



NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2024

COMPUTER APPLICATIONS TECHNOLOGY: PAPER I

Time: 3 hours

180 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This question paper consists of 18 pages and an appendix (HTML Tag List and Input Mask Character Sheet) of 2 pages (i–ii). Please check that your question paper is complete.
2. Before you begin, rename your Data Files folder to *your* examination number.
E.g.: ☐ **Data Files** becomes ☐ **1234567890**.
3. The examination consists of 5 sections and 9 questions. All questions in all sections must be answered. Follow the instructions for this question carefully.
4. You must use a text editor for the HTML section. Acceptable applications are Notepad, Notepad++ or WordPad. Microsoft Word may **NOT** be used for HTML coding.
5. Use functions and/or formulas to calculate answers, unless otherwise instructed.
6. Take note of the mark allocation to ascertain the complexity of the solution required and the amount of time you should spend on each question.
7. Save your work regularly.
8. Ensure your Developer Tab is enabled in Microsoft Word and Microsoft Excel.
9. If you are unable to get a formula/function to work correctly: open the **Student_Screenshots** document; indicate the question number; paste a screenshot showing the issue and provide a brief explanation to obtain part marks; you may then leave it out of the spreadsheet or database solution.
10. Screenshots should be appropriately cropped to display all relevant information only.
11. Unless other instructions are given, all word-processing documents should be set up as follows:
 - Measuring units – centimetres (cm)
 - Language – English (South Africa)
 - Page size – A4
 - Margins – 2.54 cm

12. You may use the offline help function, if available, in each application.
13. Figures in the question paper have a border. When a figure is provided as part of a question, you are not expected to add the border unless instructed to do so.
14. Do not rename any files or folders unless instructed to do so.
15. Do not create any folders or subfolders unless instructed to do so.
16. Do not delete, move or duplicate any files or folders unless instructed to do so.
17. Save your work at regular intervals to prevent data loss. Backup data files will be made available to you by your teacher/invigilator, if needed.

The contents of your examination *Data Files* folder and subfolders are as follows:

Data Files	Q1	Q2
<div> <div>Q1</div> <div>Q2</div> <div>Q3</div> <div>Q4</div> <div>Q5</div> <div>Q6</div> <div>Q7</div> <div>Q8</div> <div>Q9</div> <div>Student_Screenshots.docx</div> </div>	<div> <div>Archive</div> <div>_Q1_Answers.docx</div> <div>About Us.rtf</div> <div>About Us.txt</div> <div>Adopt Dont Shop.svg</div> <div>Animal Shelter.jpg</div> <div>Animals.accdb</div> <div>cat.jpeg</div> <div>chicken.jpeg</div> <div>Contact Details.xlsx</div> <div>Contacts Backup.docx</div> <div>Contacts.zip</div> <div>dog.jpeg</div> <div>donkey.jpeg</div> <div>Names.txt</div> <div>rabbit.jpeg</div> <div>The Ranch Presentation.pptx</div> </div>	<div> <div>2TheRanchInfoDoc.docx</div> <div>AdoptionProcess.pdf</div> </div>
		Q3
		<div> <div>3VolunteerRegistration.docx</div> </div>
		Q4
		<div> <div>4_1AboutUs.docx</div> <div>4_2ThankYouLetter.docx</div> <div>Donors.xlsx</div> <div>Map.png</div> </div>
		Q5
		<div> <div>5_TheRanchData.xlsx</div> <div>SmileyFace.jpg</div> </div>
		Q6
		<div> <div>6_Donors.xlsx</div> </div>
		Q7
		<div> <div>7_AnimalStats.xlsx</div> </div>
Q8	Q9	Q9 doc
<div> <div>8_RanchInfo.accdb</div> <div>Adopt.jpg</div> <div>AnimalsImport.txt</div> </div>	<div> <div>doc</div> <div>img</div> <div>home.html</div> </div>	<div> <div>Adoption.pdf</div> </div>
		Q9 img
		<div> <div>Adopt Dont Shop.svg</div> <div>Animals.jpeg</div> <div>fb.webp</div> <div>insta.webp</div> </div>

Check each folder and ensure that every file/document/folder is accessible.

