

# The Canvas

# Our new start-up : TweetShirt 디자인 만들기

## T-shirt 위에 글씨를 써보자



# <실습1> smile11.html



## <실습2>shape12(네모추가).html

```
27         if (shape == "squares") {
28             for (var squares = 0; squares < 20; squares++) {
29                 drawSquare(canvas, context);
30             }
31         }
```

```
78< p>
79    <label for="shape">Circles or squares?</label>
80    <select id="shape">
81        <option value="none" selected="selected">Neither</option>
82
83        <option value="squares">Squares</option>
84    </select>
85</p>
```

## <실습3> shape12\_1(배경색추가).html

```
75         <option value="black">Black</option>
76         <option value="yellow">yellow</option>
77         <option value="pink">pink</option>
78         <option value="lightblue">lightblue</option>
```

## <실습4>shape12-2(원추가).html

```
32         else if (shape == "circles") {
33             for (var circles = 0; circles < 20; circles++) {
34                 drawCircle(canvas, context);
35             }
36         }

61     function drawCircle(canvas, context) {
62         var radius = Math.floor(Math.random() * 40);
63         var x = Math.floor(Math.random() * canvas.width);
64         var y = Math.floor(Math.random() * canvas.height);
65
66         context.beginPath();
67         context.arc(x, y, radius, 0, degreesToRadians(360), true);
68
69
70         context.fillStyle = "blue";
71         context.fill();
72     }
73
74     function degreesToRadians(degrees) {
75         return (degrees * Math.PI)/180;
76     }
```

## <실습5>shape12-3(원네모크기변경).html

```
50 // Draws a square at a random location
51 function drawSquare(canvas, context) {
52     var w = Math.floor(Math.random() * 40);
53     var x = Math.floor(Math.random() * canvas.width);
54     var y = Math.floor(Math.random() * canvas.height);
55
56     context.fillStyle = "magenta";
57     context.fillRect(x, y, w, w+15);
58 }
59
60 // Draws a circle at a random location
61 function drawCircle(canvas, context) {
62     var radius = Math.floor(Math.random() * 10);
63     var x = Math.floor(Math.random() * canvas.width);
64     var y = Math.floor(Math.random() * canvas.height);
65
66     context.beginPath();
67     context.arc(x, y, radius, 0, degreesToRadians(360), true);
68
69
70     context.fillStyle = "blue";
71     context.fill();
72 }
```











## <실습6>shape12-4(라인추가).html

```
37     else if (shape == "line") {
38         for (var line = 0; line < 20; line++) {
39             drawline(canvas, context);
40         }
41     }
```

```
65     function drawline(canvas, context) {
66
67         var w = Math.floor(Math.random() * 200);
68         var x = Math.floor(Math.random() * canvas.width);
69         var y = Math.floor(Math.random() * canvas.height);
70
71
72         context.beginPath(); /* 새로운 경로글 그리기 시작 */
73
74         context.moveTo(w, w);
75         context.lineTo(x, y);
76         context.closePath(); /* 경로를 닫는다 */
77         context.lineWidth = 5;
78
79         /* context.fillStyle="red"; , context.fill(); 은 다각형의 색을 채운다. */
80
81         context.strokeStyle = '#ff0000'; /* set line color */
82         context.stroke(); /* 경로에 따라 선을 그린다 */
83     }
```



# 실습구조 → c7\_2\_ex

- ▲  c7\_2\_ex
    - ▷  prob1(분리와shapecolor)
    - ▷  prob2\_text
    - ▷  prob3\_bird
    - ▲  prob4\_mobile
      - ▷  method1\_calendar
      - ▷  method2\_calendar\_CDN
      - ▷  method3-mobile
      - ▷  method4\_mobile-width
      - ▷  www\_phonegap
-

