Coding

JavaScript

Event Listeners
Variables
Functions

Event Listeners

A way to respond to 'events' like a click, scroll, mousemove or window resize
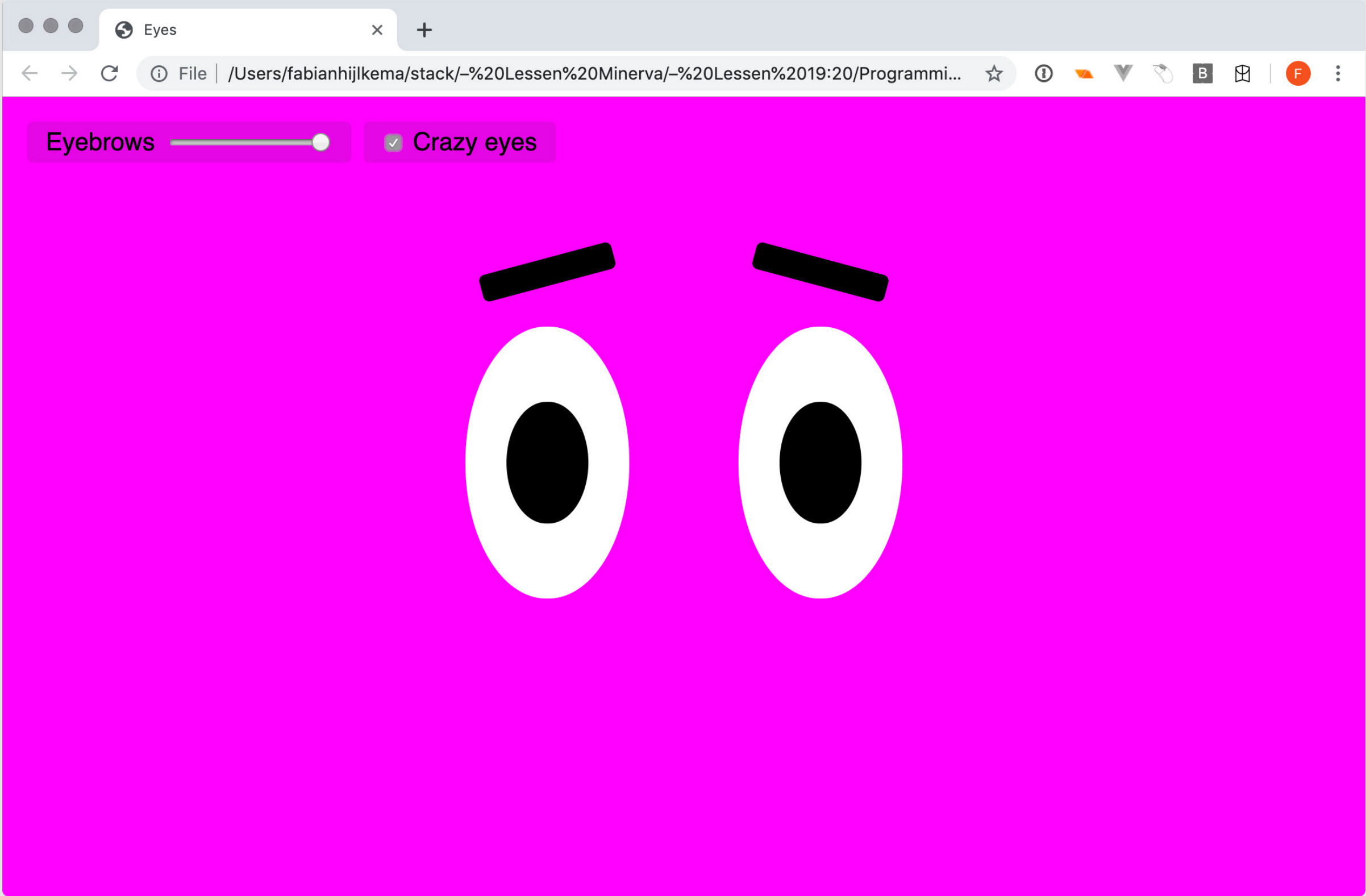
Variables

A 'word' that can store a value that can be referenced to and changed

<u>Functions</u>

Is a small set of programming-lines that can be easily re-used.

Don't Repeat Yourself

Download lesson3.zip
from http://artez.
fabianhijlkema.nl/
projectweek/coding

Open up example1.html in both Brackets and your browser.

