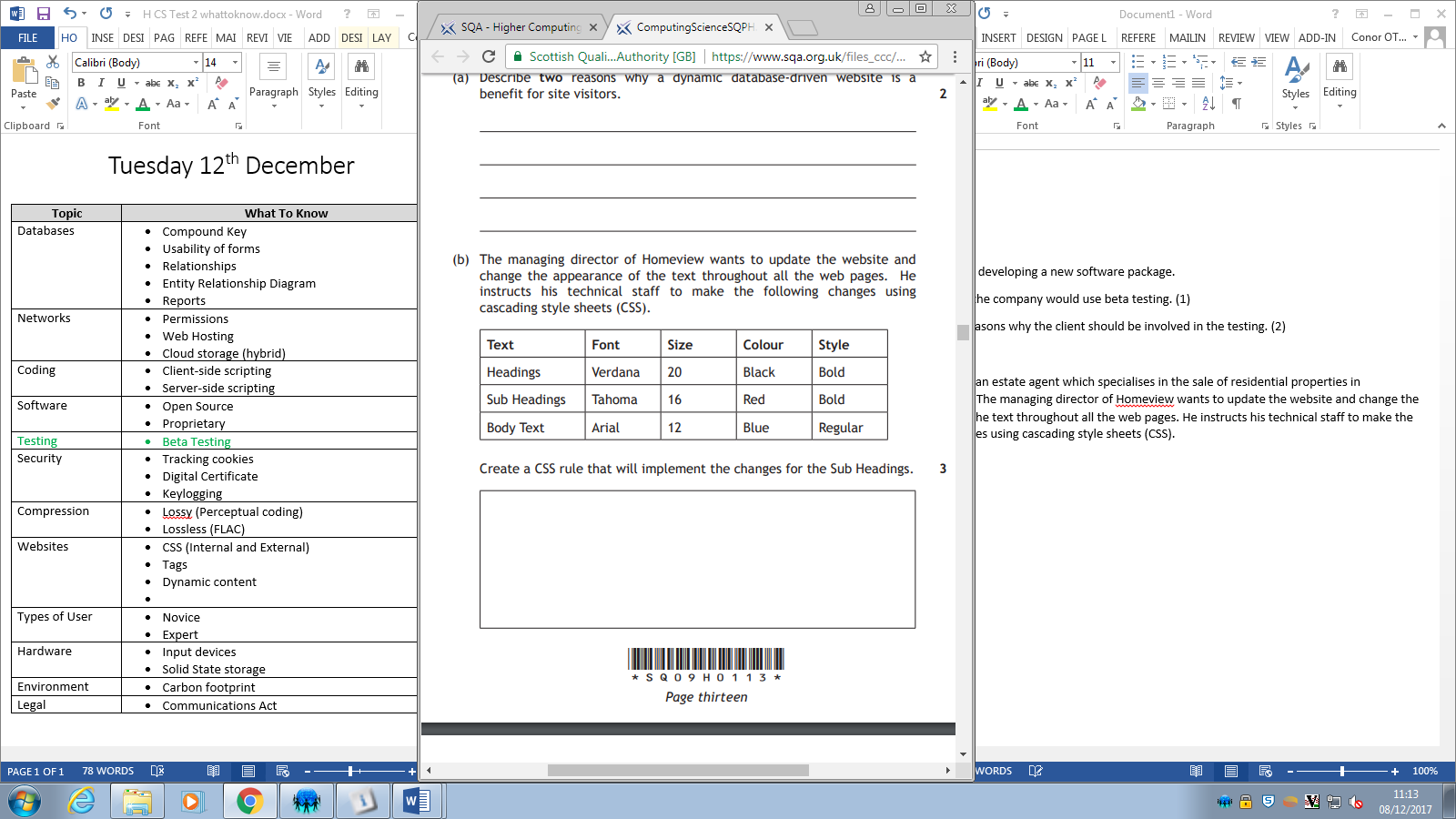
**Higher Revision**

1. A company is developing a new software package.

(a) State when the company would use beta testing. (1)

