

### **Web-Based Application Design and Development**

# **Activity #7: Utilizing separation of concern**

The goal of this activity is to utilize separation of concern.

# Part 0: Download the starting code

- 1. From Canvas, download yours solved Activity 5 files i.e. \*.html, \*.js and \*.css.
- 2. Rename them to *Lastname-Activity7.html*, .css and .js. Change the name of the .js and .css files in the html *head* element to match your new filename. Verify the URL.

# Part 1: Apply Separation of concerns

- 1. Your files currently contain embedded code, specifically there is embedded JavaScript (JS) in the HTML file. (e.g. onclick="showNum(4)")
- 2. Make the calculator function accurately without any embedded JS code.
- 3. Check out the Week5-JS-Demo to see how you can call JS event handlers like "onclick" from the JS file. Then remove the JS event handlers (e.g. onclick="showNum(4)") from the HTML file of activity 7, and call it from the JS page. You will have to do corresponding changes in the HTML file as well.
- 4. Hint: here is how you can implement showNum() in the JS file

```
window.onload = function () {
document.getElementById("btn4").onclick = showNum;
/*btn4 is the id of the button that has a value of 4*/
}
function showNum() {
    document.frmCalc.txtNumber.value += this.value;
}
```

- 5. For a binary operator, you must click on the buttons in the following order (e.g. addition):
  - a. Hit a number button
  - b. Hit the '+' button
  - c. Hit a number button
  - d. Hit the 'Calculate' button
- 6. For a unary operator, you must click the buttons in the following order (e.g. decrement):
  - a. Hit the number button
  - b. Hit the '—' button
- 7. All operators must work.
- 8. Validate any HTML CSS and/or JavaScript errors. To validate your HTML/CSS you can use either of the three methods- "By URI" (copy paste specific file path on the server), "By file upload" (uploading the file), or "By direct input" (copy paste the content of the file) on the validation link.

# Part 2: Upload files to your Exercise folder

1. Verify that your final webpage is accessible by going to https://webpages.uncc.edu/yourUsername/Exercise/Lastname-Activity7.html

# Part 3: Turn in your activity

- 1. Log in to Canvas.
- 2. Go to the Activity #7 Submission link on the Canvas page. Upload the .html, .css and .js files to the submission page.



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3. In the "Comments" textbox on Canvas provide the URL of your html file on the web server. You must provide the correct URL to get credit