Working Files ⬌

club_lapland_s

● example1_en

Getting Started ▾

index.html

main.css

▸ screenshots

```html
 92                    transform: rotate(-15deg);
 93                }
 94 ▾          #right-side .eyebrow {
 95                    transform: rotate(15deg);
 96                }
 97         </style>
 98
 99         <script>
100 ▾          $(document).ready(function(){
101
102            })
103         </script>
104     </head>
105 ▾  <body>
106 ▾      <div id="controls">
107            <div class="control"><label>Eyebrows</label><input type="range"
                   value="25" id="eyebrow-control"></div>
108            <div class="control"><input type="checkbox" id="crazyeyes-control">
                   <label>Crazy eyes</label></div>
109        </div>
110
111 ▾      <div id="left-side">
112            <div class="eyebrow"></div>
113 ▾          <div class="eye">
114                <div class="pupil"></div>
115            </div>
116        </div>
117 ▾      <div id="right-side">
118            <div class="eyebrow"></div>
119 ▾          <div class="eye">
120                <div class="pupil"></div>
```

Line 102, Column 1 — Selected 1 line — 125 Lines   INS   HTML ▾   ◯   Spaces: 4

```
 92                    transform: rotate(-15deg);
 93                }
 94 ▾          #right-side .eyebrow {
 95                    transform: rotate(15deg);
 96                }
 97        </style>
 98
 99        <script>
100 ▾          $(document).ready(function(){
101 ▾              $(window).on('mousemove', function( event ) {
102
103                  })
104
105              })
106        </script>
107    </head>
108 ▾  <body>
109 ▾      <div id="controls">
110            <div class="control"><label>Eyebrows</label><input type="range"
                   value="25" id="eyebrow-control"></div>
111            <div class="control"><input type="checkbox" id="crazyeyes-control">
                   <label>Crazy eyes</label></div>
112        </div>
113
114 ▾      <div id="left-side">
115            <div class="eyebrow"></div>
116 ▾          <div class="eye">
117                <div class="pupil"></div>
118            </div>
119        </div>
120 ▾      <div id="right-side">
```

Working Files
club_lapland_s
● example1_en

Getting Started ▾

index.html
main.css
▸ screenshots

Line 103, Column 19 — Selected 3 lines — 128 Lines   INS   HTML ▾ ○ Spaces: 4

Working Files⟱

club_lapland_s

• example1_en

Getting Started ▾

index.html
main.css
▸ screenshots

```
 92                 transform: rotate(-15deg);
 93             }
 94 ▾     #right-side .eyebrow {
 95                 transform: rotate(15deg);
 96             }
 97     </style>
 98
 99     <script>
100 ▾     $(document).ready(function(){
101 ▾         $(window).on('mousemove', function( event ) {
102             console.log('mouse is moving')
103         })
104
105     })
106     </script>
107     </head>
108 ▾ <body>
109 ▾     <div id="controls">
110         <div class="control"><label>Eyebrows</label><input type="range"
            value="25" id="eyebrow-control"></div>
111         <div class="control"><input type="checkbox" id="crazyeyes-control">
            <label>Crazy eyes</label></div>
112     </div>
113
114 ▾     <div id="left-side">
115         <div class="eyebrow"></div>
116 ▾         <div class="eye">
117             <div class="pupil"></div>
118         </div>
119     </div>
120 ▾     <div id="right-side">
```

```
 92                    transform: rotate(-15deg);
 93                }
 94 ▼          #right-side .eyebrow {
 95                    transform: rotate(15deg);
 96                }
 97        </style>
 98
 99        <script>
100 ▼          $(document).ready(function(){
101 ▼              $(window).on('mousemove', function( event ) {
102                      var x = event.pageX / $(window).width() * 100
103                      var y = event.pageY / $(window).height() * 100
104
105                  })
106
107              })
108        </script>
109    </head>
110 ▼  <body>
111 ▼      <div id="controls">
112          <div class="control"><label>Eyebrows</label><input type="range"
                value="25" id="eyebrow-control"></div>
113          <div class="control"><input type="checkbox" id="crazyeyes-control">
                <label>Crazy eyes</label></div>
114      </div>
115
116 ▼      <div id="left-side">
117          <div class="eyebrow"></div>
118 ▼          <div class="eye">
119              <div class="pupil"></div>
120          </div>
```

Working Files⤢
club_lapland_s
• example1_en

Getting Started ▾
index.html
main.css
▸ screenshots

Line 103, Column 67 — Selected 2 lines — 130 Lines   INS   HTML ▾ ○   Spaces: 4

```
 92                      transform: rotate(-15deg);
 93                  }
 94 ▾           #right-side .eyebrow {
 95                      transform: rotate(15deg);
 96                  }
 97          </style>
 98
 99          <script>
100 ▾            $(document).ready(function(){
101 ▾                $(window).on('mousemove', function( event ) {
102                      var x = event.pageX / $(window).width() * 100
103                      var y = event.pageY / $(window).height() * 100
104
105                      console.log(x, y)
106
107                  })
108
109              })
110          </script>
111      </head>
112 ▾    <body>
113 ▾        <div id="controls">
114              <div class="control"><label>Eyebrows</label><input type="range"
                 value="25" id="eyebrow-control"></div>
115              <div class="control"><input type="checkbox" id="crazyeyes-control">
                 <label>Crazy eyes</label></div>
116          </div>
117
118 ▾        <div id="left-side">
119              <div class="eyebrow"></div>
120 ▾            <div class="eye">
```

