



# Cambridge International AS & A Level

**INFORMATION TECHNOLOGY**

**9626/04**

Paper 4 Advanced Practical

**May/June 2020**

**2 hours 30 minutes**



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 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 you save work in an incorrect file format, you will **not** receive marks for that task.

## INFORMATION

- The total mark for this paper is 110.
- The number of marks for each task or part task is shown in brackets [ ].

This document has **8** pages. Blank pages are indicated.

*You have been supplied with the following source files:*

<b>Members.csv</b>	<b>Bar0.png</b>	
	<b>Bar1.png</b>	<b>Bar5.png</b>
<b>Status.rtf</b>	<b>Bar2.png</b>	<b>Bar6.png</b>
<b>UploadSim.gif</b>	<b>Bar3.png</b>	<b>Bar7.png</b>
<b>UploadSim.html</b>	<b>Bar4.png</b>	<b>Bar8.png</b>

Create a folder called **Examination\_** followed by your centre number\_candidate number  
e.g. Examination\_ZZ999\_9999

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.

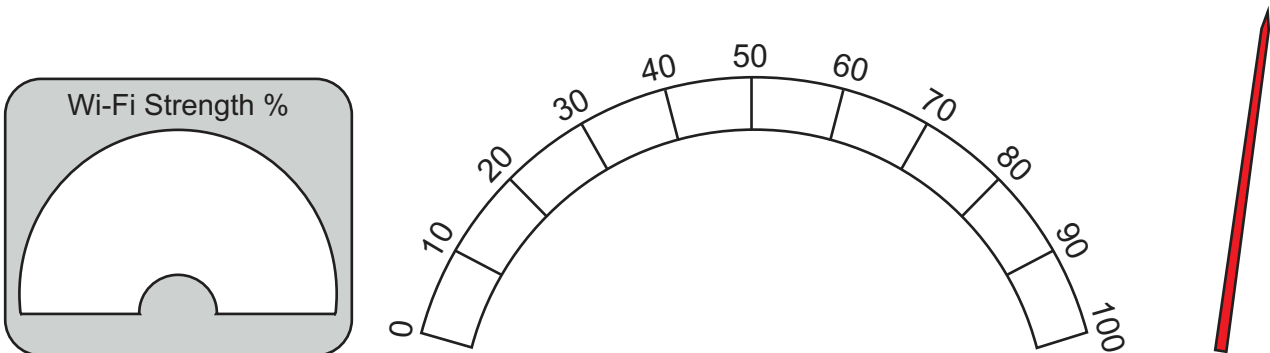
*You must use the most efficient methods and all work produced must be of a professional standard and contain your candidate details.*

- 1 Using a vector graphics application, recreate this image of a Wi-Fi signal strength meter.



The image must be created from these individual parts:

- the surround
- the scale
- the needle.



Export each individual part in both **Scalable Vector Graphics (.svg)** format **and** in a **transparent bitmap** format as: **Surround\_**, **Scale\_** and **Needle\_** followed by your centre number\_candidate number

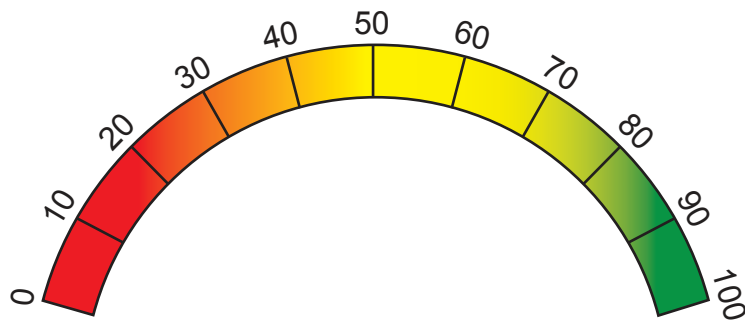
e.g. Surround\_ZZ999\_9999, Scale\_ZZ999\_9999 and Needle\_ZZ999\_9999

Export the final image as **Meter1\_** in a **Scalable Vector Graphics (.svg)** format followed by your centre number\_candidate number

