```
1: <!DOCTYPE html>
2: <html xmlns="http://www.w3.org/1999/xhtml">
3: <head>
4: <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
5: <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js"></
     script>
6: <style>
7: body{
8:    position:relative; margin:0; padding:0; background:#fff; width:100%; height:100%;
       overflow:hidden;
9: }
10: img{
11:    display:block; margin:0 auto;
12: }
13: a:link, a:hover, a:visited{
14:    text-decoration:none; color:#004a80; outline: none;
15: }
16: a:hover, a:active{
17:    color:red;
18: }
19: .menuItem{
20:    margin:30px auto;
21: }
22: </style>
23: </head>
24:
25: <body>
26: <div style="position:absolute; top:0; left:50%">
27: <div id="container" style="position:absolute; top:0; left:-960px; width:1920px; z-
     index:40000">
28: <div id="menu" style="position:absolute; top:0; left:0; width:100%; text-
     align:center; ; z-index:30000; font-size:60px; height:100%; background:white">
29: <div class="menuItem" ref="test01" style="margin-top:280px"><a href="" onclick="return
     false">START NOW</a></div>
30: </div>
31:
32: <div id="screenImage" style="position:absolute; top:0; left:0; width:100%; z-index:
     20000; cursor: none; display:none">
33: <img id="calibrate" src="img/calibrate.png" style="position:absolute; top:0; left:0; z-
     index:10000">
34: <img id="image" style="position:absolute; top:0; left:0; z-index:10100; display:none">
35: </div>
36:
37: <div id="screenDone" style="position:absolute; top:0; left:0; width:100%; z-index:
     40000; font-size:100px; text-align:center; display:none; cursor: none">
38: <input style="display:none;" id="fileDialog" type="file" nwsaveas="data.csv" />
39: <div style="line-height:1080px">COMPLETED </div>
40: </div>
41: </div>
42: </div>
43:
44: <script>
45: var fs = require('fs');
46: var gui = require('nw.gui');
47:
48: function saveFile(fileDialogID, data){
49:    var chooser = $(fileDialogID);
50:    chooser.change(function(event){
51:      fs.writeFile($(this).val(), data, function(err){
52:        if(err){
53:          alert("Error in saving the file! " + err);
54:        }
55:      });
56:      $(this).val('');
57:    });
58:    chooser.trigger('click');
59: }
60:
61: var userData = [];
62:
63: var app = {
64:    keyPress: {
```

```
65:      refresh: 114, // r
66:      quit: 113, // q
67:      nextQuestion: 13 // press enter
68:    },
69:
70:    time: {
71:      calibrate: 1500,
72:      answer: 10000 // time out for finding the digit
73:    },
74:
75:    param: {
76:      explain: 1,
77:      practice: 2,
78:      experiment: 3,
79:      idol: 0,
80:      calibrating: 1,
81:      running: 2,
82:      trialNo: {
83:        1:1, // part 1 - Use 1 image for explanation
84:        2:5, // part 2 - 5 practices
85:        3:40 // part 3 - 40 trails
86:      }
87:    },
88:
89:    status: {
90:      section: -1,
91:      trial: 0,
92:      running: -1,
93:      dataFolder: ""
94:    },
95:
96:    init: function(){
97:      app.status.running = app.param.idol;
98:      $("#container").css({top: Math.floor(($(window).height() - 1080)/2)+"px"});
99:
100:     $(".menuItem").on("click", this, function(event){
101:       app.status.dataFolder = $(this).attr("ref");
102:       app.status.section = app.param.experiment;
103:       $("#menu").hide();
104:       $("#screenImage").show();
105:       return false;
106:     });
107:
108:     gui.Window.get().on("close", function(){
109:       this.hide();
110:       this.close(true);
111:     });
112:
113:     $(document).on('mousedown', this, function(event){
114:       if(app.status.running == app.param.running){
115:         app.timesUpOrAnswered(app.status.trial, "answered");
116:       }
117:     });
118:
119:     $(document).on('keypress', this, function(event){
120:       if(event.keyCode == app.keyPress.refresh){
121:         userData = [];
122:         window.location.href = "index.html";
123:       }
124:
125:       else if(event.keyCode == app.keyPress.quit){
126:         userData = [];
127:         gui.Window.get().close();
128:       }
129:
130:       else{
131:         if(app.status.running == app.param.idol){
132:           if(event.keyCode == app.keyPress.nextQuestion){
133:             if(app.status.section==1 || app.status.section==2 || app.status.section==3)
                    {
134:               app.section();
```

```
135:              }
136:            }
137:          }
138:        }
139:      });
140:    },
141:
142:    section: function(){
143:      app.status.running = app.param.calibrating;
144:      var currentTrial = ++app.status.trial;
145:
146:      var imgName = app.status.trial <= 9 ? "img0"+app.status.trial+".png" :
147:        "img"+app.status.trial+".png"
         $("#image").attr("src", "img/"+app.status.dataFolder+"/"+imgName);
148:
149:      // trial
150:      if(app.status.section==3){
151:        var date = new Date();
152:        var timeStr = date.getHours() + ":" + date.getMinutes() + ":" + date.getSeconds()
           + ":" + date.getMilliseconds();
153:        userData.push([timeStr, "calibrate"]);
154:      }
155:
156:      setTimeout(function(){
157:        app.showQuestion(currentTrial);
158:      }, app.time.calibrate);
159:    },
160:
161:
162:    showQuestion: function(currentTrial){
163:      if(app.status.running==app.param.calibrating && currentTrial==app.status.trial){
164:
165:        // trial
166:        if(app.status.section==3){
167:          var date = new Date();
168:          var timeStr = date.getHours() + ":" + date.getMinutes() + ":" +
             date.getSeconds() + ":" + date.getMilliseconds();
169:          userData.push([timeStr, "start"]);
170:        }
171:
172:        $("#image").show();
173:        app.status.running = app.param.running;
174:        setTimeout(function(){
175:          if(app.status.section != app.param.explain){
176:            app.timesUpOrAnswered(currentTrial, "timesup");
177:          }
178:        }, app.time.answer);
179:      }
180:    },
181:
182:
183:    timesUpOrAnswered: function(currentTrial, triggerBy){
184:      if(app.status.running==app.param.running && currentTrial==app.status.trial){
185:
186:        // trial
187:        if(app.status.section==3){
188:          var date = new Date();
189:          var timeStr = date.getHours() + ":" + date.getMinutes() + ":" +
             date.getSeconds() + ":" + date.getMilliseconds();
190:          userData.push([timeStr, triggerBy]);
191:        }
192:
193:        $("#image").hide();
194:        app.status.running = app.param.idol;
195:        if(app.status.trial == app.param.trialNo[app.status.section]){
196:          $("#screenImage").hide();
197:          $("#screenDone").show();
198:
199:          // trial
200:          if(app.status.section==3){
201:            setTimeout(function(){
202:              var str = "";
```

```
203:                for(var i=0; i<userData.length; i++){
204:                    str += userData[i]+"\n";
205:                }
206:                saveFile("#fileDialog", str);
207:            }, 1500);
208:        }
209:
210:        app.status.section = -1;
211:        app.status.trial = 0;
212:        }
213:    }
214:    }
215: }
216: </script>
217:
218: </body>
219: <script>
220: $(function(){
221:     app.init();
222: })
223: </script>
224: </html>
```