Solution Development ‘sub-scenario’

One of the focal areas of the trust is to provide employment opportunities to unemployed community members. Andrea has been appointed as a trainee to assist with the increasing volume of administration. She never did CAT at school, as her school did not offer the subject, but she has attended some of the courses offered by the trust. She has done very well, but does have some gaps in her knowledge with which she needs assistance.

1. Andrea complains that, when she performs a spell check on her documents, it always queries the word ‘*colour’* and suggests it should be ‘*color’*, which she knows is wrong.

Explain why this is happening and how to fix the problem.

1. >>

2. The name André Müller needs to be added to a document. What feature of a word processor can be used to add the characters é and ü?

2. >>

3. Andrea performed a find and replace operation in a long *Word* document to replace the word ‘*data’* with ‘*information’* throughout the document.

However, when she looked at the document she saw that many words were ‘misspelt’. For example, ‘*database’* had become ‘*informationbase’* and ‘*metadata’* had become ‘*metainformation’*.

Explain what has happened and how to fix this problem.

3. >>

4. Andrea often uses the *Enter key* repeatedly to shift a heading to the top of a page.

Give one reason why this is not a good choice (besides that it takes time) and suggest a more appropriate way of doing this.

4. >>

5. Many of theTrust’s reports (typed in *Word*) are typed in *portrait* format. They often need an Appendix in the same document to be in *landscape* format.

5.1 Explain clearly how portrait format differs from landscape format.

5.1 >>

5.2 How could Andrea get the pages of an Appendix to appear in landscape format?

5.2 >>

6. The trust is very conscious of using simple, ‘understandable’ English in the training manuals they are drawing up.

What feature of a word processor could be used to find a simpler ‘version’ of a word like ‘coercion’?

6. >>

7. Andrea has seen that there is both a Save and a Save As option in most programs, including *Word* and *Excel*.

Give two sets of circumstances where she would need to use the *Save As* command, as opposed to the *Save* command – other than renaming the file.

7. >>

8. Many school children come into the centre to get help with their school projects.

8.1 One of the learners said that his teacher says that they must use *footnotes*.   
Briefly explain what a footnote is and why they are used in research projects.

8.1 >>

8.2 One of the learners complained that it takes a very long time to update the font size of all the headings in a long report.

Briefly explain why using styles would have made this task much easier and quicker.

8.2 >>

8.3 One of the learners was editing a report in Word when the following message appeared:

*"Error! Bookmark not defined."*

Briefly explain what the function of a *bookmark* in *Word* is.

8.3 >>

8.4 One of the learners added an automatic table of contents to a document, but found that one of the headings that she wanted to include was not there.

Explain what she must do to get this heading included in the table of contents.

8.4 >>

8.5 Some of the learners who come into the centre have worked on older versions of the office suite than the one used at the centre. One of the best ways to explore a new version of software is to look at the tooltips. One of the tutors at the centre also suggested they always ‘right-click’ when they are ‘stuck’ and if that does not help, they can try F1.

8.5.1 Briefly explain what tooltips are and how they can be accessed.

8.5.1 >>

8.5.2 Explain why ‘right-clicking’ can assist users when they need help.

8.5.2 >>

8.5.3 Why would ‘F1’ be of assistance to users when they need help?

8.5.3 >>

8.6 A number of the Matric learners who use the centre need to draw up a CV for their Life Orientation project, but they are not sure where to start.

Explain why making use of a template would help in this regard, by explaining what the function of a template is.

8.6 >>

8.7 One of the learners who often visits the centre has a reading problem and frequently swops letters when typing specific words. For example, he often misspells *guard* as *gaurd.*

What feature of a word processor could he use to change the misspelt words as he types them?

8.7 >>

8.8 One of the learners has created a family budget as part of a school task. He set up a table in *Word* showing the monthly income and expenses. He now wants to perform some calculations on these figures.

Give two reasons, in terms of the use of formulas, why it would have been better to perform this task in a spreadsheet program like *Excel*.

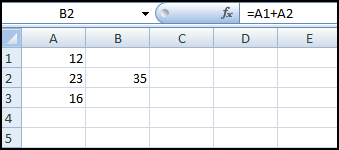
8.8 >>

9. A *PowerPoint* presentation of the financial status of the centre needs to be presented to the sponsors. A chart from a spreadsheet has been inserted into the presentation, but every time the data in the spreadsheet is changed, the chart has to be redrawn and re-inserted into the presentation.

Briefly explain how this problem can be solved.

9. >>

10. One of the learners was experimenting with a spreadsheet and the use of formulas. An extract of this spreadsheet is shown below:



10.1 Write down the resulting formula (not the answer), if the formula in cell B2 was copied to cell B3.

10.1 >>

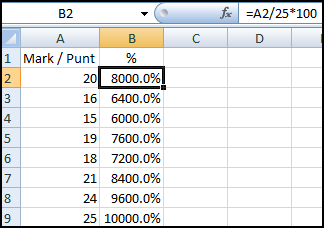
10.2 The function =SUM(A1:A3) was added to cell A4. Instead of giving the expected answer of 51, it gave an answer of 52.

