



Cambridge International AS & A Level

INFORMATION TECHNOLOGY

9626/04

Paper 4 Advanced Practical

October/November 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:

Bush.jpg
Branches.png
Artists.csv
ArtWork.csv
CommCalc.html

Create a folder called **Examination**. You must save all your work in this folder.
 Copy these files into this folder.
 Do **not** delete these files when submitting your work.

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

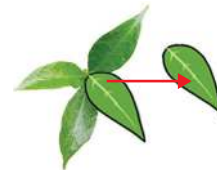
1 Use suitable graphics software to carry out the following tasks:

(a) Extract the 4-leaf cluster from the **Bush.jpg** image.



Save the extracted image with a transparent background as **4leaves_** followed by your centre number_candidate number
 e.g. 4leaves_ZZ999_9999 [13]

(b) Create a vector drawing of this single leaf as shown here.

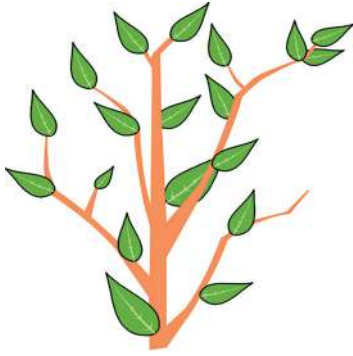


The drawing must match the shape and colour of the original leaf as closely as possible.

Save the drawing in a **Scalable Vector Graphics** (.svg) format as **Leaf_** followed by your centre number_candidate number
 e.g. Leaf_ZZ999_9999

Export the image in a **bitmap** format with a width of 50px named **BitmapLeaf_** followed by your centre number_candidate number
 e.g. BitmapLeaf_ZZ999_9999 [13]

- (c) Use your *Leaf_* image and the **Branches.png** file to create an image to match the one shown here.




Save the image with a size of 400px by 400px, in a **transparent bitmap** format, as **Shrub_** followed by your centre number_ candidate number
e.g. Shrub_ZZ999_9999 [9]

- 2 In an animation application set the canvas/frame/stage size to 400px by 400px.

Insert your *Shrub_* image.

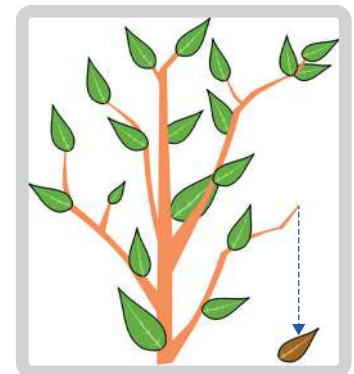


Animate the leaf image to turn from green to brown in 1 second. 

Animate the brown leaf to fall to the bottom of the frame in 1 second.

The animation should play automatically, but should stop when the brown leaf reaches the bottom of the frame.

Export the animation as **LeafDrop_** followed by your centre number_ candidate number as an **animated gif** or a **Shockwave Flash (.swf)** file
e.g. LeafDrop_ZZ999_9999 [20]



3 Create a relational database using the **ArtWork.csv** and **Artists.csv** files.

Make sure all fields in the database have appropriate names and data types.
If the £ currency symbol is not available use your local currency symbol.

Create a form to display the data as shown below. An amount called **Commission** is charged on the price of each item that is sold. The charge is calculated as a percentage of the price. For sales of:

- less than £50 the commission is 5%
- £50 and up to and including £100 the commission is 10%
- over £100 the commission is 12.5%

Artists and Art work

<p>Artist id: 2</p> <p>Title: Mr</p> <p>GivenName: Noah</p> <p>FamilyName: Adams</p> <p>Street Address: 52 City Walls Rd</p> <p>Town: CLOPTON GREEN</p> <p>PostCode: CBS 3PL</p> <p>Email: NoahAdams@pookmail.com</p>	<p style="text-align: center;">Art work for Sale</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Art id</th> <th>Image name</th> <th>Media</th> <th>Price</th> </tr> </thead> <tbody> <tr> <td>337</td> <td>Clematis on my patio</td> <td>Acrylic</td> <td>£75.00</td> </tr> <tr> <td>338</td> <td>The Sky at Night</td> <td>Acrylic</td> <td>£80.00</td> </tr> <tr> <td>342</td> <td>Summer Flowers on Plinth</td> <td>Acrylic</td> <td>£75.00</td> </tr> </tbody> </table> <p style="text-align: center;">Art work Sold</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Art id</th> <th>Image name</th> <th>Media</th> <th>Price</th> <th>Sold</th> <th>Commission</th> </tr> </thead> <tbody> <tr> <td>339</td> <td>Rough Sea</td> <td>Acrylic</td> <td>£180.00</td> <td>Yes</td> <td>£22.50</td> </tr> <tr> <td>340</td> <td>A.P. McCoy</td> <td>Watercolour</td> <td>£45.00</td> <td>Yes</td> <td>£2.25</td> </tr> <tr> <td>341</td> <td>Hogwarts</td> <td>Acrylic</td> <td>£75.00</td> <td>Yes</td> <td>£7.50</td> </tr> </tbody> </table>	Art id	Image name	Media	Price	337	Clematis on my patio	Acrylic	£75.00	338	The Sky at Night	Acrylic	£80.00	342	Summer Flowers on Plinth	Acrylic	£75.00	Art id	Image name	Media	Price	Sold	Commission	339	Rough Sea	Acrylic	£180.00	Yes	£22.50	340	A.P. McCoy	Watercolour	£45.00	Yes	£2.25	341	Hogwarts	Acrylic	£75.00	Yes	£7.50
Art id	Image name	Media	Price																																						
337	Clematis on my patio	Acrylic	£75.00																																						
338	The Sky at Night	Acrylic	£80.00																																						
342	Summer Flowers on Plinth	Acrylic	£75.00																																						
Art id	Image name	Media	Price	Sold	Commission																																				
339	Rough Sea	Acrylic	£180.00	Yes	£22.50																																				
340	A.P. McCoy	Watercolour	£45.00	Yes	£2.25																																				
341	Hogwarts	Acrylic	£75.00	Yes	£7.50																																				

ord: 1 of 2 of 692 | No Filter | Search

Make sure the form is laid out and formatted as shown above.

The form is for viewing data only. Make sure that data entry is disabled and that all these fields are fully visible. [35]

4 Open the **CommCalc.html** file in a browser.

You are required to complete this page to display the commission to be charged when data is entered and the Display Commission button is clicked.

Users must be able to change the values in the Sale price boundaries input boxes and the Artwork Price input box and recalculate the commission.

Open the file in a text editor.

Insert JavaScript code to calculate the commission.

The value of the commission must be displayed in an appropriate place on the page using the text:

Commission for a sale of £ArtPrice value will be £commission value

Example:

Art Work Sales Commission Modelling

Enter Sale price boundaries

Sale prices below £ will be charged 5% commission

Sale prices equal to this value and up to £ will be charged 10% commission

Sale prices above this value will be charged 12.5% commission

Enter Artwork Price:

£

Commission for a sale of £60 will be £6

Add programmer's comments to your code to explain key stages.

[20]

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 the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.