Scenario

The Ranch

The Ranch serves as a sanctuary for neglected and abandoned domesticated animals. Founded with the aim of saving animal lives and fostering homes.

It operates as a non-profit organisation committed to offering compassionate care, rehabilitation, and facilitating adoptions for animals in distress.

Financially, it relies entirely on donations from supporters and revenue generated by its store, which offers animal products and accessories.

Additionally, The Ranch benefits from the regular assistance of volunteers, who generously contribute their time without expecting compensation.



SECTION A FILE AND FOLDER MANAGEMENT

QUESTION 1

Open and work only in the folder named **Q1**.

- 1.1 Ensure that the view in the **File Explorer** window is set to the *Small icons* layout view. Insert a screenshot of the view in the **_Q1_Answers** document. (1)
- 1.2 Answer the following questions by inserting your answers in the **_Q1_Answers** document.
 - 1.2.1 Determine the author of the JPG file named **Animal Shelter.jpg**. Type your answer in the **_Q1_Answers** document. (1)
 - 1.2.2 Copy the file path of the database called **Animals.accdb** and paste the file path in the **_Q1_Answers** document. (1)
 - 1.2.3 Determine the date that the file **Contact Details.xlsx** was created. Write the exact date, or provide a screenshot, in the **_Q1_Answers** document. (1)
 - 1.2.4 What is the file size of the file **About Us.rtf**, in bytes? Type your answer, or provide a screenshot, in the **_Q1_Answers** document. (1)

- 1.3 Create a folder called ***Images*** in the **Q1** folder. (1)
- 1.4 Move all the image files into the ***Images*** folder. (2)
- 1.5 Create a shortcut of the folder **Archive** and rename the shortcut to **Backup**. (2)
- 1.6 Extract the folder **Contacts.zip**. (1)
- 1.7 Save the file **The Ranch Presentation** as a video file. (1)
- 1.8 Protect the document **Contacts Backup.docx** so that only users using the password '***q1p1***' (no quotation marks) can access it. *Note: Make sure you use the correct password suggested.* (2)
- 1.9 Group the contents of the **Q1** folder according to ***Name***. Take a screenshot of the grouped contents only and insert the screenshot into the **_Q1_Answers** document. (2)

16 marks

SECTION B WORD PROCESSING**QUESTION 2**

Open and work only in the folder named **Q2**.

Open the document **2TheRanchInfoDoc.docx** and edit it according to the instructions below.

- 2.1 Change the theme of the document to **Gallery**. (1)

Page 1

- 2.2 Modify the **Title** style to include the following:

The font style must be Arial and the font colour red. (2)

- 2.3 Apply the **Title** style to the title at the beginning of Page 1. (1)

- 2.4 Modify the image's width and height to 10 cm. (1)

Page 2

- 2.5 Below the heading 'Table of Contents', on Page 2, include a table of contents in any format you prefer. (1)

2.5.1 Display only the headings formatted with the Heading 1 style. (1)

Page 3

- 2.6 Correct the spelling error on this page. (1)

- 2.7 Insert a hyperlink to link the document 'AdoptionProcess.pdf' located in the **Q2** folder, on the highlighted text 'Adoption Process' at the bottom of Page 3 with a ScreenTip displaying the text 'Adoption Process Information'. (3)

Page 4

- 2.8 Locate the image next to the text 'Store Revenue'. Position the image so it appears on the right-hand side of the paragraph. See Figure 1 below as an example. (2)



Figure 1

Page 5

- 2.9 Insert the word count of the document as a field that can be updated, at the bottom of the document. (2)

Save and close the document.

[15]

QUESTION 3

Open and work only in the folder named **Q3**.

Open the document **3VolunteerRegistration.docx** and edit it according to the instructions below.

- 3.1 Adjust the page size to A5. (1)
- 3.2 Change the page margins to Narrow. (1)
- 3.3 The form was created using the Legacy tools so that volunteers can complete the form. Make the following changes to the form:
 - 3.3.1 Add a text form field next to the Name field. (1)
 - 3.3.2 Change the text format of the Surname field to First capital. (1)
 - 3.3.3 Add a right-aligned tab stop at 11 cm, with a solid line leader next to the e-mail address field. (3)
 - 3.3.4 Ensure that the 'check boxes' default is set to 'checked' for the 'Yes' option. (1)
- 3.4 Add the 'DO NOT COPY' watermark to the document. (1)
- 3.5 Insert an Endnote on the text 'newsletter' that contains the following text: 'newsletters are sent out monthly'. Use the asterisk (*) symbol as the numbering format. (2)
- 3.6 Add a comment to the title of the form which contains the following text: 'Complete the form'. (1)
- 3.7 Insert a single-line page border. (1)
- 3.8 Restrict the editing of this document to ensure only the form can be filled in and no other changes can be made – do not add a password. (2)

Save and close the document.

