AP Computer Science Principles@Beijing National Day School

Explore Task(Winter Break Assignment)

Due date: Monday, March 2nd, 2020
Instructor: Mr. Alwin Tareen
Total Points: 30

Task Overview

- In this project, you will be expected to conduct an investigation on a **computing innovation** that can potentially have significant effects on our society, economy, or culture. Those effects may be beneficial, but they can also be harmful.
- You will submit your `Explore Task` as two separate parts: the **computational artifact** and the **written response.**

Background

- You should choose an innovation that consumes, transforms, or produces data in one form or another. Also, the innovation should raise at least one concern in terms of its security, privacy, or storage.
- You will need to research the innovation, evaluating sources along the way for their relevance, credibility, and accessibility. You should also take care to avoid plagiarism by appropriately citing all sources used.
- Your investigation should not simply collect facts. Instead, it should delve deeply into the computing innovation by asking questions, proposing solutions, and drawing thoughtful conclusions.
- This deep reflection will lead to your creation of a **computational artifact** that illustrates, represents, or explains the computing innovation's intended purpose, function, or effects.
- You should strive for a creative and engaging artifact that shows your ability to think outside traditional avenues for communicating ideas. This could be an animated video, an infographic, a song, or anything else that highlights both the task and your creativity.

Specification

The Computational Artifact[10 points]

- Create an **original** computational artifact which elaborates and highlights a fundamental aspect of the computing innovation, and accentuates the content that you provided in your written responses.
- Your computational artifact must satisfy the following requirements:
  - Provide insight into a beneficial and harmful effect of the innovation.
  - Illustrate and describe an impact of the innovation on our society, economy, and culture.
- The computational artifact should be visual or audio in nature, and it can take any of the following forms: an infographic, a visualization, a video clip, or an audio recording.
- The following are some restrictions that apply to the different types of digital media formats that can be used:

- **Infographic Digital Media:**
  - Required file type: `.pdf`(Portable Document Format)
  - Maximum length: `three pages`
- **Video or Audio Digital Media:**
  - Acceptable file types: `.mp3`, `.mp4`, `.wmv`, `.avi`, `.mov`, `.wav`, `.aif`
  - Maximum running time: `60 seconds`
  - Maximum file size: `30MB`

The Written Response[20 points]

- Provide answers to each of the following response prompts, starting at question **2a** and finishing with question **2e**. Make sure each of your responses are clearly labelled with the designators **2a** to **2e**, in order.
- Your responses must provide evidence of the extensive knowledge that you have developed about your chosen computing innovation and its impact.
- Structure your responses so that they would be understandable to someone who is not familiar with your computing innovation.
- Include citations, as applicable, within your written responses.
- Your written responses must be submitted in a `.pdf` file format.

Written Response Prompts

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 computating innovation's intended purpose, its function, or its effect.
- **[Must not exceed 100 words]**

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.

- **[Must not exceed 100 words]**

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.

- **[Must not exceed 250 words]**

2d. Using specific details, describe:

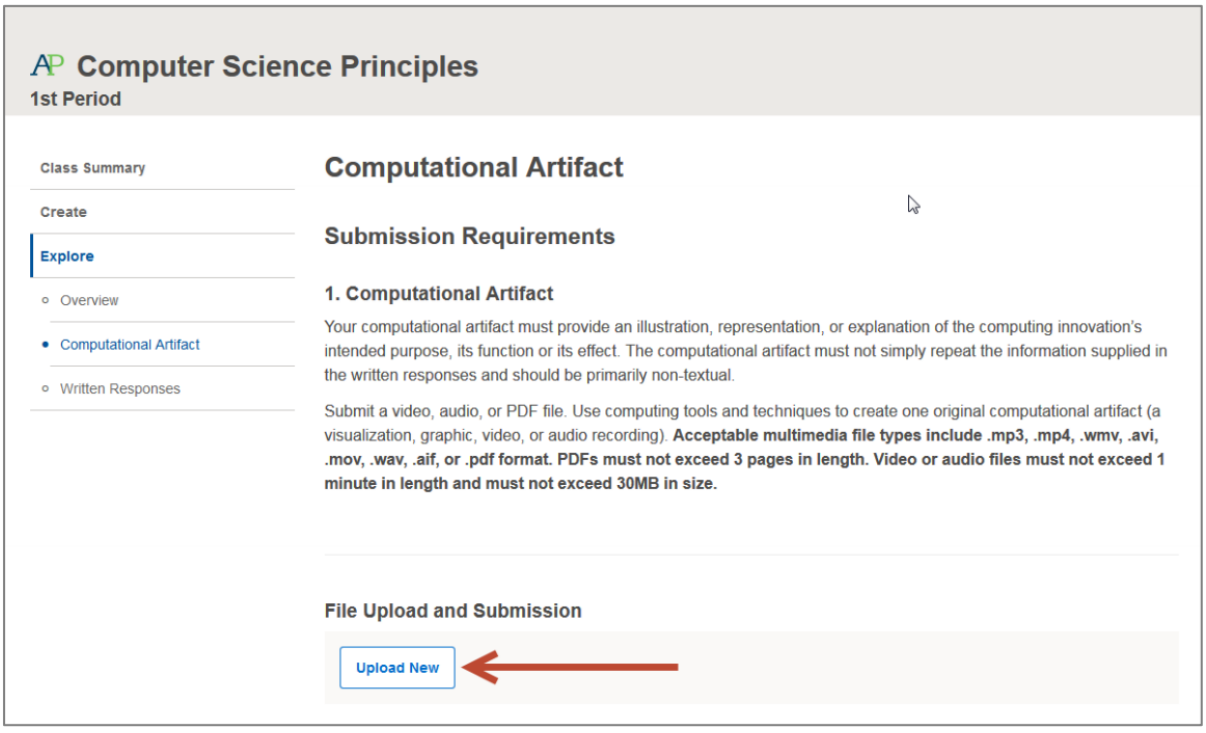
- the data your innovation uses;
- how the innovation consumes(as input), produces(as output), and/or transforms data; and
- at least one data storage concern, data privacy concern, or data security concern directly related to the computing innovation.
- **[Must not exceed 250 words]**

2e. Provide a list of at least three online or print sources used to create your computational artifact and/or support your responses through in-text citation 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. In other words, these two sources should be dated from June 1st, 2018 onwards.
- For each online source, include the complete and 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 in-text citations for the sources you used.
- Each source must be relevant, credible, and easily accessed.
- **[No word limit]**

Submission

- Submit your computational artifact file and written responses `.pdf` file by uploading it to the `AP Digital Porfolio` platform. Click on the following link: `https://digitalportfolio.collegeboard.org/`
- Click on the **Explore** tab on the left-hand navigation menu. Then, select the **Computational Artifact** link. You should see the following webpage appear, which contains the `Upload New` button. Click on this button, and select the file you wish to upload.



- At this point, the webpage indicates that your file has successfully uploaded. Repeat the above steps to upload your **Written Responses** file.
- **IMPORTANT: DO NOT CLICK ON THE `Submit Final` BUTTON.**
- I need to inspect your submissions and ensure that they are complete. Once I am satisfied that your Explore Task meets all of AP's requirements, then we can formally submit your work for official AP grading.