Working Files ⬓

club_lapland_s

• example1_en

Getting Started ▾

index.html

main.css

▸ screenshots

```
 92                     transform: rotate(-15deg);
 93                 }
 94 ▾             #right-side .eyebrow {
 95                     transform: rotate(15deg);
 96                 }
 97         </style>
 98
 99         <script>
100 ▾             $(document).ready(function(){
101 ▾                 $(window).on('mousemove', function( event ) {
102                     var x = event.pageX / $(window).width() * 100
103                     var y = event.pageY / $(window).height() * 100
104
105 ▾                     $('.pupil').css({
106                         left: x + '%',
107                         top: y + '%'
108                     })
109
110                 })
111
112             })
113         </script>
114     </head>
115 ▾     <body>
116 ▾         <div id="controls">
117             <div class="control"><label>Eyebrows</label><input type="range"
                value="25" id="eyebrow-control"></div>
118             <div class="control"><input type="checkbox" id="crazyeyes-control">
                <label>Crazy eyes</label></div>
119         </div>
120
```
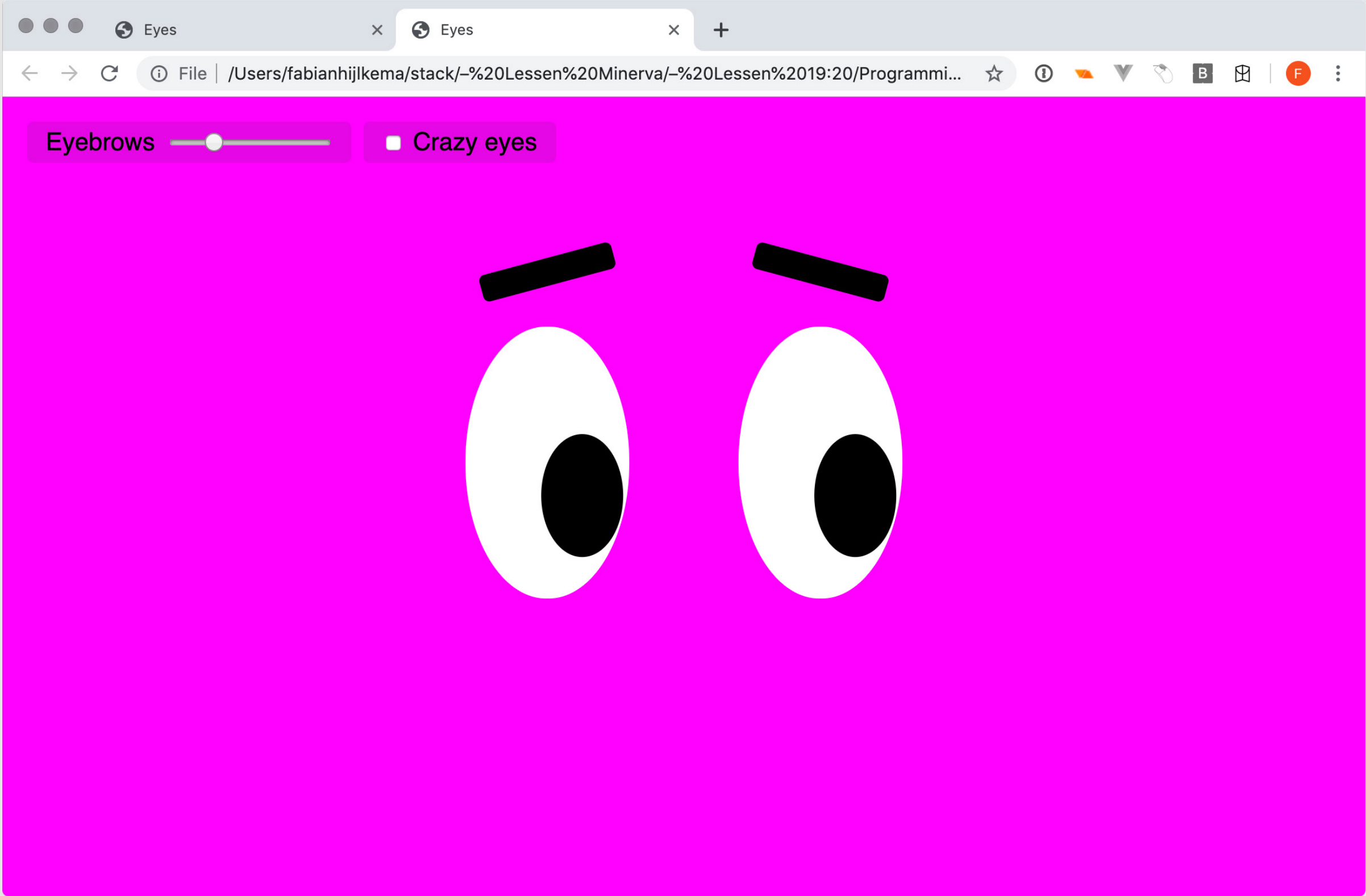
Line 108, Column 23 — Selected 4 lines — 135 Lines   INS   HTML ▾ ◯   Spaces: 4

