INFORMATION TECHNOLOGY – UNIT 2

Chapter 5 – Data analysis and visualization (1)

1. Make sure you have created an account at many eyes.

<http://www-958.ibm.com/software/data/cognos/manyeyes/> - you will need it during class next term. Your email address should be one that is accessible at school. (eg. [xyz0001@prsc.vic.edu.au](mailto:xyz0001@prsc.vic.edu.au)). Read through the process involved in the many eyes website (p201) and make sure you understand it.

Answer the following questions in full sentences, with as much detail as possible.

1. When might it be better to produce data in a visual form? Give some examples.
2. Study Figure 5.4 (p179) On what day are most students late? What time are students most likely to arrive on a Monday? What day are students least likely to be late?
3. What is a project constraint?
4. What is the difference between qualitative and quantitative data?
5. What is a CSV file and why is it useful? What software is often used with CSV files?
6. Look at Fig 5.9 (p183). How did most people find out about the Southside Market? Write down the top 3 responses. Is this quantitative or qualitative data?
7. Look at 5.10 (p184). Write down the top 3 things the customers mentioned in their surveys? Is this quantitative or qualitative data?
8. How could the group identify data about their customers’ demographics (ie, lifestyle, income etc.)
9. What is a data set?
10. What are the four main ways in which data visualization can be used?
11. Suggest the type of data visualization tool that would be most appropriate in the situations below:
    1. how students get to school (by percentage)
    2. which countries have the highest carbon footprint
    3. the daily rainfall for the month of June
    4. the price of NAB shares for a week
    5. a comparison between all 4 “big bank” shares at the end of a week
    6. the frequency of each study score for I.T. in 2010
    7. a comparison between the sizes of club AFL memberships
    8. Identifying which words are most used in a song

INFORMATION TECHNOLOGY – UNIT 2

Chapter 5 – Data analysis and visualization (2)

1. What is the difference between primary and secondary data? Give an example of both from the Southside Makers case study.
2. Identify four different types of mistake that people make when completing a survey.
3. What is meant by data integrity and why is it important?
4. How can on-line purchases be validated?
5. Identify a manual and an electronic method of measurement that is commonly used.
6. What is Boolean data?
7. Give two examples of how Southside Makers could use data visualization for making decisions.
8. Why would it be better for Southside Makers to have the addresses of local cafes shown on a map rather than just listed?
9. What criteria should be used to measure whether a visualization is a more efficient way of presenting the data?
10. What criteria should be used to measure whether a visualization is a more effective way of presenting the data?
11. List three formats and three conventions that should be followed when making a data visualization.
12. Study the visualization below and suggest three things that could be done to improve it.