[15]

QUESTION 4

Open and work only in the folder named **Q4**.

Open the document **4_1AboutUs.docx** and edit it according to the instructions below.

Page 1

- 4.1 Format the heading 'The Ranch: A Haven for Hopeful Tails' with a WordArt of your choice. (1)
- 4.2 Place all the text below the heading on *Page 1* in a text box. (1)
- 4.3 Reject the track change on *Page 1*. (1)

Page 2

- 4.4 Insert the image **Map.png** in the **Q4** folder below the heading 'Map'. (1)
- 4.5 Apply the Bevel Oval Black Style to the image **Map.png**. You don't need to resize the image. See Figure 2 below as an example. (1)

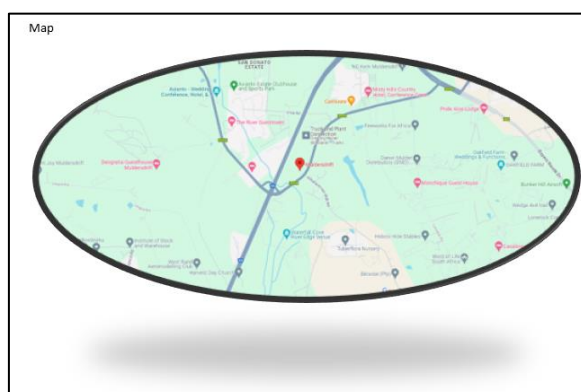


Figure 2

- 4.6 Ensure that *Page 2* displays in landscape orientation but *Page 1* and *Page 3* remain in portrait orientation. (2)

Page 3

- 4.7 Format the table on *Page 3* as follows:
 - 4.7.1 Insert a row at the top of the table. (1)
 - 4.7.2 Ensure that this row is merged and centred across the entire table. (2)
 - 4.7.3 Add the text 'Summary of Donations from 2011 to 2023' to this row. (1)
 - 4.7.4 Add a formula in the last cell of the second column to determine the total donations and ensure that the format is set to currency. (2)

Save and close the document.

Open the document **4_2ThankYouLetter.docx** and edit it according to the instructions below.

Page 1

4.8 Prepare a letter for every donor and merge the document as follows:

4.8.1 Use the file called **Donors.xlsx** in the **Q4** folder as the data source. (2)

4.8.2 Sort the data in ascending order according to the *last_name* and ensure that the same person does not get the letter twice. (2)

4.8.3 Insert the fields for *e-mail*, *first_name* and *last_name* in the place of the placeholders with the same text and highlighted in yellow. (1)

4.8.4 Complete the merge of the document. Save this document as **4_2Merged**. (2)

Save and close the document.

[20]

50 marks

SECTION C SPREADSHEETS**QUESTION 5**

Open and work only in the folder named **Q5**.

Open the spreadsheet **5_TheRanchData.xlsx** and edit it according to the instructions below.

Sheet1 worksheet

- 5.1 Rename Sheet 1 to 'Animals'. (1)
- 5.2 Change the tab colour to red. (1)
- 5.3 Apply yellow shading to the cell range **A1:G1**. (1)
- 5.4 Sort the data according to *Animal_Name* in descending order. (2)
- 5.5 Use a feature to fill all the cells in **Column B** of all animals that have been admitted to the shelter before 2022 in blue. (2)
- 5.6 Create a drop-down list for **Column C** using the list of items on the *List* worksheet. (2)
- 5.7 Create a unique *Pet_Id* for each animal in **Column F** consisting of the first three letters of the animal's name and a random number between 1 and 200. Example of a unique Pet ID: Abc123. (3)
- 5.8 Calculate the age of each animal in years in **Column G**. Ensure that the age is rounded off to the nearest whole number. (3)

