

INFORMATION TECHNOLOGY

9626/04

Paper 4 Advanced Practical

February/March 2019

2 hours 30 minutes

Additional Materials: Candidate Source Files:
Alarm.mp3
BranchData2018.csv
CountDownTask.html
EvidenceDocument.rtf



READ THESE INSTRUCTIONS FIRST

DO **NOT** WRITE IN ANY BARCODES.

Carry out **every** instruction in each task.
Save your work using the file name given in the task as and when instructed.

The number of marks is given in brackets [] at the end of each task or part task.

Any businesses described in this paper are entirely fictitious.

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.

This document consists of **6** printed pages and **2** blank pages.

All documents produced must be of a professional standard and contain your candidate details.


Create a folder called **Examination** to save all your work.

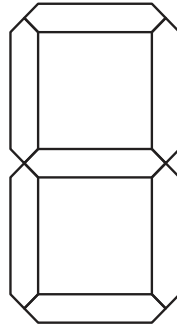
Copy the following files into your *Examination* folder:

Alarm.mp3
BranchData2018.csv
CountDownTask.html
EvidenceDocument.rtf

Use your *Evidence Document* to answer the questions in *Task 2* and *Task 4* and include screenshots of any methods you use that are not obvious from the files you create.

- 1 (a) You are required to create images of numbers on a seven-segment digital display. They will be used in an animation of a countdown timer.

Each segment of the display is shaped like this  and should be arranged to fit as shown:



Numbers can be displayed by highlighting the required segments.



Create a blank seven-segment display, 60 pixels wide and 110 pixels high, using a 1-point grey (150,150,150 RGB) outline.

Save the image as **7seg_template_** followed by your centre number_candidate number.
 For example: 7seg_template_ZZ999_9999

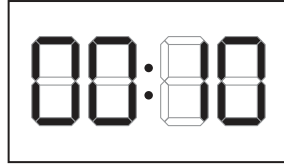
Create an image of each number from 0 to 9 using the template.

Save each image as **0, 1, 2**, etc. in a file format that supports transparency.

[15]

- (b) Create an animation of a 10-second countdown timer using the images of the numbers saved in **Task 1(a)**.

Set the frame size to 350 pixels wide x 200 pixels high, with a white background, and display the numbers as shown:



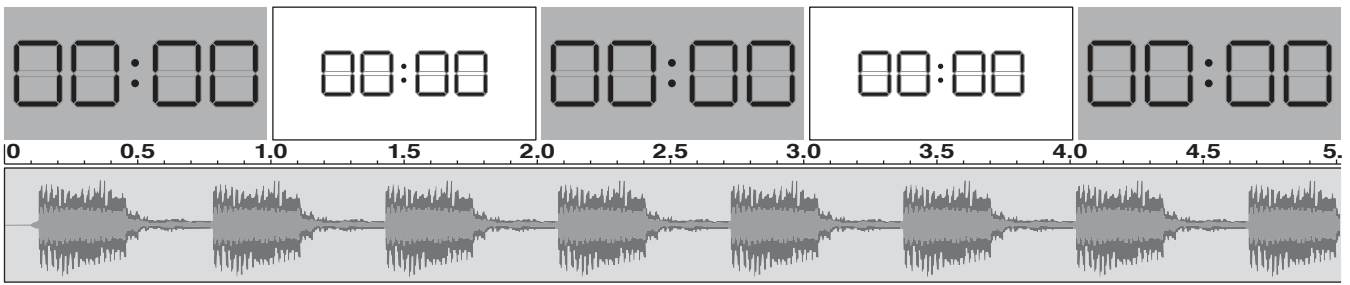
The digits must count down from 10 to 0 in 1-second intervals and sound an alarm for a further five seconds.

The animation should then stop.

The colon should appear to blink by growing and shrinking every alternate second.

When the countdown timer reaches 0, the background must change to red and the digits and background must alternate in size and colour each second for five seconds as shown.