Working Files ⊟

club_lapland_s

● example1_en

Getting Started ▾

index.html

main.css

▸ screenshots

```
 97            </style>
 98
 99            <script>
100 ▾            $(document).ready(function(){
101 ▾                $(window).on('mousemove', function( event ) {
102                      var x = event.pageX / $(window).width() * 100
103                      var y = event.pageY / $(window).height() * 100
104
105 ▾                    $('.pupil').css({
106                          left: x + '%',
107                          top: y + '%'
108                      })
109
110                  })
111
112 ▾                $('#eyebrow-control').on('input', function(){
113
114                  })
115
116                })
117            </script>
118        </head>
119 ▾      <body>
120 ▾          <div id="controls">
121              <div class="control"><label>Eyebrows</label><input type="range"
                     value="25" id="eyebrow-control"></div>
122              <div class="control"><input type="checkbox" id="crazyeyes-control">
                     <label>Crazy eyes</label></div>
123          </div>
124
125 ▾          <div id="left-side">
```

Line 114, Column 19 — Selected 3 lines — 139 Lines   INS   HTML ▾ ○   Spaces: 4

```html
97          </style>
98
99          <script>
100 ▾           $(document).ready(function(){
101 ▾               $(window).on('mousemove', function( event ) {
102                     var x = event.pageX / $(window).width() * 100
103                     var y = event.pageY / $(window).height() * 100
104
105 ▾                   $('.pupil').css({
106                         left: x + '%',
107                         top: y + '%'
108                     })
109
110                 })
111
112 ▾               $('#eyebrow-control').on('input', function(){
113                     var rotation = $(this).val() * 0.6 - 30
114                 })
115
116             })
117         </script>
118     </head>
119 ▾   <body>
120 ▾       <div id="controls">
121             <div class="control"><label>Eyebrows</label><input type="range"
                value="25" id="eyebrow-control"></div>
122             <div class="control"><input type="checkbox" id="crazyeyes-control">
                <label>Crazy eyes</label></div>
123         </div>
124
125 ▾       <div id="left-side">
```

Line 114, Column 1 — Selected 1 line — 139 Lines   INS   HTML ▾ ○   Spaces: 4

```
 97            </style>
 98
 99        <script>
100 ▾        $(document).ready(function(){
101 ▾            $(window).on('mousemove', function( event ) {
102                var x = event.pageX / $(window).width() * 100
103                var y = event.pageY / $(window).height() * 100
104
105 ▾            $('.pupil').css({
106                left: x + '%',
107                top: y + '%'
108            })
109
110            })
111
112 ▾            $('#eyebrow-control').on('input', function(){
113                var rotation = $(this).val() * 0.6 - 30
114
115                console.log(rotation)
116            })
117
118        })
119        </script>
120    </head>
121 ▾    <body>
122 ▾        <div id="controls">
123            <div class="control"><label>Eyebrows</label><input type="range"
                    value="25" id="eyebrow-control"></div>
124            <div class="control"><input type="checkbox" id="crazyeyes-control">
                    <label>Crazy eyes</label></div>
125        </div>
```

```html
        </style>

        <script>
            $(document).ready(function(){
                $(window).on('mousemove', function( event ) {
                    var x = event.pageX / $(window).width() * 100
                    var y = event.pageY / $(window).height() * 100

                    $('.pupil').css({
                        left: x + '%',
                        top: y + '%'
                    })

                })

                $('#eyebrow-control').on('input', function(){
                    var rotation = $(this).val() * 0.6 - 30

                    $('#left-side .eyebrow').css({
                        transform: 'rotate(' + rotation + 'deg)'
                    })

                })

            })
        </script>
    </head>
    <body>
        <div id="controls">
            <div class="control"><label>Eyebrows</label><input type="range"
            value="25" id="eyebrow-control"></div>
```