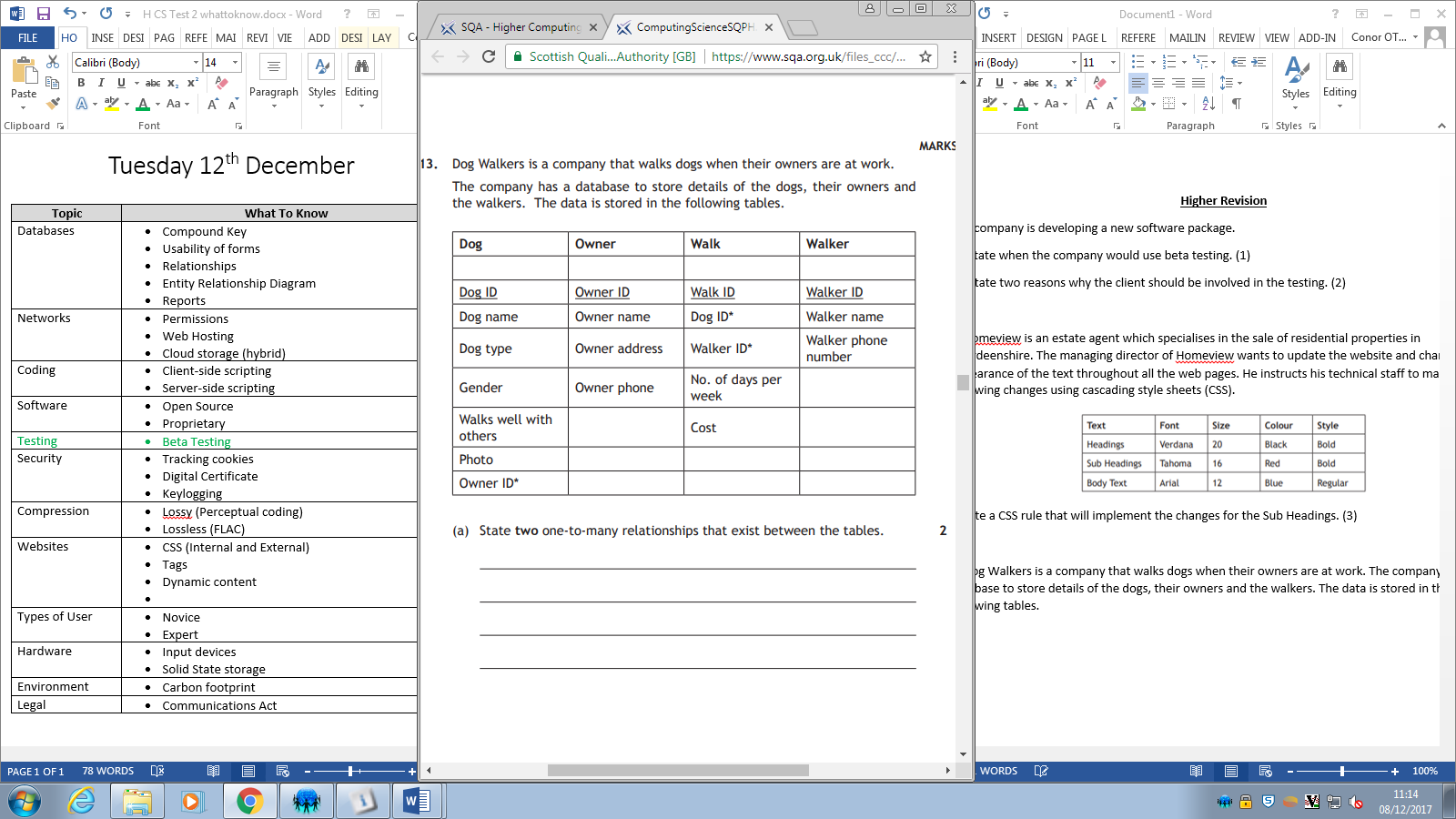
(b) State two reasons why the client should be involved in the testing. (2)

2. Homeview is an estate agent which specialises in the sale of residential properties in Aberdeenshire. The managing director of Homeview wants to update the website and change the appearance of the text throughout all the web pages. He instructs his technical staff to make the following changes using cascading style sheets (CSS).



