

## 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 computing innovation demonstrated by my computational artifact is Near Field Communication (NFC).

Near Field Communication is a technology that was created in order to let different devices like smartphones communicate with other NFC enabled devices. With this power to connect two devices that are near each other you have the ability to transfer data across both devices without having to connect both of them through a cable or over a wireless network that will transfer everything slower. A new emerging use for NFC has become the ability to pay with it in stores that have NFC enabled scanners. The idea of not having to carry a real wallet around appeals to many people nowadays.

**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.

My development process was a lot of a learning process for me. I learned not only about NFC but also about how I could easily relay information I had just obtained to people in a much simpler way. I used Microsoft Word to do my artifact which might sound easy because it is something that we all use but it is actually very complex. I used a lot of the drawing tools to make different shapes like the arrow and I edited the pictures so they would fit in. I also had to use text alighten to make the text easy to see and pleasing to read. Overall my experience making this artifact was great and I think it is a great way for people to start sharing their knowledge on different subjects.

## 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.

NFC has many different advantages and disadvantages. One of the advantages that comes along with NFC is the ability to transfer data and pay for things with your mobile device. Transferring data over Wifi can sometimes prove to be slow and ineffective when it comes to nearby transferring. This is where NFC can come along and allow people to transfer all this data at faster rates if both devices are close. The other side of the coin is paying at stores with NFC technology embedded in today's phones. This allows people to have a realistic "mobile wallet" that can work as their card in places that support NFC payments. As good as this all sounds people do see some downsides to it, privacy and security. With NFC there is more data that is given to companies like Google and Apple that can mine your data and do certain things with it. Also with the payments, people are scared of storing their debit and credit cards online. While if a hacker did go to extreme heights to access all the cards, it would be very difficult due to these companies securing your cards through token authentication.

**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.

The data used in NFC is the consumer's data. NFC takes data on your device or someone's else's device and transfers it between both devices. NFC also stores your credit card and debit card data encrypted by software so no one is able to access it. Tokens are used in place of credit card numbers creating fake numbers that lead to nothing. NFC can be consumed by users by using it to transfer data and pay for things online. The only data concern along with this is the process is the concern of data being intercepted.

## 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.

<https://developer.android.com/guide/topics/connectivity/nfc/index.html>  
<http://nearfieldcommunication.org/>  
<http://nfc-forum.org/what-is-nfc/>