Working Files

club_lapland_s

• example1_en

Getting Started

index.html

main.css

▸ screenshots

Line 117, Column 23 — Selected 3 lines — 144 Lines   INS   HTML ▾   ◯   Spaces: 4
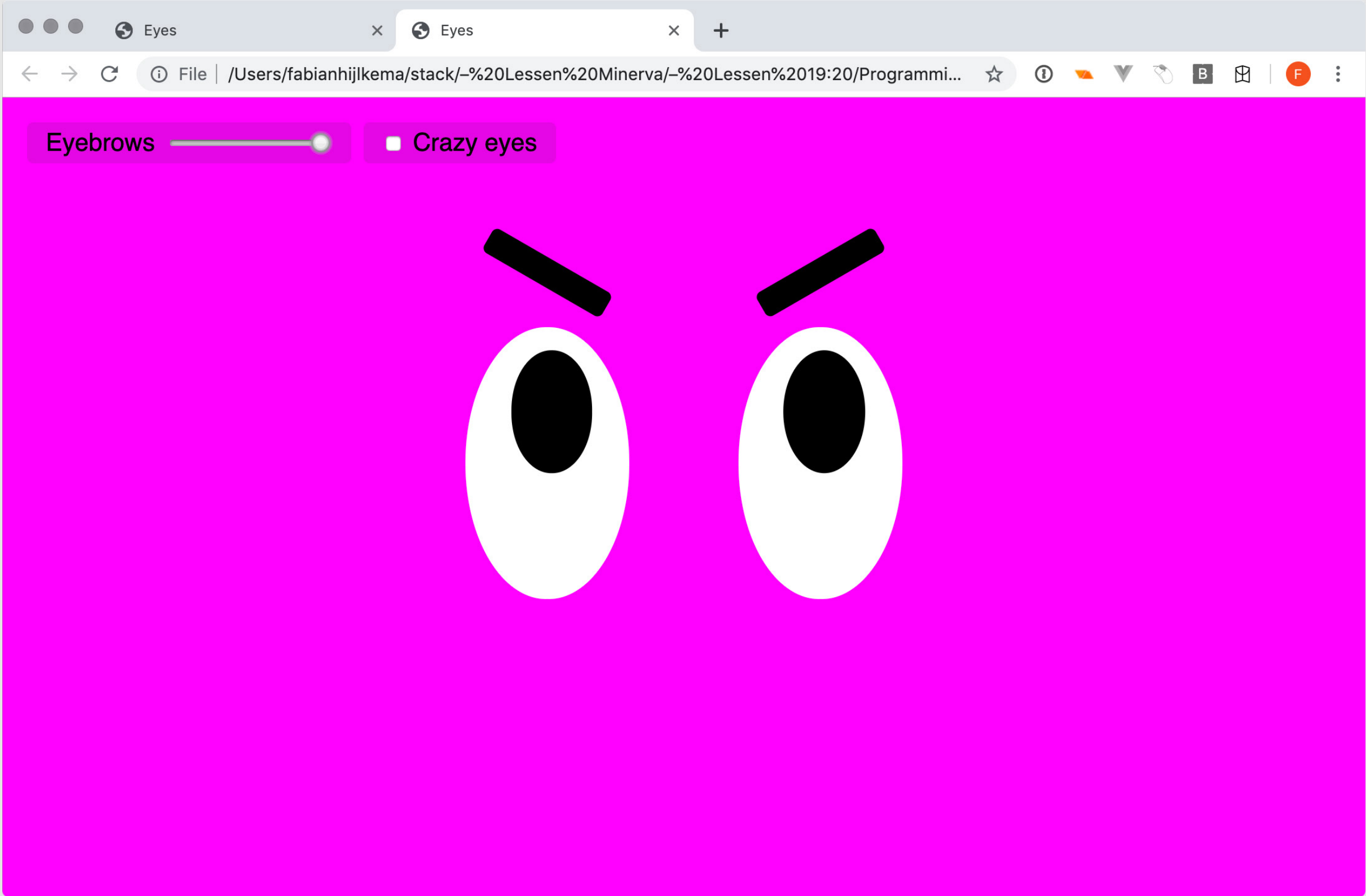
```
 97            </style>
 98
 99            <script>
100                $(document).ready(function(){
101                    $(window).on('mousemove', function( event ) {
102                        var x = event.pageX / $(window).width() * 100
103                        var y = event.pageY / $(window).height() * 100
104
105                        $('.pupil').css({
106                            left: x + '%',
107                            top: y + '%'
108                        })
109
110                    })
111
112                    $('#eyebrow-control').on('input', function(){
113                        var rotation = $(this).val() * 0.6 - 30
114
115                        $('#left-side .eyebrow').css({
116                            transform: 'rotate(' + rotation + 'deg)'
117                        })
118                        $('#right-side .eyebrow').css({
119                            transform: 'rotate(' + -rotation + 'deg)'
120                        })
121                    })
122
123                })
124            </script>
125        </head>
126        <body>
127            <div id="controls">
```

```
94    #right-side .eyebrow {
95        transform: rotate(15deg);
96    }
97    </style>
98
99    <script>
100       $(document).ready(function(){
101           var crazyeyes = false
102
103           $(window).on('mousemove', function( event ) {
104               var x = event.pageX / $(window).width() * 100
105               var y = event.pageY / $(window).height() * 100
106
107               $('.pupil').css({
108                   left: x + '%',
109                   top: y + '%'
110               })
111
112           })
113
114           $('#eyebrow-control').on('input', function(){
115               var rotation = $(this).val() * 0.6 - 30
116
117               $('#left-side .eyebrow').css({
118                   transform: 'rotate(' + rotation + 'deg)'
119               })
120               $('#right-side .eyebrow').css({
121                   transform: 'rotate(' + -rotation + 'deg)'
122               })
123           })
124
```