Volunteers worksheet

- 5.9 Create a 2D clustered column chart using the data in the cell range **J1:K7**. See Figure 3 on the next page as an example. (1)
- 5.10 Move the chart to a new sheet. (1)
- 5.11 Ensure that the title of the chart reads 'Number of volunteers per area'. (1)
- 5.12 Change the Chart style to Style 9. (1)
- 5.13 Fill the bars of the graph with the image **SmileyFace.jpg** in the **Q5** folder. Ensure that the image is stacked so that one smiley face represents five volunteers. (3)

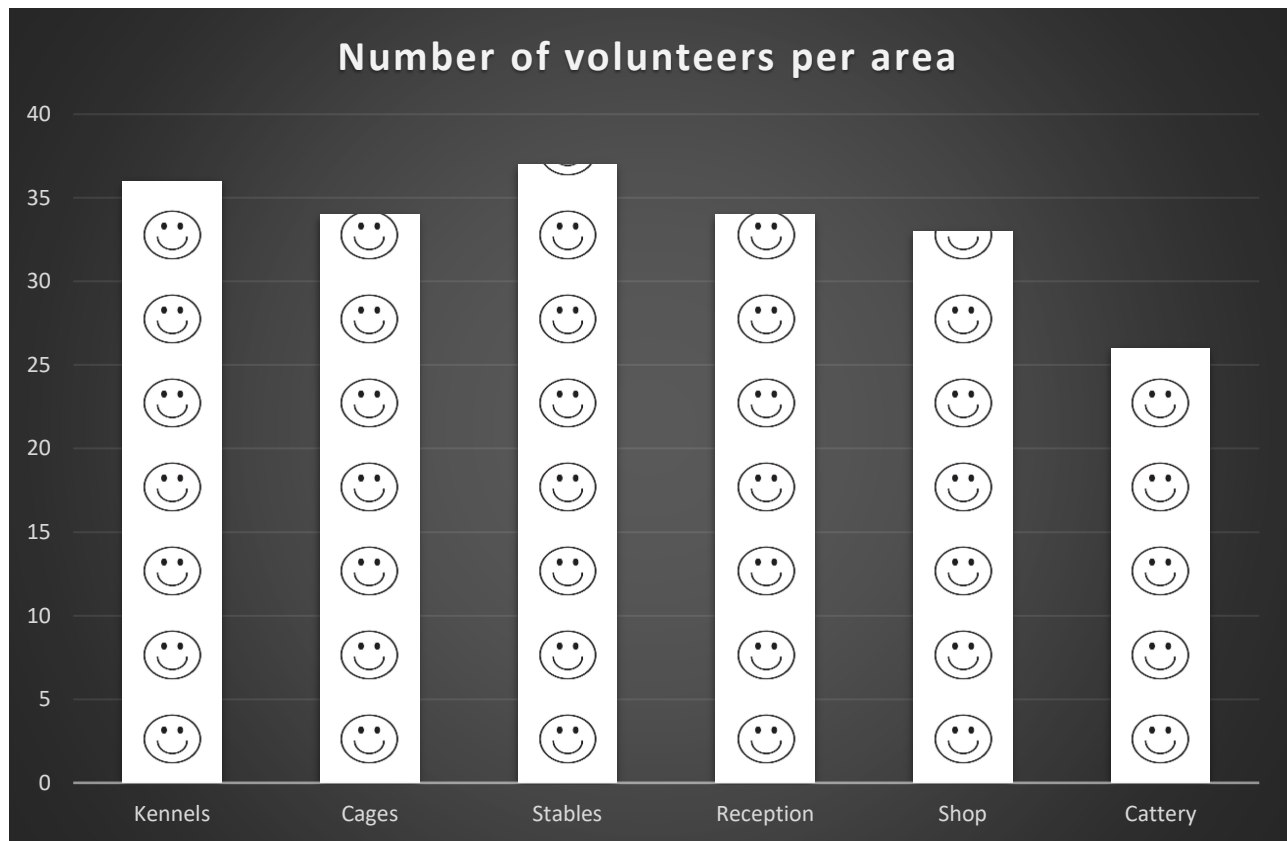


Figure 3

Save and close the workbook.