Create a CSS rule that will implement the changes for the Sub Headings. (3)

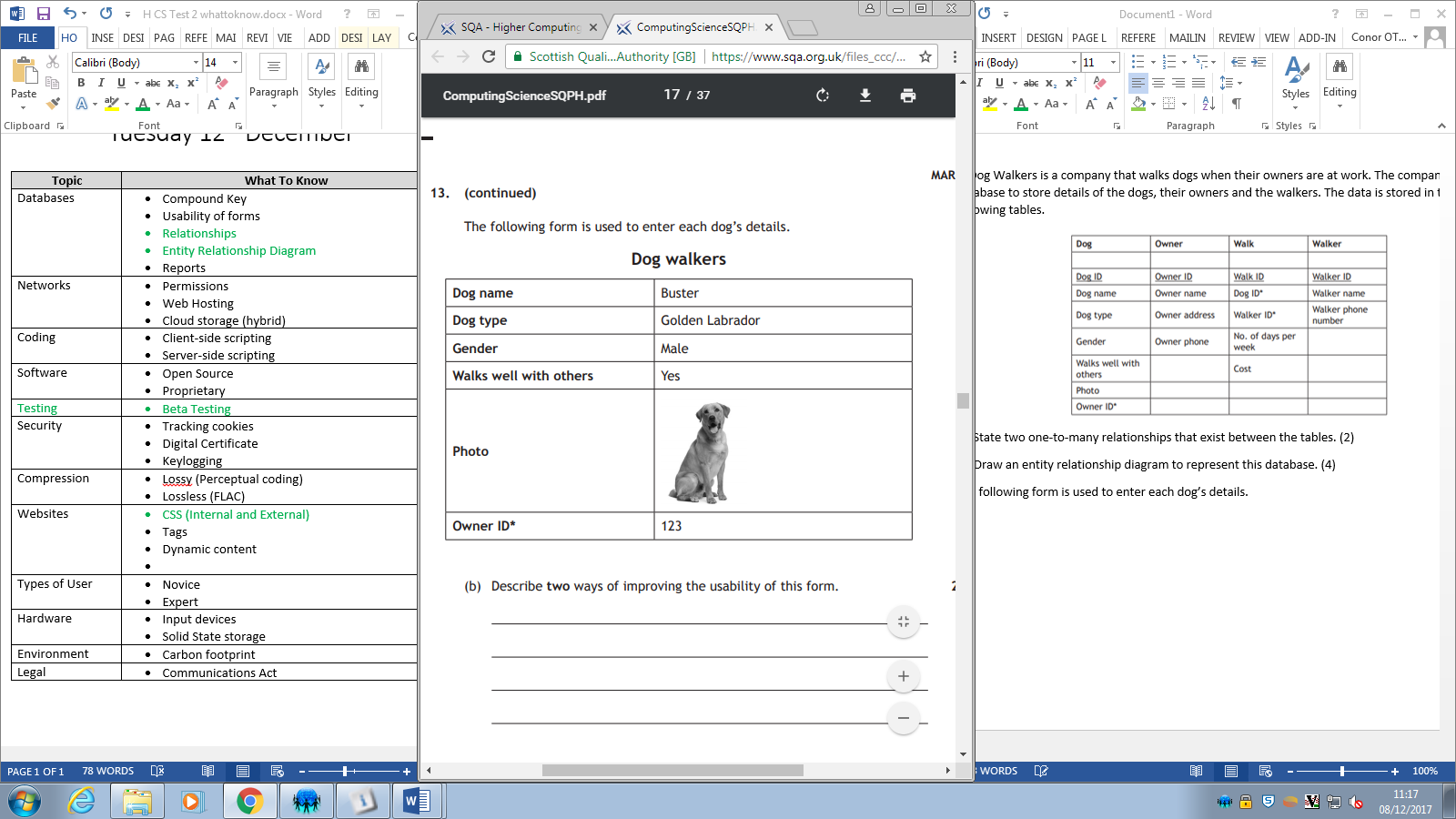
3. Dog Walkers is a company that walks dogs when their owners are at work. The company has a database to store details of the dogs, their owners and the walkers. The data is stored in the following tables.



(a) State two one-to-many relationships that exist between the tables. (2)