Working Files⇥

club_lapland_s
• example1_en

Getting Started ▾

index.html
main.css
▸ screenshots

Working Files

club_lapland_s

• example1_en

Getting Started ▾

index.html

main.css

▸ screenshots

```html
112          if(crazyeyes) {
113 ▾                    $('#right-side .pupil').css({
114                            left: 100 - x + '%',
115                            top: 100 - y + '%'
116                    })
117                }
118            })

119
120 ▾            $('#eyebrow-control').on('input', function(){
121                var rotation = $(this).val() * 0.6 - 30
122
123 ▾                $('#left-side .eyebrow').css({
124                    transform: 'rotate(' + rotation + 'deg)'
125                })
126 ▾                $('#right-side .eyebrow').css({
127                    transform: 'rotate(' + -rotation + 'deg)'
128                })
129            })
130
131 ▾            $('#crazyeyes-control').on('input', function(){
132                crazyeyes = $(this).is(':checked')
133            })
134        })
135    </script>
136    </head>
137 ▾    <body>
138 ▾        <div id="controls">
139            <div class="control"><label>Eyebrows</label><input type="range"
                value="25" id="eyebrow-control"></div>
140            <div class="control"><input type="checkbox" id="crazyeyes-control">
                <label>Crazy eyes</label></div>
```

Line 131, Column 17 — Selected 3 lines — 157 Lines   INS   HTML ▾ ◯   Spaces: 4

```
94  ▼        #right-side .eyebrow {
95                  transform: rotate(15deg);
96              }
97      </style>
98
99      <script>
100 ▼          $(document).ready(function(){
101                  var crazyeyes = false
102
103 ▼              $(window).on('mousemove', function( event ) {
104                      var x = event.pageX / $(window).width() * 100
105                      var y = event.pageY / $(window).height() * 100
106
107 ▼                  $('.pupil').css({
108                          left: x + '%',
109                          top: y + '%'
110                      })
111
112 ▼                  if(crazyeyes) {
113 ▼                      $('#right-side .pupil').css({
114                              left: 100 - x + '%',
115                              top: 100 - y + '%'
116                          })
117                      }
118                  })
119
120 ▼              $('#eyebrow-control').on('input', function(){
121                      var rotation = $(this).val() * 0.6 - 30
122
123 ▼                  $('#left-side .eyebrow').css({
124                          transform: 'rotate(' + rotation + 'deg)'
```
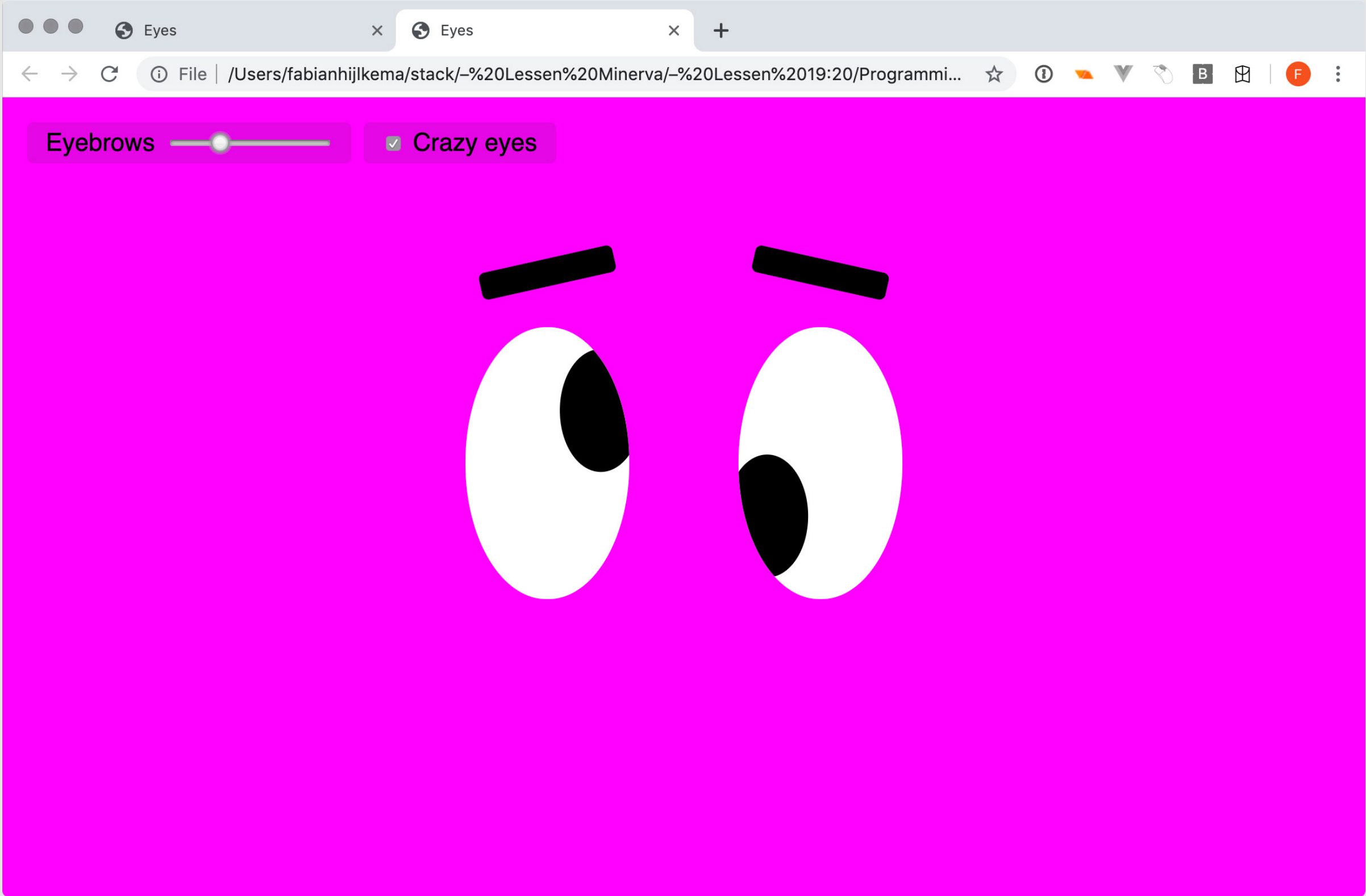
Working Files
club_lapland_s
• example1_en