The **Alarm.mp3** sound should play continuously during that time.



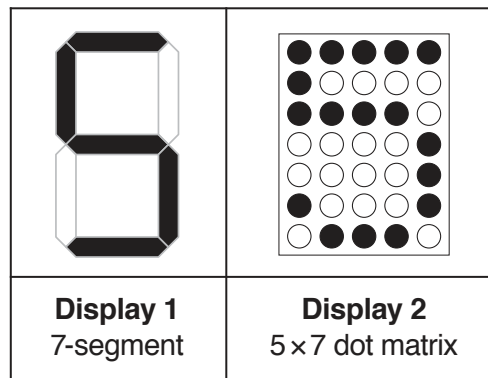
Save the animation in a format suitable for playing in a browser with the filename **Countdown_** followed by your centre number_candidate number. For example: Countdown_ZZ999_9999

Save the file in **.avi format** with a width of 500 pixels using the filename **CountdownAvi_** followed by your centre number_candidate number.

For example: CountdownAvi_ZZ999_9999

[30]

2 Consider the two types of character display shown.



In your Evidence Document state which type of display would be better for:

- a scrolling noticeboard
- a kitchen timer.

In your Evidence Document:

- identify another suitable application for each type of display
- explain, for each application, why this type of display is more suitable
- identify an application where a larger number of dots in a matrix would be better.

[7]

3 Open the file **BranchData2018.csv** in a spreadsheet application.

Enter the following labels in cells G1 to N1 and format them as shown.

G	H	I	J	K	L	M	N
Company Branch	Total Branch Sales	Average Branch Sales	Highest Individual Sales	Given_name	Family_name	Payroll_number	Rank

Set columns G to N to be 100 pixels wide. Format cells G1 to N1 to have a white 10-point sans serif font on a blue background.

You are required to complete the table with data for each branch.

In your Evidence Document, place screenshots of any methods you use that are not obvious from the spreadsheet when you save the file.

Column G must contain the branch names in ascending order.

In column H use formulae to show the total sales for each branch.

In column I use formulae to show the average sales for each branch.

In column J use formulae to show the highest individual sales for each branch.

In columns K to M use formulae to show the *Given_name*, *Family_name* and *Payroll_number* of the person with the highest individual sales.

In column N use an efficient method to display the *Rank* of each person, Rank 1 being the greatest of the highest individual sales. The order of the branches must still be shown in ascending order.

Save the spreadsheet as **SalesAnalysis_** followed by your centre number_candidate number. For example: SalesAnalysis_ZZ999_9999

Print only the new table in columns G to N to a **pdf document** in portrait orientation with the header **Top Sales Personnel 2018** centred in a 14-point bold serif font. Make sure the table fits on a single page.

Name this file **TopSales_** followed by your centre number_candidate number. For example: TopSales_ZZ999_9999 [35]

- 4 • Examine the following data which has been taken from the spreadsheet created in **Task 3**.

Antwerp, € 3 689 000, € 245 933, € 491 000, Eve, Kelly, EKE5120032, 3

- In your Evidence Document explain what is needed to gain information from this data.
 - Identify where you will find what is needed to gain the information in this case.
 - State an item of knowledge that can be gained from the information.
- Looking at jars of different sizes of the same brand of chutney in the supermarket, you make a choice of which to purchase.

In your Evidence Document list the data, information and knowledge you use to make this choice. [8]

- 5 Open the file **CountDownTask.html** in both a browser and a text editor.

Much of the JavaScript in the CountDownTask file has been completed and there are comments included to explain important sections of the code.

You are required to complete the *Timer() function* which must display the images of the numbers 5 to 0 in the cell with id="display" counting down in seconds. The cell must display 0 (zero) before the start button is pressed.

Add programmer comments to explain how the code you add works.

Save the completed file in **.html format** with the filename **CountDownTimer_** followed by your centre number_candidate number. For example: CountDownTimer_ZZ999_9999 [15]

Save your Evidence Document.

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