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**INFORMATION TECHNOLOGY**

**9626/04**

Paper 4 Advanced Practical

**February/March 2017**

**2 hours 30 minutes**

Additional Materials: Candidate Source Files

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**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.



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This document consists of **5** printed pages and **3** blank pages.

You have a commission from a company who run a number of small retirement homes across the UK. You are required to create some digital resources for their Woodlands Homes centre.

You are required to complete an Evidence Document. It should include details of your work as specified and answers to the questions.

You are provided with the following files:

**Evidence.rtf**  
**LibraryProject.rtf**  
**Applications.rtf**  
**Vacancies.rtf**  
**Woodlands.png**  
**Peaceful.jpg**  
**Wildlife.png**  
**BasicBookingForm.html**

All files that you save should include your Centre number and candidate number; e.g. Evidence\_XX999\_1234

### Task 1

- (a) *Woodlands Homes is a small residential complex of 3 buildings each with 6 apartments. They intend to set up a library for residents to borrow books. They want to use a database to maintain a list of books and track loans.*

More details of the project are available in the file **LibraryProject.rtf**  
 Open the file and take note of the requirements.

Create a database structure named **WoodlandsSchema** to meet the requirements detailed in the file, with the structure normalised to third normal form. Do **not** enter any data.

Include a screenshot of the relationship diagram in your Evidence Document. [13]

- (b) In your Evidence Document explain when enforcing referential integrity is needed.

Use an example from the WoodlandsSchema database to explain why enforcing referential integrity could be a disadvantage. [4]

- (c) Save a copy of the WoodlandsSchema database as **WoodlandsDevelopment**  
 This will be used to develop and test the database.

- (i) Create a form to view the borrowers and the books they have on loan.  
 Add appropriate navigation buttons to the form.

- (ii) Books can be borrowed for 14 days.  
 Create a report to display a list of books that are overdue.

The report should be grouped by borrower and display the:

- title, forename and surname of the borrower
- date the book was borrowed
- number of days the book is overdue
- title and the author of the book.

Insert your name, Centre number and candidate number in the page footer of the report.  
Enter suitable data to test the form and the report with at least 3 borrowers.  
At least 1 of the borrowers should have borrowed more than 1 book. [11]

- (d) **Applications.rtf** contains details of people who have asked for information about apartments at Woodlands.

There are no vacancies for single apartments.  
There is one vacancy for a double apartment in Ash House.  
Letters are required for only those who have not yet been sent a reply.

Use **Vacancies.rtf** as a template to mail merge replies and insert fields and text where indicated.

Letters to those who requested information about the availability of a single apartment should display the text **We regret there are no single apartments available at the moment.**

Letters to those who requested information about the availability of a double apartment should display the text **We have one vacancy for a double apartment in Ash House.**

The letter should close with either **We will notify you when vacancies arise.** or **Please ring the office to arrange a viewing.**

Save the merge document as **Vacancies Mergedoc**  
Save the merged letters as **Vacancy Replies**

Ensure the letters are formatted consistently and are of a professional standard. [12]

## Task 2

- (a) *Woodlands Homes* intends to add RFID tags to the books.  
Create an image for a sticker to cover the tag.

Draw a tree consisting of 3 overlapping light green circles for the foliage and a brown rectangle for the trunk.

Join the circles to make a single shape with a 1pt black outline.  
Position the top of the tree trunk behind the foliage.

Convert the rectangle to curves and flare the bottom of the trunk.

Duplicate the tree twice and arrange the three trees as shown here.

Create a path to position the text **Woodlands** as shown.  
Do **not** show the path in the completed image.

The text should be in a sans-serif font, coloured white with a 1pt black outline.

Add the text **Homes** as shown.

Group the objects and resize the image to 250 pixels (px) wide and 200 pixels (px) high.  
Save the image in a vector graphics format as  
**Woodlands\_Centre number\_candidate number**

Place a screenshot showing the dimensions of the image in your Evidence Document.

Export the image as a bitmap file.

[25]

- (b) In your Evidence Document list 5 properties that can be changed for a vector drawing of a rectangle. [5]



**Task 3**

- (a) *Woodlands Homes wants an animated advert for their website.*

The advert should be 500px wide and 300px high.

It should consist of three clips each lasting 2 seconds and play continuously.

Clip 1 should fade in **Woodlands.png** as the background and display the text **Woodlands**

Clip 2 should set **Peaceful.png** as the background and display the text **Set in peaceful countryside**

Clip 3 should display **Wildlife.png** as the background and display the text **Lots of wildlife**  
The clip should fade out to about 50%.

All text should be in the centre of the image in a white sans-serif font. The text should double in size during each clip.

Export the animation in a suitable file format for inclusion in a webpage.

Use the filename **WoodlandsAdvert\_Centre number\_candidate number** [25]

- (b) In the Evidence Document answer the following about tweening.

(i) State what is meant by a shape tween.

(ii) List **3** properties that can be changed in the course of a shape tween. [5]

**Task 4**

*Woodlands Homes is going to hold library introduction sessions for the residents. They want residents to book the sessions on their intranet.*

The webpage has been started and saved as **BasicBookingForm.html**

Open the page in a browser to view the form.

Test the form with the following entries:

House = Oak

Name = Mary Dunn

Number of people = 2

Session = 3

Amend the code in the form to meet the following requirements:

- Entries in the *House* input box should be limited to the house names: Ash, Birch and Oak. No entry or any other entry should result in the error message **Please enter the correct house name: Ash, Birch or Oak.**
- Any other input box left empty should result in the error message **Please complete all the information.**
- The text in the final alert should match the number of people booking, for example **1 person** or **2 people**

Save the form as **NewBookingForm.html** [10]





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