Getting Started ▼
index.html
main.css
▸ screenshots

```html
122
123 ▼                      $('#left-side .eyebrow').css({
124                              transform: 'rotate(' + rotation + 'deg)'
125                          })
126 ▼                      $('#right-side .eyebrow').css({
127                              transform: 'rotate(' + -rotation + 'deg)'
128                          })
129                      })
130
131 ▼                  $('#crazyeyes-control').on('input', function(){
132                          crazyeyes = $(this).is(':checked')
133                      })
134
135                      blink()
136                  })
137              </script>
138          </head>
139 ▼      <body>
140 ▼          <div id="controls">
141              <div class="control"><label>Eyebrows</label><input type="range"
                     value="25" id="eyebrow-control"></div>
142              <div class="control"><input type="checkbox" id="crazyeyes-control">
                     <label>Crazy eyes</label></div>
143          </div>
144
145 ▼          <div id="left-side">
146              <div class="eyebrow"></div>
147 ▼              <div class="eye">
148                  <div class="pupil"></div>
149              </div>
150          </div>
```

```
126                $('#right-side .eyebrow').css({
127                    transform: 'rotate(' + -rotation + 'deg)'
128                })
129            })
130
131            $('#crazyeyes-control').on('input', function(){
132                crazyeyes = $(this).is(':checked')
133            })
134
135            blink()
136        })
137
138        function blink() {
139            console.log('blink')
140        }
141    </script>
142  </head>
143  <body>
144    <div id="controls">
145        <div class="control"><label>Eyebrows</label><input type="range"
            value="25" id="eyebrow-control"></div>
146        <div class="control"><input type="checkbox" id="crazyeyes-control">
            <label>Crazy eyes</label></div>
147    </div>
148
149    <div id="left-side">
150        <div class="eyebrow"></div>
151        <div class="eye">
152            <div class="pupil"></div>
153        </div>
154    </div>
```

Working Files

club_lapland_s
example1_start
• example1_end

Getting Started

index.html
main.css
▸ screenshots

Line 140, Column 14 — Selected 3 lines — 163 Lines   INS   HTML ▾   ◯   Spaces: 4

```
122
123 ▾                    $('#left-side .eyebrow').css({
124                          transform: 'rotate(' + rotation + 'deg)'
125                      })
126 ▾                    $('#right-side .eyebrow').css({
127                          transform: 'rotate(' + -rotation + 'deg)'
128                      })
129                  })
130
131 ▾                $('#crazyeyes-control').on('input', function(){
132                      crazyeyes = $(this).is(':checked')
133                  })
134
135                  blink()
136              })
137
138 ▾          function blink() {
139                  var timetowait = Math.ceil(Math.random() * 6) * 1000
140              }
141          </script>
142      </head>
143 ▾    <body>
144 ▾        <div id="controls">
145              <div class="control"><label>Eyebrows</label><input type="range"
                 value="25" id="eyebrow-control"></div>
146              <div class="control"><input type="checkbox" id="crazyeyes-control">
                 <label>Crazy eyes</label></div>
147          </div>
148
149 ▾        <div id="left-side">
150              <div class="eyebrow"></div>
```

