Create PT - Written Response Template

Assessment Overview and Performance Task Directions for Students

Video Submit one video in .mp4, .wmv, .avi, or .mov format that demonstrates the running of at least one significant feature of your program. Your video must not exceed 1 minute in length and must not exceed 30MB in size

Prompt 2a. Provide a written response or audio narration in your video that:

- identifies the programming language;
- identifies the purpose of your program; and
- explains what the video illustrates.

(Must not exceed 150 words)

I use Java Script inside this HTML game because this language can link image and program closely. As a game player, I know that a good UI or beautiful image can attract players. However, I am not good at drawing so it is difficult that to create the game with my own picture. Therefore, I use CSS label to design this game because label can help me to insert picture. The purpose of this program is a simply game that everyone should play "whack-a-mole." a Jerry is hiding under the cloud with randomly appears on the screen. Players should click the mouse to kill it and get ten score for each mouse. If the players hit the mouse, the mouse will become a mushroom cloud. My video illustrates the gaming situation that want will players see when they are playing.

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.
(Must not exceed 200 words)

My program has some incremental and iterative code. The first one will be my “score” code. The game score should always display on the screen and continually increase when you get the point. I use CSS label to display it and “innerHTML” to make it fixed on the HTML. The “sum” is a variable in my program that calculates the score of the player. The calculate equation is in the “hit” function that each time player hit the mouse the score will increase 10. The second distinct point is the way I use to connect each function. In JavaScript we can use “onclick” to set attribute for each subject, therefore I can call the next function easier than using other language. There is a question appears when I set the attribute of each function. I was confused about the attributes such as “onclick.” Then I studied on CSDN which is a China IT Club and learn about how to use “removeAttribute” and “setAttribute” these two algorithms. I found that if I just put this algorithm in the function then calling next function, it will save many coding times. By the way I also simplify my program by using this method.

2c. Capture and paste a program code segment that implements an algorithm (marked with an **oval** in **section 3**) and that is fundamental for your program to achieve its intended purpose. This code segment must be an algorithm you developed individually on your own, must include two or more algorithms, and must integrate mathematical and/or logical concepts. Describe how each algorithm within your selected algorithm functions independently, as well as in combination with others, to form a new algorithm that helps to achieve the intended purpose of the program. *(Must not exceed 200 words)*

Code Segment

```
function background(){
    sb=Math.floor(Math.random()*9);
    p1=document.getElementsByTagName("img");
    p1[sb].src="dishu.gif";

    p1[sb].setAttribute("onclick","hit()");

    setTimeout("kill()",900);
```

Written Response

This code segment is the background setting of the program. It will make the mouse randomly appears on the nine squares. The first line is a mathematical concept code. It uses “Math.random” to create a random variable “sb.” The second line and third line connect together to insert a picture on the p1 object because it is image we use “img” for prefix. To make the game vivid I use gif instead of picture, then the mouse can move without any code. The fourth program is the essential program. The “set Attribute” algorithm help me input “onclick” to the picture p1. “onclick” is already in the html therefore I can easily call it. “hit()” is a function that display hit process and it just below the background function. By using “setAttribute” method I can call “hit()” when “onclick” is done. Finally, there is a mandatory waiting 900ms when the program is running to change function.

2d. Capture and paste a program code segment that contains an abstraction you developed individually on your own (marked with a **rectangle** in **section 3**). This abstraction must integrate mathematical and logical concepts. Explain how your abstraction helped manage the complexity of your program. *(Must not exceed 200 words)*

Code Segment

```
function hit(){
      p1[sb].src="kill.png";
     p1[sb].removeAttribute("onclick");

     sum+=10;
     document.getElementById("score1").innerHTML=sum;
  }
  function kill(){
        p1[sb].removeAttribute("onclick");
        p1[sb].src="hide.png";
       setTimeout("background()",900);
    }
```

Written Response

This program is a function of hitting process. It includes two parts: the first part is the insert part the second one is score part. The score part automatically increase number when player have hit the mouse and save in html permanently therefore the score1 will always increase if you hit the mouse. I use abstraction in hit process, by using the function hit() the input picture and score calculation can be finished together and only need call it for one time. It really saves a lot of executing time because the program is shorter than before. The same method appears on the second function kill. Kill() has a unique code “setTimeout” though this function you can not only input the “hide” picture but also control the speed of the game.

Export or save this document as a PDF and turn in to the AP Digital Portfolio along with your **Video** and **Program Code** (separate files).