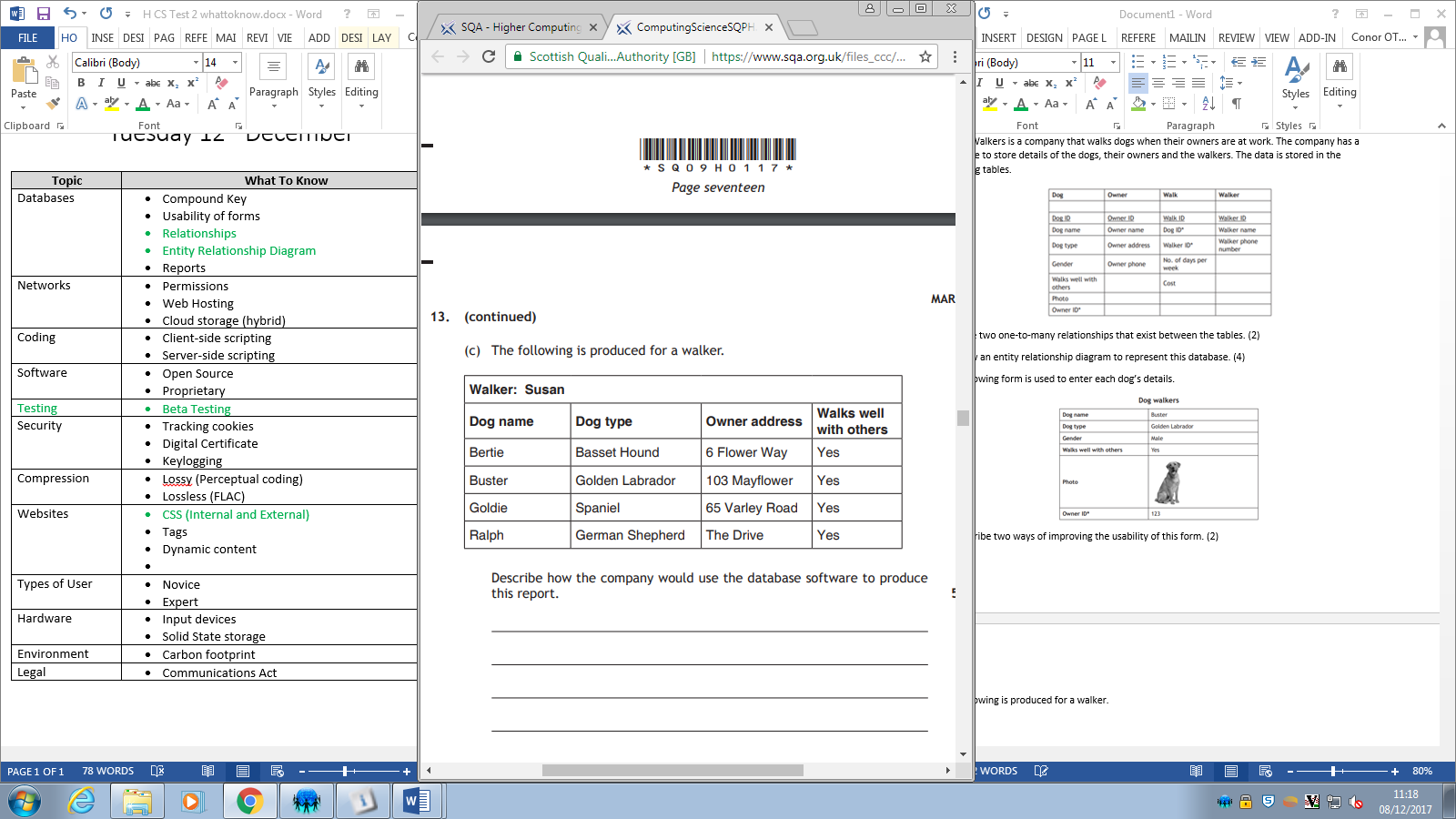
(b) Draw an entity relationship diagram to represent this database. (4)

The following form is used to enter each dog’s details.