Line 140, Column 14 — Selected 3 lines — 163 Lines   INS   HTML ▾ ○   Spaces: 4

Working Files⇥

club_lapland_s

● example1_en

Getting Started ⌄

index.html

main.css

▸ screenshots

```
122
123 ▽            $('#left-side .eyebrow').css({
124                transform: 'rotate(' + rotation + 'deg)'
125            })
126 ▽            $('#right-side .eyebrow').css({
127                transform: 'rotate(' + -rotation + 'deg)'
128            })
129        })
130
131 ▽        $('#crazyeyes-control').on('input', function(){
132            crazyeyes = $(this).is(':checked')
133        })
134
135        blink()
136    })
137
138 ▽    function blink() {
139        var timetowait = Math.ceil(Math.random() * 6) * 1000
140 ▽        setTimeout(function(){
141            alert('blink')
142        }, timetowait)
143    }
144    </script>
145    </head>
146 ▽ <body>
147 ▽    <div id="controls">
148        <div class="control"><label>Eyebrows</label><input type="range"
        value="25" id="eyebrow-control"></div>
149        <div class="control"><input type="checkbox" id="crazyeyes-control">
        <label>Crazy eyes</label></div>
150    </div>
```

Line 142, Column 31 — Selected 3 lines — 166 Lines   INS   HTML ▾ ◯   Spaces: 4

Working Files

club_lapland_s

• example1_en

Getting Started

index.html

main.css

▸ screenshots

```javascript
122
123 ▾                     $('#left-side .eyebrow').css({
124                             transform: 'rotate(' + rotation + 'deg)'
125                         })
126 ▾                     $('#right-side .eyebrow').css({
127                             transform: 'rotate(' + -rotation + 'deg)'
128                         })
129                 })
130
131 ▾             $('#crazyeyes-control').on('input', function(){
132                 crazyeyes = $(this).is(':checked')
133             })
134
135             blink()
136         })
137
138 ▾     function blink() {
139             var timetowait = Math.ceil(Math.random() * 6) * 1000
140 ▾         setTimeout(function(){
141                 $('.eye').addClass('blink')
142             }, timetowait)
143         }
144     </script>
145   </head>
146 ▾ <body>
147 ▾     <div id="controls">
148         <div class="control"><label>Eyebrows</label><input type="range"
                value="25" id="eyebrow-control"></div>
149         <div class="control"><input type="checkbox" id="crazyeyes-control">
                <label>Crazy eyes</label></div>
150     </div>
```

Line 142, Column 1 — Selected 1 line — 166 Lines   INS   HTML ▾ ◯   Spaces: 4

```
122
123 ▼                    $('#left-side .eyebrow').css({
124                          transform: 'rotate(' + rotation + 'deg)'
125                      })
126 ▼                    $('#right-side .eyebrow').css({
127                          transform: 'rotate(' + -rotation + 'deg)'
128                      })
129                  })
130
131 ▼              $('#crazyeyes-control').on('input', function(){
132                  crazyeyes = $(this).is(':checked')
133              })
134
135              blink()
136          })
137
138 ▼      function blink() {
139              var timetowait = Math.ceil(Math.random() * 6) * 1000
140 ▼          setTimeout(function(){
141                  $('.eye').addClass('blink')
142
143                  blink()
144              }, timetowait)
145          }
146      </script>
147  </head>
148 ▼ <body>
149 ▼    <div id="controls">
150          <div class="control"><label>Eyebrows</label><input type="range"
              value="25" id="eyebrow-control"></div>
151          <div class="control"><input type="checkbox" id="crazyeyes-control">
```

Working Files ▣

club_lapland_s

● example1_en

Getting Started ▾

index.html
main.css
▸ screenshots

Line 143, Column 21 — Selected 7 columns — 168 Lines   INS   HTML ▾ ◯   Spaces: 4

Working Files ⊞

club_lapland_s

example1_en

Getting Started ▾

index.html

main.css

▸ screenshots

```
122
123 ▼                        $('#left-side .eyebrow').css({
124                              transform: 'rotate(' + rotation + 'deg)'
125                          })
126 ▼                        $('#right-side .eyebrow').css({
127                              transform: 'rotate(' + -rotation + 'deg)'
128                          })
129                      })
130
131 ▼              $('#crazyeyes-control').on('input', function(){
132                  crazyeyes = $(this).is(':checked')
133              })
134
135              blink()
136          })
137
138 ▼      function blink() {
139              var timetowait = Math.ceil(Math.random() * 6) * 1000
140 ▼          setTimeout(function(){
141                  $('.eye').addClass('blink')
142 ▼              setTimeout(function(){
143                      $('.eye').removeClass('blink')
144                  }, 150)
145
146                  blink()
147              }, timetowait)
148          }
149      </script>
150  </head>
151 ▼ <body>
152 ▼      <div id="controls">
```

Line 144, Column 28 — Selected 3 lines — 171 Lines   INS   HTML ▾   ◯   Spaces: 4

Now create the final character "Z" where you try to be more creative using JavaScript.