## <실습7>prob1(분리와shapecolor)

```
5 <link rel="stylesheet" href="index.css">
6 <script type="text/javascript" src="index.js">
```

```
46 // Draws a square at a random location
47 function drawSquare(canvas, context) {
48     var selectObj = document.getElementById("shapeColor");
49     var index = selectObj.selectedIndex;
50     var color = selectObj[index].value;
51
52     var w = Math.floor(Math.random() * 50);
53     var x = Math.floor(Math.random() * canvas.width);
54     var y = Math.floor(Math.random() * canvas.height);
55
56     context.fillStyle = color;
57     context.fillRect(x, y, w, w);
58 }
59
```

```
function drawSquare(canvas, context) {
}

function drawCircle(canvas, context) {
}

function drawLine(canvas, context) {
}
```

완성하기



## <실습8>prob1(분리와shapecolor) - method1\_parameter)

```
27     <label for="shapecolor">Select shape color:</label>
28     <select id="shapecolor">
29         <option value="red" selected="selected">Red</option>
30         <option value="green">Green</option>
31         <option value="orange">Orange</option>
32         <option value="blue">Blue</option>
33     </select>
```

```
17     var shapecolor=document.getElementById("shapecolor");
18     var index = shapecolor.selectedIndex;
19     var shColor = shapecolor[index].value;
```

## <실습9>prob1(분리와shapecolor) - method2\_function

```
33- function getShapeColor()  
34 {  
35     var selectObj = document.getElementById("shapeColor");  
36     var index = selectObj.selectedIndex;  
37     var bgColor = selectObj[index].value;  
38  
39     return bgColor;  
40 }
```

```
context.fillStyle = getShapeColor();
```

**함수처리 가능하나 일관성 없음!**  
**이해도 떨어짐!**

## <실습10>prob2\_text

```
32      drawText(canvas, context);
```

```
95  function drawText(canvas, context) {  
96      var selectObj = document.getElementById("foregroundColor");  
97      var index = selectObj.selectedIndex;  
98      var fgColor = selectObj[index].value;  
99  
100     context.fillStyle = fgColor;  
101     context.font = "bold 1em 고딕";  
102     context.textAlign = "left";  
103     context.fillText("이 트윗을 봅니다", 20, 40);  
104  
105     selectObj = document.getElementById("tweets");  
106     index = selectObj.selectedIndex;  
107     var tweet = selectObj[index].value;  
108     context.font = "italic 1.2em 명조";  
109     context.fillText(tweet, 30, 100);  
110  
111  
112     context.font = "bold 1em 고딕";  
113     context.textAlign = "right";  
114     context.fillText("훌륭한 문구입니다!", canvas.width - 20,  
115                     canvas.height - 40);  
116  
117 }
```

## <실습11>prob3\_bird

```
28     drawBird(canvas, context);
29     drawOutline(canvas, context);
```

```
110- function drawBird(canvas, context) {
111     var twitterBird = new Image();
112     var mirim = new Image();
113     twitterBird.src = "twitterBird.png";
114     mirim.src = "mirim.png";
115     twitterBird.onload = function() {
116         context.drawImage(twitterBird, 20, 120, 70, 70);
117         context.drawImage(mirim, 520, 20, 70, 70);
118     };
119
120 }
121
122- function drawOutline(canvas, context) {
123     context.lineWidth = 5;
124     context.strokeStyle = 'blue';
125     context.strokeRect(2, 2, canvas.width-4, canvas.height-4);
126 }
127
```