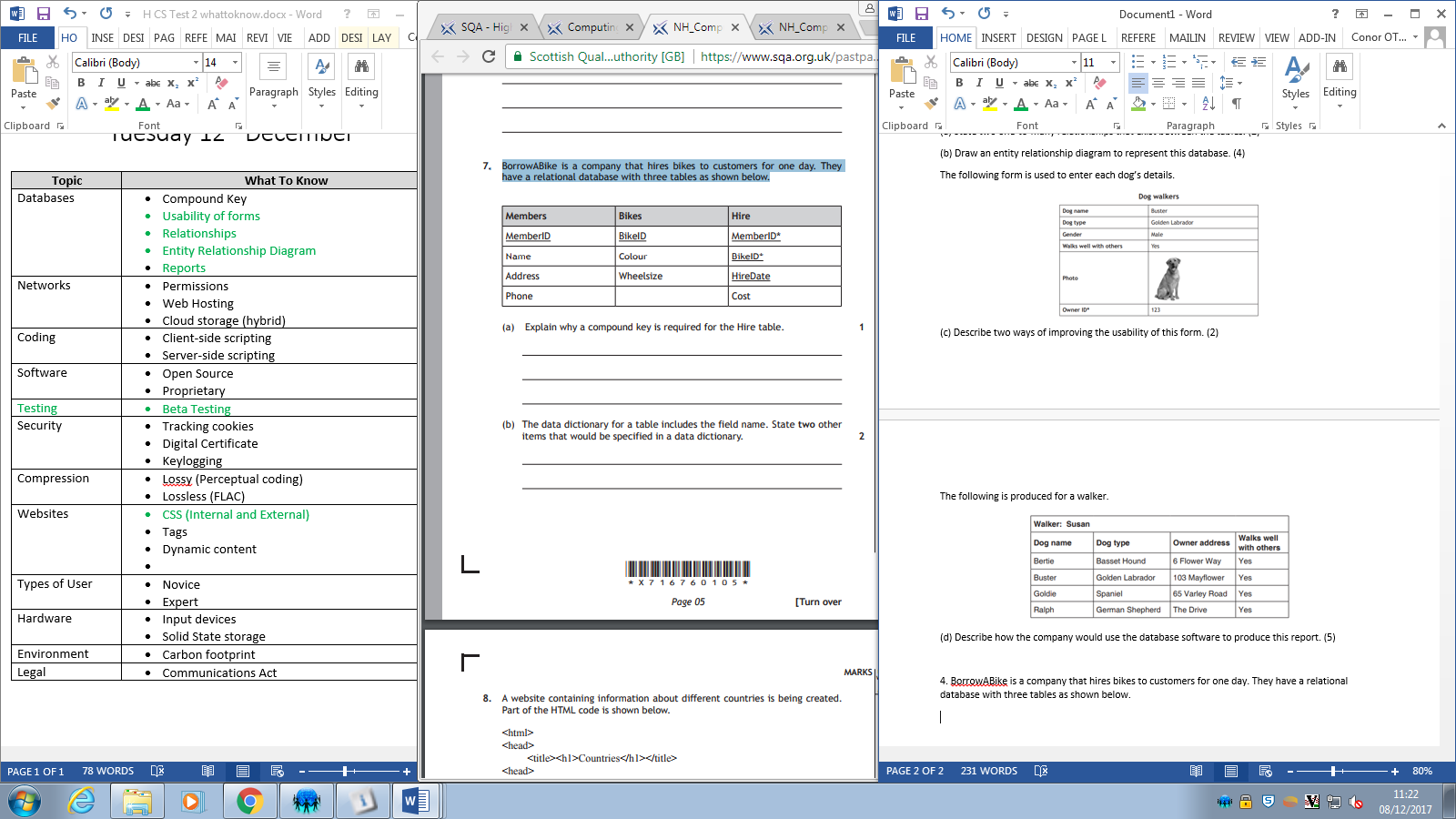
(c) Describe two ways of improving the usability of this form. (2)

The following is produced for a walker.



(d) Describe how the company would use the database software to produce this report. (5)

4. BorrowABike is a company that hires bikes to customers for one day. They have a relational database with three tables as shown below.



Explain why a compound key is required for the Hire table. (1)

5. Vol4Ecosse is a non-profit organisation based in Scotland. The group send students to work on community-based projects throughout the country. Students can access the Vol4Ecosse website and complete some user forms to update their current location and the status of each project.

(a) Vol4Ecosse decide to make use of server-side validation when handling forms that keep track of progress. Describe two reasons why server-side validation may be more appropriate than client-side validation in this case. (2)

(b) Whilst volunteering, the students are encouraged to update the status of different projects throughout the country by adding text and photographs to a shared web-based folder. Explain why cloud storage might be best suited for this purpose. (2)

(c) The Regulation of Investigatory Powers Act 2000 (RIPA) has implications for Vol4Ecosse and their Internet Service Provider (ISP).

(i) Describe the financial implications of this Act for ISPs. (1)

(ii) Describe one reason why RIPA is becoming increasingly difficult to enforce. (2)

6. (a) Describe a lossy compression technique that reduces the file size for sound. (2)

(b) Describe a lossless compression technique that reduces the file size for sound. (2)