Explain why this may have occurred by referring to the difference between formatting and rounding in a spreadsheet.

10.2 >>

11. One of the tutors was helping a teacher who came to the centre for help with using a spreadsheet for her marks. The teacher set up this spreadsheet to convert the learners’ marks for a test out of 25 to a percentage:

:



Explain why the incorrect answers are being produced in column B.

11. >>

12. One of the more talented learners started to set up a spreadsheet to help his mother with some of the administration of the spaza shop she owns. An extract of this spreadsheet is shown below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E |
| 1 | Cost per unit | | | | **R 10.00** |
| 2 |  |  |  |  |  |
| 3 | Name | Quantity purchased | Price | VAT | Total |
| 4 | George, Babalwe | 10 | R 100.00 | R 14.00 | R 114.00 |
| 5 | Savuka, Xolani | 20 | R 0.00 | R 0.00 | R 0.00 |
| 6 | Brandt, Tiffany | 5 | ###### | ###### | ###### |
| 7 | Gerber, Chesnee | 8 | ###### | ###### | ###### |

12.1 Give all the types of formatting that were used to format cell A1 and the contents of the cell.

12.1 >>

12.2 What formatting was used to format the contents of cell B3?

12.2 >>

12.3 Briefly explain why some of the cells display hash signs (######) and explain how to solve this problem.

12.3 >>

12.4 The formula in cell C4 (=B4\*E1) is correct.

Clearly explain why incorrect results are produced when the formula is copied to cell C5 as shown, and explain how to solve the problem.

12.4 >>

12.5 The learner wanted to print the spreadsheet on one page, but in the print preview he saw that the document did not fit onto one page. Explain two ways in which he can try to solve this problem.

12.5 >>

13. Consider the following spreadsheet which was used to keep track of the number of parents attending the courses and the amounts they have paid for printing:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** | **E** | **F** | **G** |
| 1 | **Cost per page** | | R 0.85 |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |
| 4 | **Course** | **Surname** | **Name** | **Email** | **Owns a PC** | **Pages printed** | **Total Cost** |
| 5 | 1 | Babbage | Gerty | GertieB@yahoomail.com | Y | 10 | R 58.50 |
| 6 | 2 | Moodley | Thiolan | ThioMoodley@mweb.co.za | N | 25 | R 71.25 |
| 7 | 2 | Somlota | Xola | XolaBabes@gmail.com | Y | 0 | R 50.00 |
| 8 | 1 | Baatjies | Magda |  | Y | 1 | R 50.85 |
| 9 | 3 | Appel | Willem | Appelator@mailbox.co.za | N | 22 | R 68.70 |
| 10 | 1 | Smit | Ruth | RuthSmit44@webmail.co.za | Y | 12 | R 60.20 |
| 11 | 2 | Smit | Magda |  | N | 18 | R 65.30 |
| 12 | 3 | Dorp | Magda |  | N | 12 | R 60.20 |
| 13 |  |  |  |  |  |  | R 485.00 |

13.1 Which spreadsheet functions could be used to do each of the following:   
(You can just write down the name of the function in each case.)

13.1.1 To determine how many people own a PC (see column E).

13.1.1 >>

13.1.2 To determine how many pages were printed by people attending Course 1 (see columns A and F).

13.1.2 >>

13.1.3 To determine the number of people who have an email address listed (column D).

13.1.3 >>

13.1.4 To determine the number of people who do not have an email address listed (column D).

13.1.4 >>

13.1.5 To determine if the @ sign appears in an email address, e.g. cell D5.

13.1.5 >>

13.1.6 To determine the most popular course (using column A).

13.1.6 >>

13.1.7 To calculate the total cost (column G) of people attending Course 2, who do not own a PC.

13.1.7 >>

13.2 Give two reasons why you think codes (numbers) have been used to identify the courses in column A as opposed to their actual names, for example ‘Introduction to internet’?

13.2 >>

13.3 The formula used to calculate the cost of the course for Gerty Babbage is: =50+F5\*$C$1.

Explain in your own words (without referring to specific cells) how the cost of a course is calculated, based on this formula.

13.3 >>

13.4 One of the trust members requested that the information in the spreadsheet be entered into an *Access* database.

What feature of a database can one use to avoid having to retype all this information?