[22]

QUESTION 6

Open and work only in the folder named **Q6**.

Open the spreadsheet **6_Donors.xlsx** and edit it according to the instructions below.

Donors worksheet

- 6.1 Calculate the total amount of donations received in cell **C3**. (2)
- 6.2 If a donor is also a volunteer, this is indicated by the letter 'Y' for yes in **Column C**. Calculate the total number of donors who are also volunteers in cell **C5**. Ensure that this function works when copied down to cell **C6**. (4)
- 6.3 Insert a function in cell **C8** to calculate the total amount of donations received by all donors who are also volunteers. Format the cell to Accounting. (5)
- 6.4 Calculate the tax amount in cell **F11** that the donors will receive, which is 25% of their donations based in **Column E**. Copy this to all the cells in **Column F**. (3)
- 6.5 If a donor's contribution in **Column E** exceeds R1 500,00, they are associated with a company. Insert a function in cell **G11** to indicate whether a donor is linked to a company or not. Display **Company** for donations exceeding R1 500,00 and **Individual** for amounts below. Copy the function to all the cells in **Column G**. (4)
- 6.6 All donors will receive a gift based on their donation amount. The amount and gifts are stored in the *Gifts* worksheet. Insert a function in cell **H11** to display which gift each donor will receive. Copy the function to all the cells in **Column H**. (5)

Save and close the workbook.

[23]

QUESTION 7

Open and work only in the folder named **Q7**.

Open the spreadsheet **7_AnimalStats.xlsx** and edit it according to the instructions below.

Subtotal worksheet

- 7.1 Use the Subtotal feature in Excel to determine the total number of animals of each type. Ensure a page break is inserted between groups. See Figure 4 below as an example.

	A	B	C
1	animal_name	animal_type	
42	bird Count	40	
79	cat Count	36	
114	dog Count	34	
151	donkey Count	36	
177	horse Count	25	
207	rabbit Count	29	
208	Grand Count	200	
209			
210			

Figure 4

Save and close the workbook.

[5]

50 marks

SECTION D DATABASE**QUESTION 8**

Open and work only in the folder named **Q8**. Remember to save each query, form and report before closing.

Open the database file **8_RanchInfo.accdb**.

- 8.1 Import the text file **AnimalsImport.txt**, located in the **Q8** folder, into the existing table called *tbl_Animals*. (2)

If you were unable to import the requested text from Question 8.1, you can still proceed with the remaining questions.

Tables

tbl_Animals

- 8.2 Choose the most appropriate field as a primary key for this table. (1)
- 8.3 Adjust the field properties of the following fields:

	Field name	Properties	
8.3.1	<u>animal_id</u>	<ul style="list-style-type: none"> Data entered must be in the following format: <ul style="list-style-type: none"> All uppercase. 3 compulsory letters. 1 compulsory number. 2 optional numbers. 	(4)
8.3.2	<u>animal_name</u>	<ul style="list-style-type: none"> 25 characters in length. 	(1)
8.3.3	<u>animal_gender</u>	<ul style="list-style-type: none"> Only letters 'M' or 'F' may be entered in this field. Supply suitable text if incorrect data is entered. 	(2)
8.3.4	<u>animal_type</u>	<ul style="list-style-type: none"> Must get its values from the table <i>tbl_Types</i>. Presented as a combo box. Ensure the values are displayed in alphabetical order. 	(3)
8.3.5	<u>date_of_birth</u>	<ul style="list-style-type: none"> The date of birth field must display the date in the following format: <ul style="list-style-type: none"> 11-Feb-24 	(1)
8.3.6	<u>date_rescued</u>	<ul style="list-style-type: none"> The date rescued field must be entered for every record and may not be left empty. 	(1)

Save and close *tbl_Animals*.