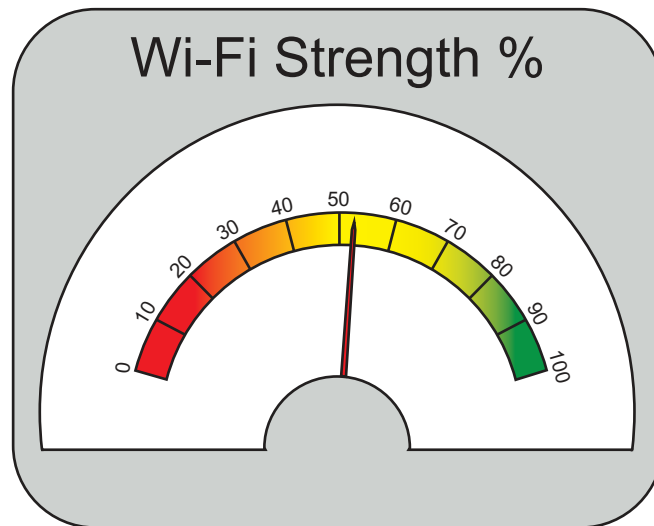
e.g. Meter1\_ZZ999\_9999

Export the image using the same name in a **non-transparent bitmap** format with a width of 600px.

Use a gradient fill for the scale so that the scale appears to progress in colour from red to yellow to green as shown.



Save the coloured scale as **Scale2\_** followed by your centre number\_candidate number, in both **Scalable Vector Graphics (.svg)** format and a **transparent bitmap** format.  
e.g. Scale2\_ZZ999\_9999

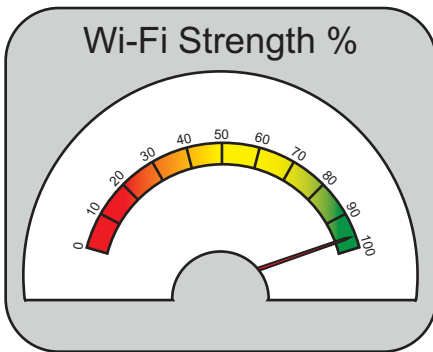


Export the new image as **Meter2\_** followed by your centre number\_candidate number in a **Scalable Vector Graphics (.svg)** format.  
e.g. Meter2\_ZZ999\_9999

Export the image using the same name in a **non-transparent bitmap** format with a width of 600px.

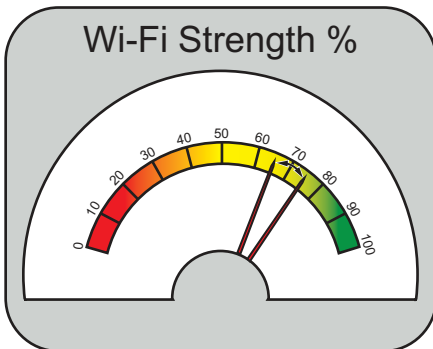
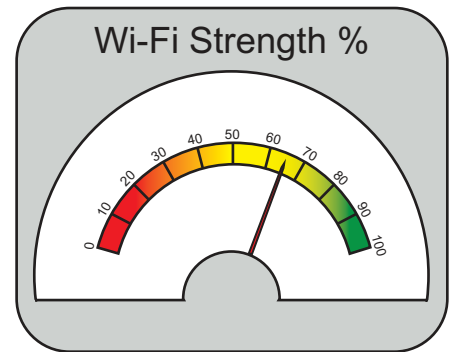
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- 2 Create an animation of the Wi-Fi meter appearing to measure the signal strength. The animation must run continuously. Set the width of the meter to 13 cm. Set the frame size to match the size of the meter.

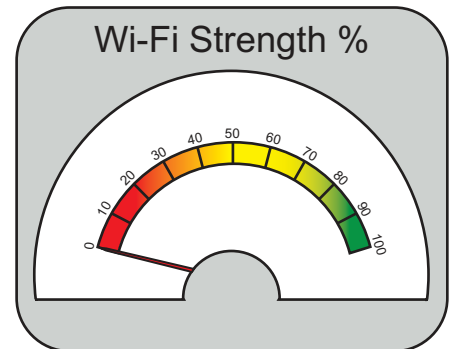


**The needle must move smoothly:**

- from 0% to 97% in 2 seconds
- take 1 second to return to 65%



- spend 1 second swinging between 65%–75% (65%–75%–65%–75%)
- return to 0% in 1 second.



