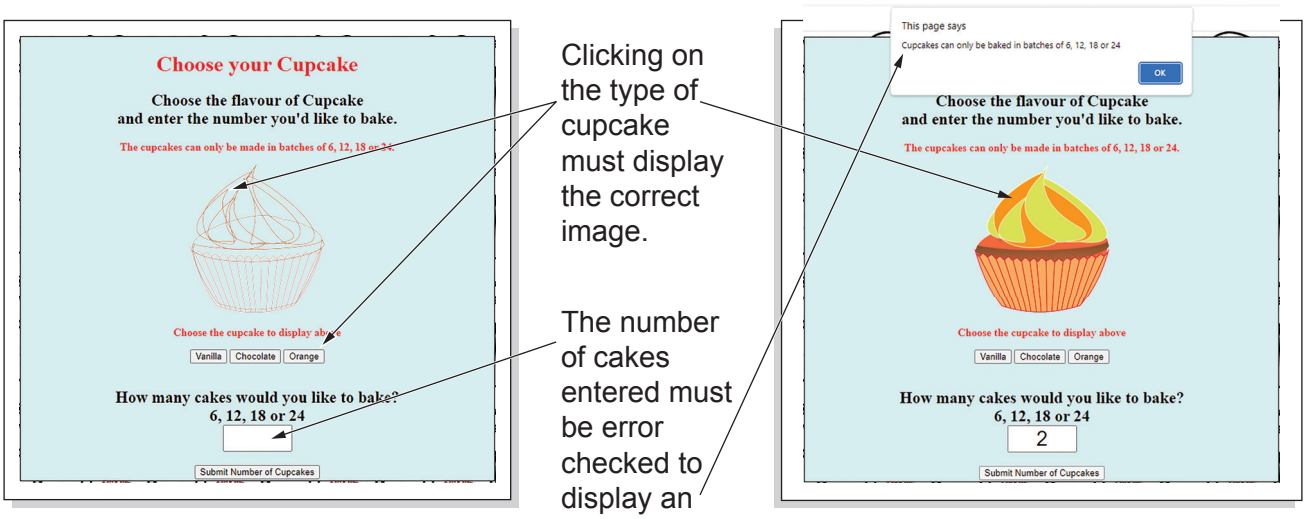
Create a new folder named **Llfan** in your examination folder.

Copy these files into the *Llfan* folder:

Chocolate.png
Cupcake.js
Hat.svg
Llfan.html
Orange.png
Vanilla.png
WireFrame.png

Open **Llfan.html** in your browser.

You are required to complete the external JavaScript file named *Cupcake.js* to enable the webpage to function as described here:



Open *Llfan.html* in your text editor to determine the placeholder for the images and the names of the required functions.

The initial image is named wireframe.png. This must be replaced with the image that matches the cake type when a button is clicked.

The names of the functions required to display the correct images are shown in the html code.

Open the file *Cupcake.js* in your text editor. Enter the code to display the correct images.

© UCLES 2024

[Turn over

www.dynamicpapers.com

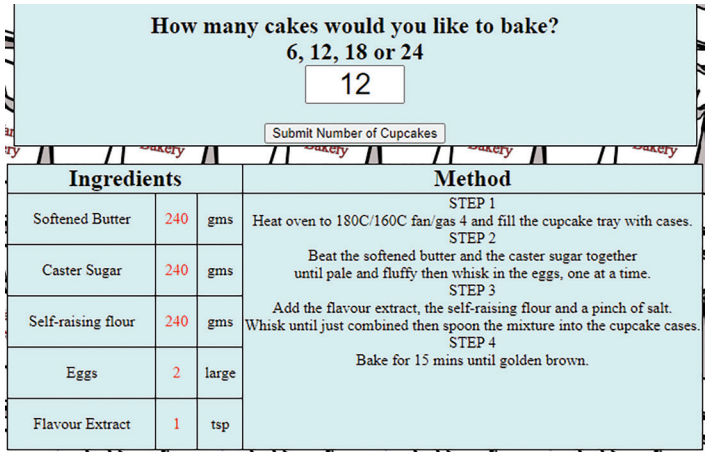
The variables listed in *Cupcake.js* are initialised with the ingredients needed for 6 cupcakes.

Complete the code for the function `check()`

It must display:

- the correct quantities if 6, 12, 18 or 24 cupcakes are entered
- an alert if a wrong quantity is entered.

Save the JavaScript file with the same name.



Save the completed webpage as **Llfan**_your centre number_candidate number.
For example, Llfan_ZZ999_9999

[15]

© UCLES 2024

www.dynamicpapers.com

BLANK PAGE

© UCLES 2024

www.dynamicpapers.com

BLANK PAGE

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.

© UCLES 2024