Forms

8.4 Edit the form *frm_VolunteerData* as follows. Use the questions and Figure 5 below as a reference.

8.4.1 Edit the size of the text in the header to 35 pt. (1)

8.4.2 Insert the image **Adopt.jpg** in the **Q8** folder centred in the detail section below the fields. See Figure 5 below as an example. (2)

8.4.3 Insert a button in the form footer that will print the form when the button is clicked. See Figure 5 below as an example. DO NOT PRINT THE FORM. (2)

The screenshot shows a Microsoft Access form titled "frm_VolunteerData". The form has a header section with the title "Volunteer Information" in a large, bold font. Below the header, there are several text boxes for data entry:

- ID: (empty)
- volunteer_surname: Piatkowski
- volunteer_name: Kata
- gender: Female
- age: 19
- day_volunteering: Monday
- hours: 7
- area_volunteering: Kennels

Below the text boxes, there is a logo that reads "ADOPT DON'T SHOP" with two paw prints above the word "ADOPT". At the bottom of the form, there is a small blue button with a printer icon.

Figure 5

Save and close *frm_VolunteerData*.

8.5 Create a form called *frm_AnimalData*. It must contain all fields from *tbl_Animals* and ensure the layout is set to Justified. (2)

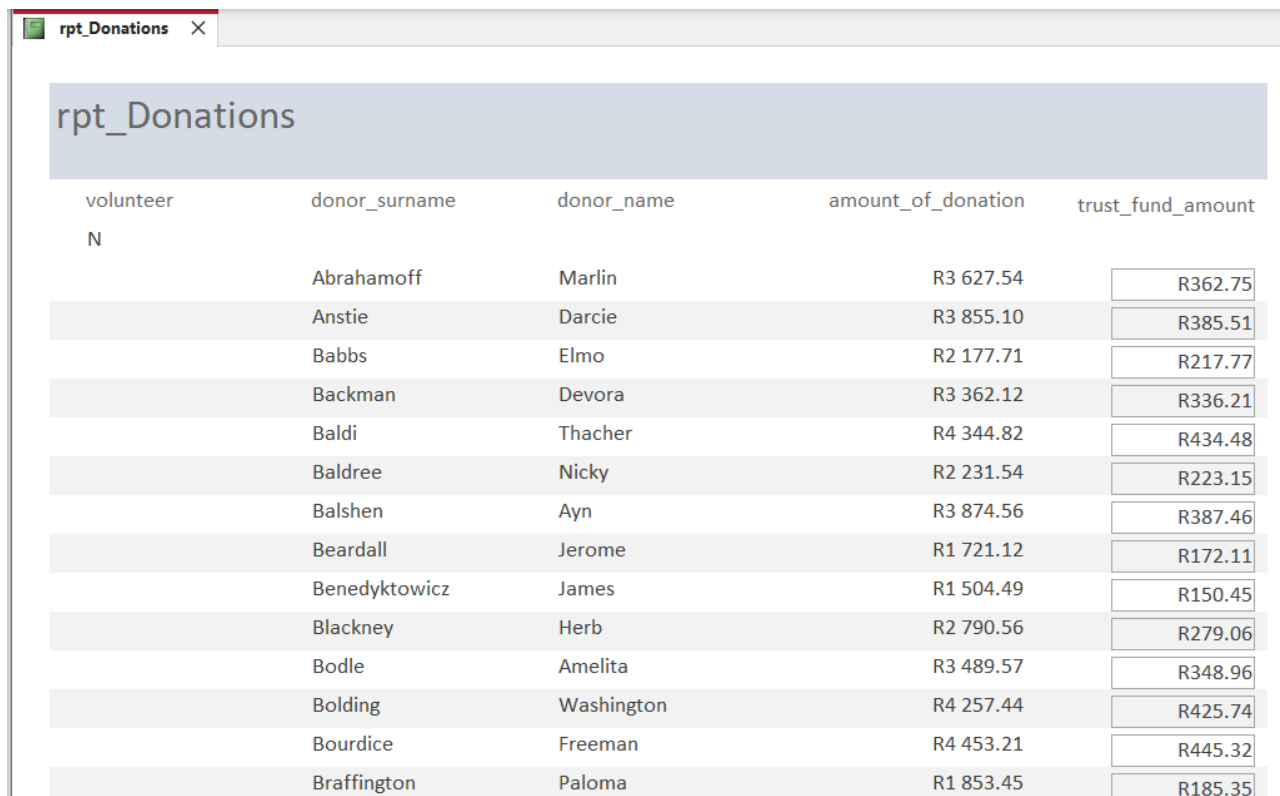
Save and close *frm_AnimalData*.

