Math279 Final Project (Fall/13)

Deadline: 11:59:59pm, Mon., Dec. 23rd, 2013
NO LATE PROJECT WILL BE ACCEPTTED!

IMPORTANT NOTICE:
1. This is a take home final project. You have about two weeks to finish it. However, you should complete this project, including both the coding and the written components, **ON YOUR OWN**! If you have any questions about the description of the project, you may contact me by email. Any plagiarism activity, including both copying from others and helping others by giving out your results, will result in an **F** for your final grade of this course.
2. If you cannot finish the project on time, you may send me whatever results you have by the deadline to get partial credit.
3. There is absolutely NO LATE PROJECT that will be graded.

Outline of Final Project

You have two options for the final project

❑ Option I: Complete the game page with instructions and more.

  o Part I: a JavaScript game that you will build by following the instructions provided in this set of slides

  o Part II: Design the layout yourself. Use Bootstrap or write your own CSS file.

❑ Option II: Enhance your personal web page with Bootstrap

Option I
Part I Instruction

Step 1. Build a new htm document and create ten buttons in it

- create **<YourLastName>_JSgame.htm**

- use comment tags to insert your name and date information in the head part

- build ten buttons in **<YourLastName>_JSgame.htm** using HTML form elements

- index these ten buttons by numbers 0, 1, 2,… 8, 9

- Hint: the sample syntax for creating a button, in a form, is

  <input type="button" name="bt0" value="0">

Step 2: Using **onLoad** attribute

- the **onLoad** attribute is used in **\<body\>** tag
- can be used to load an initial dialog window
- add a function called greeting() with onLoad attribute to the \<body\> tag

  \<body onLoad="greeting()"\>

  where, **greeting()** is a user defined function that you will write later

Using **alert()** method

❑ the **alert()** method is used to display a dialog box
  o Method input: a message
  o Method output: a pop-up dialog box with
    ❑ 1. the message that is defined by the programmer;
    ❑ 2. an OK button

❑ example: **alert("Hello there.")**

Step 3: create greeting() function

❑ in <YourLastName>_JSgame.htm, build function **greeting()**

  o Create the JavaScript function within the <head> … </head> tags

  o Function input: none (i.e. no parameters)

  o Function output: a pop-up dialog box shows a greeting message such as "Welcome to the game." (hint: use alert() method)

Step 4: Build game() function

- Function input: a number that the user chooses
- Function output: a dialog box telling the user whether the number is correct

```javascript
function game(attempt){
    trys--;
    if (attempt==myNumber){
    alert("You won!");
        resetNumbers();
    }else{
    if (trys==0){
    alert("You Lose! My number is "+myNumber+".");
    resetNumbers();
    }else{
        if (attempt<myNumber){
                alert("Try a larger number!");
        }
        if (attempt>myNumber){
                alert("Try a smaller number!");
        }
    } //end inner else
    } //end outer else
}//end function
```

- ❑ **Step 5:** add the following variables and function before *game()* *and* greeting() functions

```
var trys;
var myNumber;
function resetNumbers(){
        trys=3;
        myNumber=Math.floor(Math.random()*10);
}
```

- ❑ **Step 6:** add the following command in greeting() function

```
resetNumbers();
```

- ❑ **Step 7:** add onClick="*game()*" in each of the button tags, example

```
<input type="button" name="bt0" value="0" onClick="game(0)">
<input type="button" name="bt1" value="1" onClick="game(1)">
… …
```

- ❑ **Step 8:** reload the webpage, play the game, don't forget to click on the buttons!

[Option I](#)
[Part II: Page Decoration](#)

Option I: Complete the Game

- ❑ Add necessary components to the page, such as game instructions, background images, etc.

- ❑ Write CSS or use Bootstrap incorporating with div(header, footer, etc.) element to layout the web page

- ❑ Be creative!

Option II: Enhance your personal web page

- Create pages(at least three) for different topics like your hobby or your pet and so on.
- Create navigation bar on each page to connect those pages together
- Use bootstrap to layout your pages
- Be creative!

Things to hand in – READ carefully

1. For option I, the **entire webpage of Part I**, create a *.txt* or *.doc* document that explains what these programs are about and what EACH LINE of the code accomplishes
   - Here, for similar lines, such as the code for creating the ten buttons in Part I, you may explain them together
   - Don't forget to put your name in this document
2. Send me the following two parts through **Blackboard**
   - the source files(*.html, *.jpg, *.css, etc.) as a single zip file for both Option I and Option II
   - the *.txt* or *.doc* file explaining the code of Part I if you choose Option I

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