13.4 >>

14. The information from the spreadsheet in the previous question was imported into a database table and fields for CellNo and Gender were added. An extract of the records stored in the database table is shown below:

| **Course** | **Surname** | **Name** | **Gender** | **Email** | **CellNo** | **OwnPC** | **PagesPrinted** | **TotalCost** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | Appel | Willem | M | Appelator@mailbox.co.za | 834712321 | N | 22 | 68.70 |
| 1 | Baatjies | Magda | V |  | 834712321 | Y | 1 | 50.85 |
| 1 | Babbage | Gerty | F | GertieB@yahoomail.com | 823456781 | Y | 10 | 58.50 |
| 2 | Smit | Magda | F |  | 831235900 | N | 18 | 65.30 |
| 2 | Moodley | Thiolan | m | ThioMoodley@mweb.co.za | 72868712 | N | 25 | 71.25 |
| 1 | Smit | Ruth | F | RuthSmit44@webmail.co.za | 726512314 | Y | 12 | 60.20 |
| 2 | Somlota | Xola | F | XolaBabes@gmail.com | 731138432 | N | 0 | 50.00 |
| 3 | Dorp | Magda | F | Maggies@bulletmail.com | 731138432 | N | 12 | 60.20 |

14.1 Is there a suitable choice for a primary key, based on the data currently stored in the table?

Briefly motivate your answer.

14.1 >>

14.2 Sibu complained that the Rand signs disappeared when she tried to type them into the TotalCost field for each record.

Briefly explain why this is happening, and give the best way to solve this problem.

14.2 >>

14.3 Sibu is also frustrated because the zeroes in front of the cellphone numbers disappeared when she typed them. For example, 0834712321 became 834712321.

Explain why this is happening, and how to solve this problem.

14.3 >>

14.4 What would have been the most appropriate data type to use for each of the following fields, based on the data stored in the fields?

14.4.1 PagesPrinted

14.4.1 >>

14.4.2 Email

14.4.2 >>

14.4.3 OwnPC

14.4.3 >>

15. It is crucial to try to prevent incorrect or invalid data being entered into a database. Sibu has already found a number of mistakes in the data that has been entered. Fortunately, database software such as *Access* provides a number of features to help reduce these errors.

15.1 What feature of the database could be used to ensure that every cellphone number consists of 10 digits?

15.1 >>

15.2 Give two features or controls of the database that Sibu could use to ensure that only an ‘M’ or an ‘F’ is entered for the Gender field.

15.2 >>

15.3 What feature of a database can Sibu use to ensure that a value for the Course field is entered for every new record added?

15.3 >>

16. The following query was created to try to produce an alphabetical list of all the people, sorted first by surname, attending Course 1 or 2 where the total cost is R 100 or more.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field: | Name | Surname | Course | TotalCost |
| Table: | tblData | tblData | tblData | tblData |
| Sort: | Ascending | Ascending |  |  |
| Show: | **☑** | **☑** | **🞏** | **☑** |
| Criteria |  |  | 1 and 2 |  |
| or: |  |  |  | >R 100 |
|  |  |  |  |  |

List any four problems you see with this attempt at the query.

16. >>

17. A database report needs to be produced with an alphabetical list of the names of all the people who attended Courses 1, 3, 7 or 10 (a list per course needs to be shown). The total number of people who attended each of these courses and the total number of pages printed (by everyone attending any of these courses) must also be shown.

Explain the process that needs to be followed and clearly indicate *how* and *where* you would add any functions needed to produce the required information.

17. >>

18. Andrea wants to create a web page for the Vusani Trust and she is experimenting with HTML tags.

18.1 Briefly explain what HTML is. The meaning of the abbreviation is not required.

18.1 >>

18.2 How can one easily identify an HTML tag in a web page?

18.2 >>

18.3 Assume you had an opening HTML markup tag of <x>. What would its matching end tag probably look like?

18.3 >>

18.4 What does a web browser do with text that is not included in a markup tag?

18.4 >>

18.5 Andrea has typed her first attempt at creating a web page in *Word*.

Explain in what format she would have to save the file so that it can be opened in a web browser?

18.5 >>

18.6 What are the <HTML> and </HTML> tags used for?

18.6 >>

18.7 What is the significance or use of the <title> tag?

18.7 >>

18.8 What is the effect of adding the <hr /> tag?

18.8 >>

18.9 Explain why the following HTML code might cause a problem:

<b> <i> This is my first web page </b> </i>

18.9 >>

18.10 Andrea does not understand the difference between the <br /> and <p> tags.

Explain to her what the difference is.

18.10 >>

18.11 Andrea came across the following HTML example in a textbook:

<img src="smelly.gif" alt="Bad Smell" height="42" width="42"/>

Explain exactly what this HTML element does by referring to each of the attributes.

18.11 >>

18.12 Explain what the function of the following HTML element is:

<a href="http://www.studyopportunities.co.za">Visit us!</a>.

18.12 >>

18.13 HTML code can be used to set the *cell padding* in a table.

What is cell padding?

18.13 >>

18.14 What is the difference between the list tags <ol> and <ul> ?

18.14 >>