Reports

- 8.6 Create a report, using *tbl_Donors*, called *rpt_DonorVolunteers*. (1)
- 8.6.1 Use the fields donor_surname, donor_name and volunteer. (1)
- 8.6.2 Sort the data alphabetically according to the field donor_surname. (1)
- 8.6.3 Ensure that the orientation of the report is set to landscape. (1)
- 8.6.4 Apply conditional formatting to the field volunteer that displays all records with 'Y' in green shading. (3)

Save and close rpt_DonorVolunteers.

- 8.7 Open and edit the report called *rpt_Donations*. (1)
- 8.7.1 Calculate and display the total amount of donations for volunteers and non-volunteers, in the volunteer footer. Ensure that the answer displays as currency. (2)
- 8.7.2 Display the total number of donors at the end of the report. (1)
- 8.7.3 10% of each donation amount will be put into a trust fund to help other non-profit organisations. Create a calculated field for each record to determine the amount that will be added to the trust fund. Ensure this new field has a descriptive label and displays as currency. See Figure 6 below as an example. (4)



volunteer	donor_surname	donor_name	amount_of_donation	trust_fund_amount
N	Abrahamoff	Marlin	R3 627.54	R362.75
	Anstie	Darcie	R3 855.10	R385.51
	Babbs	Elmo	R2 177.71	R217.77
	Backman	Devora	R3 362.12	R336.21
	Baldi	Thacher	R4 344.82	R434.48
	Baldree	Nicky	R2 231.54	R223.15
	Balshen	Ayn	R3 874.56	R387.46
	Beardall	Jerome	R1 721.12	R172.11
	Benedyktowicz	James	R1 504.49	R150.45
	Blackney	Herb	R2 790.56	R279.06
	Bodle	Amelita	R3 489.57	R348.96
	Bolding	Washington	R4 257.44	R425.74
	Bourdice	Freeman	R4 453.21	R445.32
	Braffington	Paloma	R1 853.45	R185.35

Figure 6

Save and close rpt_Donations.

Queries

8.8 Open the query *qry1_AllDogsCats*.

Display all the female cats and sort the query, ascending, according to animal_type. (4)

Save and close qry1_AllDogsCats.

Save and close the database.

40 marks

SECTION E HTML**QUESTION 9**

Open and work only in the folder named **Q9**.

Open the webpage **home.html** using a text editor.

- 9.1 The text at the top of the page: 'The Ranch – Rescuing Lives, Creating Homes' must be displayed on the tab of the web browser. (1)
- 9.2 Set the font face of the entire web page to Arial. (2)
- 9.3 Add the text 'Adopt don't shop' as a tooltip to the image **Adopt Don't Shop.svg** so that when your mouse hovers over the image it displays the text. See Figure 7 below as an example. (2)



Figure 7

- 9.4 Format the text 'About The Ranch' (located just below the text 'Rescuing Lives, Creating Homes' at the first heading and paragraph) so that it has the same formatting as the text 'Programs'. (1)
- 9.5 Insert a black line below the text *<!-- Black line goes here -->* and ensure that this line is only half of the width of the window. (3)
- 9.6 The image **Animals.jpeg** is not displaying on the webpage. Correct the error in the code to ensure that the image displays. Do not make changes to the file name or file extension. (1)

- 9.7 Correct the numbered list to display each item with Roman numerals as the numbering format. See Figure 8 below as an example. (3)

At The Ranch, we offer a range of programs including:

- I. rescue and rehabilitation
- II. adoption services
- III. educational outreach

Through these programs, we aim to make a positive impact on the lives of animals and the community.

Figure 8

- 9.8 Convert the text *Click here* into a hyperlink that links to the **Adoption.pdf** file in the folder **doc** in the **Q9** folder. Do not move or copy the file out of the designated folder. (3)
- 9.9 Edit the appropriate tag in the table and add the correct attributes so that the first row containing the text *Contact Details* spans across the entire table and in the centre of the cell. (3)
- 9.10 Centre and bold the last paragraph containing the text © 2024 *The Ranch*. *All rights reserved*. (2)
- 9.11 Add the appropriate tag and attribute to the text *Back to top* on the bottom of the webpage so that this text acts as a link to go back to the top of the webpage when clicked. (3)

24 marks

Total: 180 marks