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Explore — Impact of Computing Innovations Written Response Submission Template

Submission Requirements
2. Written Responses

Submit one PDF document in which you respond directly to each prompt. Clearly label your responses **2a–2e in order.** Your responses must provide evidence of the extensive knowledge you have developed about your chosen computing innovation and its impact(s). Write your responses so they would be understandable to someone who is not familiar with the computing innovation. Include citations, as applicable, within your written responses. **Your response to the first four prompts (2a–2d) combined must not exceed 700 words.**

Computational Artifact

2a. Provide information on your computing innovation and computational artifact.

- Name the computing innovation that is represented by your computational artifact.
- Describe the computing innovation's intended purpose and function.
- Describe how your computational artifact illustrates, represents or explains the computing innovation's intended purpose, its function or its effect.

(Approximately 100 words)

Insert response for 2a in the text box below.

> The Global Positional System, otherwise known as the GPS, has had a huge impact on society since it has been created. Shown in the computational artifact, GPS has a variety of different uses. Originally, it was created for military purposes, but it was soon realized that civilians could utilize this device according to the "General Infromation On GPS." Nowadays, it is used for driving directions, tracking lost items, monitoring the locations of children, and much more (Bajaj). The artifact demonstrates the several functions of the GPS within the various pictures and some of the components involved with the functionality of the device.

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2b. Describe your development process, explicitly identifying the computing tools and techniques you used to create your artifact. Your description must be detailed enough so that a person unfamiliar with those tools and techniques will understand your process.

(Approximately 100 words)

Insert response for 2b in the text box below.

I created my artifact on microsoft word to make it simple yet effective. I first found several images that represented the numerous functions of the GPS and I inserted them into the word document. Then, I strategically placed them around the page in a collage-like form and cropped many of them to make them fit accordingly. Additionally, I inserted my rectangle into the document, formatting it in an aesthetically pleasing way, and put my title in a text box on top of that. With some final little touch-ups and adjustments, I finished my artifact. However, it was in a word document, so I saved it as a PDF to make it officially finished.

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Computing Innovation

2c. Explain at least one beneficial effect and at least one harmful effect the computing innovation has had, or has the potential to have, on society, economy, or culture.

(Approximately 250 words)

Insert response for 2c in the text box below.

Since the GPS innovation has so many potential uses, there are numerous different harmful and beneficial effects, all described in Karen Bajaj's article. When looking at the GPS's ability to track children, this becomes a huge benefit to society. It betters the safety for children nowadays. If they get lost, a parent can easily use their iPhone to track their location. Also, if parents sees that their child is heading towards somewhere that is potentially dangerous, they can prevent the child from getting in trouble. Though it could be seen as an invasion of privacy, it can very easily increase the safety of children or even teenagers. Another GPS function that is very popular is the use of driving directions. While this is very convenient at times, people in society have become very reliant on this luxury. It causes many people to only trust the words of the GPS and to not actually become familiar with the places they are going. If something were to happen while someone was driving and they had to know where they were, many people would have no idea where they were. While many people would be able to use their phone to find out where they are, if for some reason they could not do this, they would be in trouble. While GPS probably has more benefits than detriments, there are definitely some major harmful effects from people's overuse of the GPS.

2d. Using specific details, describe:

- The data your innovation uses.
- How the innovation consumes (as input), produces (as output), and/or transforms data.
- At least one data storage concern, data privacy concern, or data security concern directly related to the computing innovation.

(Approximately 250 words)

Insert response for 2d in the text box below.

According to Fred Zahradnik in his Lifewire article, GPS takes in data signals from several satellites that are in orbit around the Earth. Using these signals, a GPS can pinpoint your exact or relative location. In general, the data it produces is the location, but depending on which specific device you are using at the time, the location can be used to figure out other things, like directions, speed, and more. However, there can be some serious security concerns when it comes to using GPS. According to Catherine Rump, the government can track people's locations through their cell phone use. Every minute or so phones registers its location with the cell phone networks, allowing data to be easily available to when you might be. Also, when you use GPS on your phone, such as google maps, the government can monitor where you go and what you are doing. It is pretty invasive, but it is very difficult to avoid and the government can use it as a helpful tool to track criminals.

References

2e. Provide a list of at least three online or print sources used to create your computational artifact and/or support your responses to the prompts provided in this performance task.

- At least two of the sources must have been created after the end of the previous academic year.
- For each online source, include the permanent URL. Identify the author, title, source, the date you retrieved the source, and, if possible, the date the reference was written or posted.
- For each print source, include the author, title of excerpt/article and magazine or book, page number(s), publisher, and date of publication.
- If you include an interview source, include the name of the person you interviewed, the date on which the interview occurred, and the person's position in the field.
- Include citations for the sources you used, and number each source accordingly.
- Each source must be relevant, credible, and easily accessed.

(Note: No word count limit for this answer)
Insert response for 2e in the text box below.

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