

Create — Applications from Ideas

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 – 2d in order**. **Your response to all prompts combined must not exceed 750 words, exclusive of the Program Code.**

Program Purpose and Development

2a. Identify the programming language and identify the purpose of your program. Explain your video using one of the following:

- A written summary
- of what the video illustrates OR
- An audio narration in your video. If you choose this option, your response to the written summary should read, “The explanation is located in the video.”

(Approximately 150 words)

Insert response for 2a in the text box below.

For my project, I've created a simple clicker game using HTML, CSS, and JavaScript. In the video, I am demonstrating how the website functions. To get access to the game, you have to verify your age. If the age is not exceeding the limit, you will be sent to a different page. Once having access to the game, the game provides \$500 to make purchases. The user has three buttons, "Start Hacking", "Buy Beginner", and "Buy Expert". To make money without hiring any hacker(s), the button "Start Hacking" will provide the user with money. When a beginner hacker is hired, it cost \$10 for the first. The only difference is, the expert hacker gets money much quicker. The more hackers the user purchase, the prices gets higher, for example, the expert hackers. If the user wants to quit the game, he has the option to go back home.

2b. Describe the incremental and iterative development process of your program, focusing on two distinct points in that process. Describe the difficulties and/or opportunities you encountered and how they were resolved or incorporated. In your description clearly indicate whether the development described was collaborative or independent. At least one of these points must refer to independent program development; the second could refer to either collaborative or independent program development. (*Approximately 200 words*)

Insert response for 2b in the text box below.

Being new to adding JavaScript to HTML, I came upon many problems. An opportunity I had was knowing JavaScript in building apps. With opportunities, I also had difficulties. The biggest problem I had was enabling the age limit to access the website. As a first time using HTML and JavaScript, I was not sure how it worked. I was using an If/Else statement which I was very familiar with, I plugged every piece of information and eventually figured it out by myself. An advantage I had with using JavaScript on apps was that I knew how each element worked with the code. I then proceeded on making the game with the knowledge of developing JavaScript based applications. For every problem I had, I solved it on my own.

2c. Capture and paste an image or images of your program code segment that implements the most complex algorithm you wrote. (marked with a color border below)

```
function buy() {  
    var Cost = Math.floor(10 * Math.pow(1.2,starter));  
    if (cash >= Cost) {  
        starter = starter + 1;  
        cash = cash - Cost;  
        document.getElementById('starter').innerHTML = starter;  
        document.getElementById('cash').innerHTML = cash;  
    }  
  
    var nextCost = Math.floor(10 * Math.pow(1.2,starter));  
    document.getElementById('Cost').innerHTML = nextCost;  
};
```

Your algorithm should integrate several mathematical and logical concepts. Describe the mathematical and logical concepts used to develop the algorithm. Explain the complexity of the algorithm and how it functions in the program. (*Approximately 200 words*)

Insert text response for 2c in the plain box below.

Without this algorithm, the button would not function properly. This algorithm handles and functions the entire "beginner" button and the money amount available. The algorithm makes it much simpler because, within the click, it adds the amount of hacker(s) bought, reduces the money being charged from the money balance, and finally, it increases the value of the hacker. Within the function, it runs an IF statement that reads, if money is greater or equal to the cost of a beginner hacker than the price is charged from the balance and it adds a hacker. After purchasing a hacker, the money being collected is increasing. After making a purchase, the cost of a hacker increases and then the price changes for next purchase.

2d. Capture and paste an image or images of the program code segment that contains an abstraction you developed (marked with a matching **blue color border** below)



Your abstraction should integrate mathematical and logical concepts.
Explain how your abstraction helped manage the complexity of your program.
(Approximately 200 words)

Insert text response for 2d in the plain box below.

