```
1    // Script for homework 3 part I
2    $(document).ready(function () {
3        var resultTextArea = $("#result");
4        var form2Button = $("#form2");
5        var clearButton = $("#clear");
6        var isFaded = false;
7
8        form2Button.click(function () {
9            if (!isFaded) {
10               resultTextArea.fadeOut(1000, function () {
11                   // display "New set of result was executed"
12                   resultTextArea.val("New set of result was executed");
13                   resultTextArea.css("color", "");
14                   resultTextArea.fadeIn(1000, function () {
15                       // after fading in, trigger formValid function
16                       formValid();
17                   });
18               });
19           } else {
20               resultTextArea.fadeOut("slow", function () {
21                   // clear the textarea and remove the fade
22                   resultTextArea.css("opacity", 1);
23                   resultTextArea.val("");
24                   isFaded = false;
25               });
26           }
27       });
28
29       clearButton.click(function () {
30           resultTextArea.fadeIn(100, function () {
31               setTimeout(function () {
32                   // display "You have successfully cleared the form"
33                   resultTextArea.val("You have successfully cleared the form");
34                   resultTextArea.css("color", "");
35                   // after a short delay, fade out the message and clear textarea content
36                   resultTextArea.fadeOut(1500, function () {
37                       // after fading out, clear the textarea content and show textarea
38                       resultTextArea.val("");
39                       resultTextArea.fadeIn(200);
40                       isFaded = false;
41                   });
42               }, 200); // adjust the delay duration
43           });
44       });
45
46       // Function for Student Grade validation
47       function formValid() {
48       // Get input values
49           var number1 = document.getElementById("hwAvg").value;
50           var number2 = document.getElementById("midExam").value;
51           var number3 = document.getElementById("finalExam").value;
52           var number4 = document.getElementById("participation").value;
53
54           var num1 = parseInt(number1);
55           var num2 = parseInt(number2);
56           var num3 = parseInt(number3);
57           var num4 = parseInt(number4);
58
59           var inputFields = document.querySelectorAll(".numField");
60
61           // Flag to track if all conditions are met
62           var isValid = true;
63
64           inputFields.forEach(function(inputField) {
65           var inputValue = parseFloat(inputField.value);
66
67           if (isNaN(inputValue)) {
68               resultTextArea.val("Please make sure to enter valid numbers in all input
                   fields!");
```

```javascript
69              resultTextArea.css("color", "red");
70              resultTextArea.css("font-weight", "bold");
71              isValid = false;
72          } else if (inputValue < 0 || inputValue > 100) {
73              resultTextArea.val("Please make sure to enter numbers between 0 and 100
                    only!");
74              resultTextArea.css("color", "red");
75              resultTextArea.css("font-weight", "bold");
76              isValid = false;
77          }
78      });
79
80      if (isValid) {
81          computeGrade(num1, num2, num3, num4);
82          }
83      }
84
85      // student grade computed
86      function computeGrade(num1, num2, num3, num4) {
87          var finGrade, retake;
88          var finAve = Math.round((0.5 * num1) + (0.2 * num2) + (0.2 * num3) + (0.1 *
                num4));
89
90          switch (true) {
91              case (finAve >= 90):
92                  finGrade = "A";
93                  break;
94              case (finAve >= 80):
95                  finGrade = "B";
96                  break;
97              case (finAve >= 70):
98                  finGrade = "C";
99                  break;
100             case (finAve >= 60):
101                 finGrade = "D";
102                 retake = true;
103                 break;
104             default:
105                 finGrade = "F";
106                 retake = true;
107         }
108
109         if (retake) {
110             var fail = "Student must retake the course";
111         }
112
113         var form2Result = "Results from form2 function";
114         resultTextArea.val(form2Result);
115
116         var line1, line2, line3, tab;
117         tab = "    ";
118         line1 = `${tab}The final average: ${finAve}`;
119         line2 = `${tab}The final grade: ${finGrade}`;
120         line3 = `${tab}${fail || ""}`;
121
122         var resultText = "\n" + line1 + "\n" + line2 + "\n" + line3;
123         resultTextArea.val(resultText);
124         // Change font to default if red text exists from prior condition
125         resultTextArea.css("color", "");
126         resultTextArea.css("font-weight", "");
127     }
128 });
```