7. Explain how tracking cookies can be a security risk. (2)

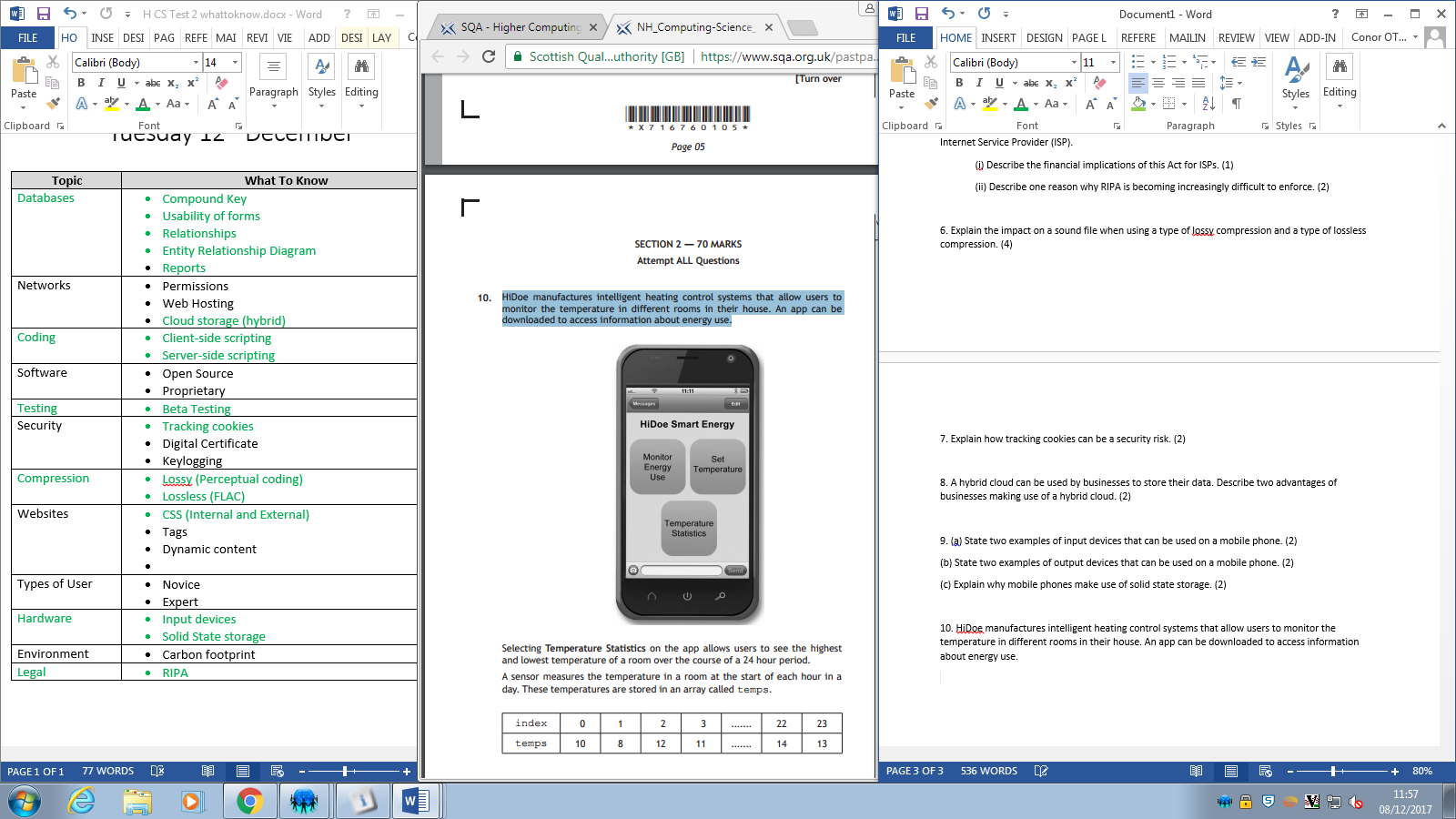
8. A hybrid cloud can be used by businesses to store their data. Describe two advantages of businesses making use of a hybrid cloud. (2)

9. (a) State two examples of input devices that can be used on a mobile phone. (2)

(b) State two examples of output devices that can be used on a mobile phone. (2)

(c) Explain why mobile phones make use of solid state storage. (2)

10. HiDoe manufactures intelligent heating control systems that allow users to monitor the temperature in different rooms in their house. An app can be downloaded to access information about energy use.



a) Describe the type of user this app is designed for. (2)

b) Describe two ways that intelligent heating systems such as HiDoe can be used to reduce the carbon footprint of homes. (2)

11. Describe three different stages of a computer system that can have an impact on carbon footprint. (2)

12. Pupils access files from a shared folder on their school network server. These files are available for the pupils to open, but only a teacher can edit and save the files to this folder. Describe how this is implemented. (2)