

AP CSP – Summer Work 2025

Read chapters 1 – 4 of the book Blown to Bits, available as a free pdf at

<http://www.bitsbook.com>

Answer the following questions to the best of your ability. In the beginning of the school year, there will be a form in Schoology for you to copy and paste your answers. If you have any questions, email me at Brian.Serapiglia@amityregion5.org

Chapter 1:

1. What is a bit and what does it mean to say that "it's all just bits"? (Koan 1) Give examples of the things today that are stored in bits?

Answer

2. Describe, in your own words, Moore's Law.

Answer

3. Give an example of how the digital explosion is "neither good nor bad" but has both positive and negative implications.

Answer

4. Find and summarize a news article that talks about the positive or negative impacts of a computing innovation. Is the technology itself positive or negative? Or have people used the technology in positive and/or negative ways?

Answer

Chapter 2:

1. Is it possible to identify someone, perhaps a patient, knowing just the gender, birth date, and zip code? Why or why not?

Answer

2. Are electronic documents like paper documents? Write 2-3 sentences comparing and contrasting them.

Answer

3. Earlier in the course, you built the Map Tour app. In the final version, what kind of data is collected from the user? Does the user know the data is being collected? Can they opt out of providing data and still use the app?

Answer

4. Is the Privacy Act effective? Explain why or why not.

Answer

5. Are you willing to trade some of your privacy for the convenience of having a computer or a company recommend products to you? Why or why not? Under what circumstances?

Answer

6. How do we leave digital "footprints and fingerprints?" Do you think this is important for everyone to know? Why or why not?

Answer

7. How have social media platforms such as Twitter, Instagram, Snapchat, etc. affected our privacy?

Answer

8. In this course, you are building apps that collect data from users, the device, and its sensors. What responsibilities do we have as app developers for the data we collect?

Answer

9. Search the web for a recent news story that deals with privacy. Write a paragraph summarizing the article, including any beneficial or harmful impacts on privacy.

Answer

Chapter 3:

1. What is metadata? Give an example of how a piece of metadata could be used to increase the usefulness of an image or document.

2. What is a model?

3. What's the difference between a raster image and an ASCII representation of a text document?

4. What are filename extensions? What are they used for?

5. What is lossless representation? What is lossy representation? What are the trade-offs in using each representation?

6. What is steganography and what is it used for? Describe in your own words the steganography algorithm used in the activity.

7. What would you have to do to delete a document from your computer so that it could not possibly be read by anyone else?

8. What is free and open source software? Provide an example.

Free Response:

9. How has retouching become a controversial issue? Give an example.

10. Would you rather own a camera (or camera phone) with a higher number of megapixels or lower? Explain.

11. Other than digital images, what might be an example of a computer model? Explain your answer based on the definition of a model.

12. The code that implements App Inventor is open source and its impact on education is obvious. Find another example of open source software and describe its positive impact on education, business or society.

Chapter 4:

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