Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

INFORMATION TECHNOLOGY	**9626/04**
Paper 4 Advanced Practical	**May/June 2017**
	2 hours 30 minutes

Additional Materials: Candidate Source Files

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.

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

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[Turn over

You are working for a restaurant called HUNGRY, who serve a mixture of European and Asian food. Amelia is the manager of HUNGRY.

All files produced must be of a professional standard and suit the business context. All saved file names must contain your candidate details. You must use the most efficient method to complete each task.

You have been provided with the following files:

Customers.csv
Bookings.csv
Hungry.rtf
Man.png
Hungry_website.html

Open and examine each file carefully.

1 (a) Amelia has a logo designed for HUNGRY. The design for the logo is:
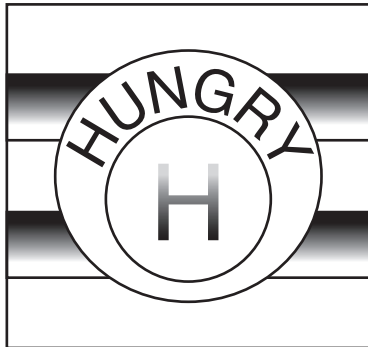
Amelia wants this logo recreating in a suitable software package. The logo must be 200 pixels by 200 pixels in size. Save in a suitable compressed file format for inclusion on a website, with the name **Hungry_logo_Centre number_candidate number**

[10]

(b) Describe the difference between bitmap and vector graphics, using no more than 250 words. Place this in a word processed document and save the document with the name **task_1b_Centre number_candidate number**

[6]

2 Amelia wants a short animation that she can use to advertise the restaurant.

The animation must meet the following requirements:

- The aspect ratio of the animation must be set to 512 by 288 pixels or 16:9.
- At the start of the animation, the background must be pale blue.
- After 2 seconds the text **HUNGRY** must appear a letter at a time. Once a letter appears it remains on the screen. The timing for each successive letter appearing must be 0.5 seconds. The text must be in a white, 48pt sans serif font. The text must then disappear.
- The image **Man.png** must appear in bottom right corner of the frame at a suitable size.
- A white rectangle must appear in the centre of the frame. The rectangle must be a suitable size to display a short sentence.
- In the rectangle the text **Our staff are warm and welcoming** must be displayed for 3 seconds. The text must fade in and fade out.
- In the rectangle the text **Our food is delicious** must be displayed for 3 seconds. The text must fade in and fade out.
- The text in the rectangle must be in a black, 32pt sans serif font.
- The rectangle and the image *Man.png* must disappear.
- The logo created in task **1** must appear small in the centre of the frame. The logo must grow to fill most of the frame and rotate 360 degrees as it grows. The logo must then display for 2 seconds.
- The animation must be set to loop.
- All animations must be smooth.
- The animation must be exported in a suitable format for displaying on a website.

Create the animation in a suitable software package to meet Amelia's requirements.

Save the animation as **Hungry_advert_Centre number_candidate number**

[20]

3   Amelia wants a database to view customer bookings at HUNGRY.

Using the files **Customers.csv** and **Bookings.csv** create a relational database for Amelia.

Suitable data types must be set for each field. **Party_number** should be set to only accept numbers between 1 and 10 (inclusive). A suitable error message must be displayed when a number outside the range is entered.

Save your database as **Hungry_Centre number_candidate number**

[7]

4   **(a)** Amelia wants a form to view details of customers and their bookings.

The form must meet the following requirements:

- The Hungry logo created in task **1** must be displayed at the top of the form on the right.
- The top section of the form must have a black background.
- The form must have a suitable title shown at the top of the form.
- The title text must be in a white sans serif font.
- The rest of the form must have a grey background.
- All other text and data must be in a black sans serif font.
- The form must display all the fields of a customer record.
- Details of customer bookings must be shown in a sub-form.
- The sub-form must display all the fields of a booking record except the Customer_ID.
- The sub-form must be large enough to display up to 4 bookings with no horizontal scroll bar.
- The sub-form must display the vertical scroll bar only when necessary.
- All labels and fields must be aligned as shown on page 5 opposite.

Title				Hungry Logo

Customer_ID [ ]   Customer_forename [ ]   Customer_surname [ ]

Address [ ]
[ ]
[ ]

Bookings

Booking_ ▾	Date_of_booking ▾	Time_of_booking ▾	Party_number ▾	Number_of_courses ▾
*				

- Users must not be able to enter or amend data using this form.
- The form must have suitable navigation and search buttons added under the sub-form.
- The default form navigation controls must not be visible.

Save the form as **Bookings**

[15]

(b) Discuss the advantages and disadvantages of using a relational database for this task by comparing this solution with the use of a flat file database. Place this in a word processed document, using no more than 250 words. Save your document as **task_4b_Centre number_candidate number**

[6]

5 Amelia wants to send a letter with a discount voucher to reward customers who have made more than one booking for 2 courses, or more than one booking for 3 courses.

Use the template **Hungry.rtf** file to mail merge a letter to customers who qualify.

Letters to customers who have made 3 bookings for the 3 courses option must, where indicated, display the text:
We consider you a very valued customer.

Letters to customers who have made 3 bookings for the 2 courses option must, where indicated, display the text:
We value your custom at HUNGRY.

All other customer letters should, where indicated, display the text:
We hope to see you soon.

Where indicated:
  • customers who have made more than one booking for 2 courses must receive a 10% discount off their next meal
  • customers who have made more than one booking for 3 courses must receive a 15% discount off their next meal.

Save the document with your merge codes as
Hungry_merge_Centre number_candidate number

Perform the mail merge to create the individual letters. Save the merged letters as
Hungry_discount_Centre number_candidate number

[25]

6 (a) Amelia wants a webpage that customers can use to make an enquiry about a booking. The webpage must meet the following requirements:

  • A check that the forename field is completed
  • A check that the surname field is completed
  • A check that the telephone number field is completed
  • A check that the value entered into the number in party field is between 1 and 10 (inclusive)
  • Suitable error messages must appear when the submit button is clicked if any of the above checks fail.

Using the file **Hungry_website.html** add a script to meet the requirements for Amelia's webpage. Programmer comments must be added to annotate each requirement.

Save your website as **Hungry_website_Centre number_candidate number**

[16]

(b) Loops are used in programming to repeat a section of code. Explain the difference between a counting loop and a condition loop. Place this in a word processed document, using no more than 150 words. Save your document as **task_6b_Centre number_candidate number**

[5]

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