The animation must then pause for 2 seconds before starting again.

Export the animation as **AnimatedMeter\_** followed by your centre number\_candidate number as an **animated gif** or a **Shockwave Flash (.swf)** file.  
e.g. AnimatedMeter\_ZZ999\_9999

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3 The **Members.csv** file contains details of The Role Play Community membership.

Open the *Members.csv* file in a spreadsheet application.

Rename the worksheet as **RPCMembers**

Save the workbook in **spreadsheet** format as **RPCMembers\_** followed by your centre number\_ candidate number  
e.g. *RPCMembers\_ZZ999\_9999*

*The status of a member changes when they reach 40 years of age.*

Use the Members data to identify all those members who will become 40 years of age during June and July of 2020.

*Members are required to register a valid email address but the pookmail and dodgit domains are no longer operational.*

Use the **Status.rtf** file as a template to automate mail merge letters to members who will become 40 years of age in June or July of 2020 and include the following text for those members with a *pookmail* or *dodgit* email address:

**As you know, you are required to register a working email address. Unfortunately, it seems your email provider <insert email domain> is no longer operational.**

**Please acknowledge this letter with your new email address.**

Insert the mergefields where indicated and save the merge document as **RPCMergeDoc\_** followed by your centre number\_ candidate number  
e.g. *RPCMergeDoc\_ZZ999\_9999*

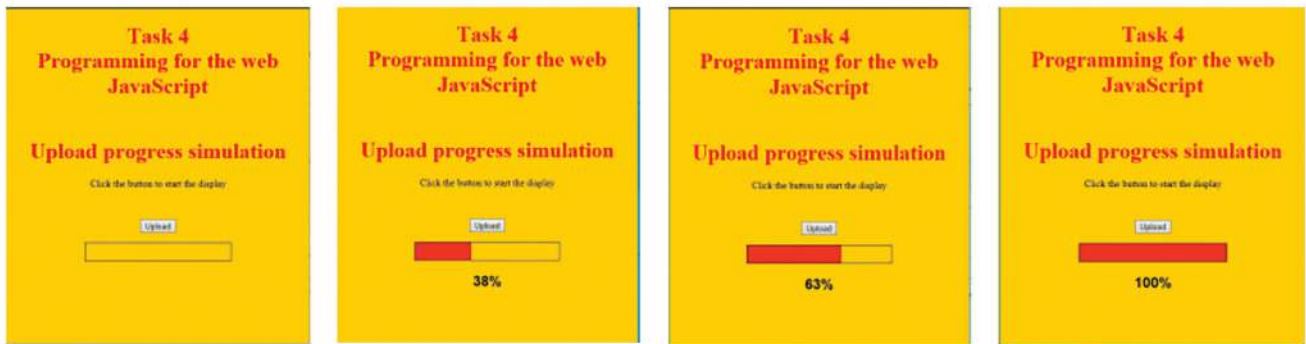
Merge the letters and save the document as **RPCLetters\_** followed by your centre number\_ candidate number  
e.g. *RPCLetters\_ZZ999\_9999*

Make sure that the merged letters are formatted consistently and are of a professional standard.

Save a copy of your data source as **MergeData\_** followed by your centre number\_ candidate number  
e.g. *MergeData\_ZZ999\_9999*

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- 4 Play **UploadSim.gif** in a browser. The animation shows a simulation of a file upload progress bar which you will create by adding JavaScript to a web page.



You will notice that when the Upload button is pressed the bar appears to fill in 8 steps using the images Bar1.png to Bar8.png

Bar0.png is the empty box displayed before the start.

The percentage to match the simulation of the amount of the bar filled is displayed below the bar.

Make sure the HTML file and the images Bar1.png to Bar8.png are in the same folder.

Open **UploadSim.html** in a browser to view the page.

Open **UploadSim.html** in a text editor.

Finish the code to display the sequence of bar images and percentages to create the simulation.

Placeholders: id= "display" and id= "percent", have been set for the position of the bars and the percentages.

A count variable, the Interval Timer and the Timer function are already included and set to count up every half a second.

You may use other methods if you wish.

Annotate your code with appropriate programmer's comments.

Save your final version of the page in **HTML format** as **ProgressBar\_** followed by your centre number\_candidate number  
e.g. ProgressBar\_ZZ999\_9999

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