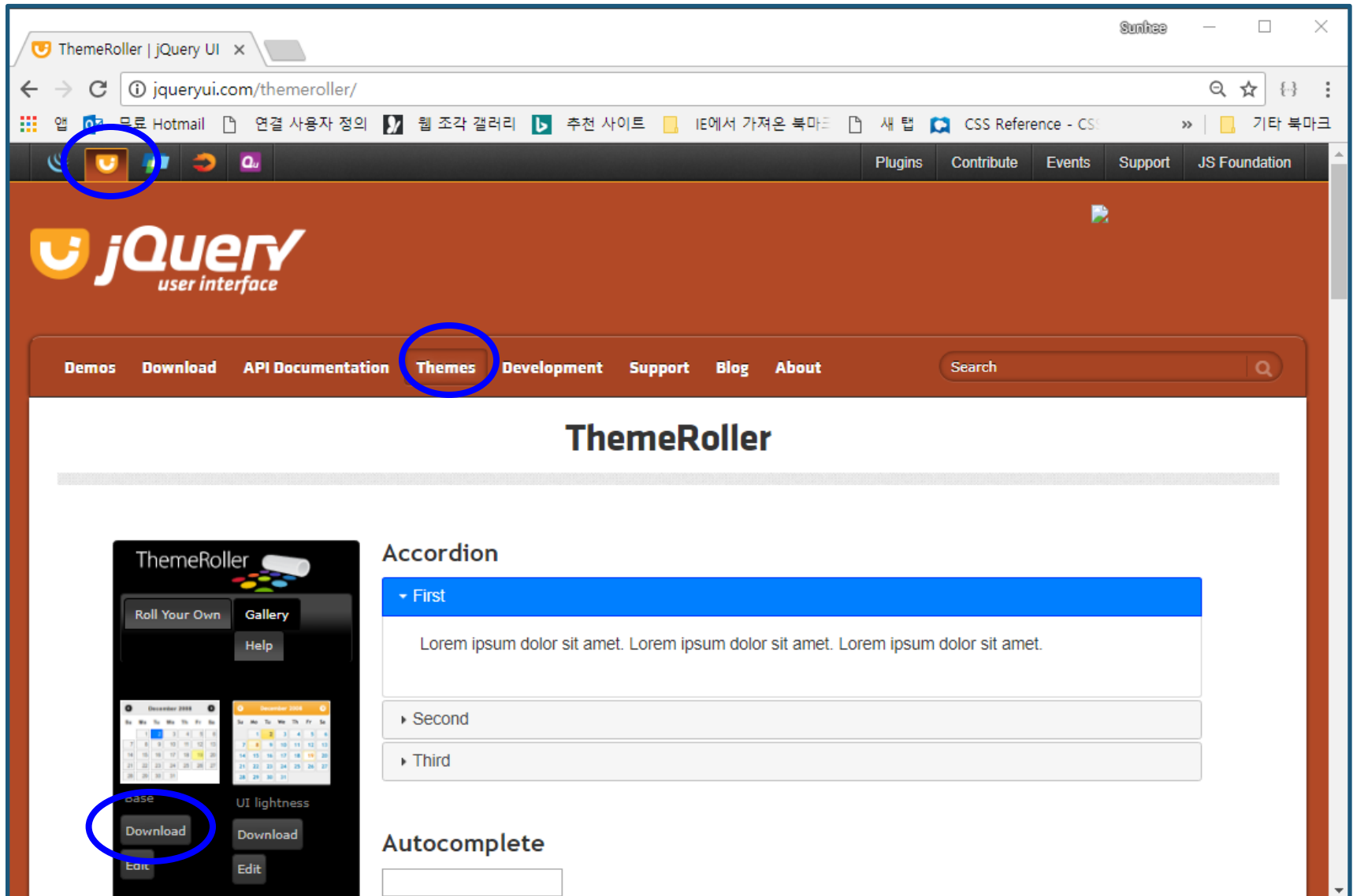
## <실습11>prob3\_bird - drawText 보충 - 문자열이 긴 경우

```
96     if (tweet.length > 60) {
97         var tweetLines = splitIntoLines(tweet);
98         for (var i = 0; i < tweetLines.length; i++) {
99             context.fillText(tweetLines[i], 30, 70 + (i * 25));
100         }
101     } else {
102         context.fillText(tweet, 30, 100);
103     }
```

```
144 //함수 살펴보기
145 function splitIntoLines(str) {
146     var strs = new Array();
147     var space = str.indexOf(' ', 60);
148     strs[0] = str.substring(0, space);
149     strs[1] = str.substring(space + 1);
150     if(strs[1].length>60){
151         var space =strs[1].indexOf(' ', 60);
152         strs[1] = str[1].substring(space+1);
153     }
154     return strs;
155 }
```

//함수 살펴보기

# <실습12>prob4\_mobile> method1\_calendar(1/2)





# <실습12>prob4\_mobile > method1\_calendar(2/2)

```
3   <meta charset="utf-8">
4   <title>jQuery UI Example Page</title>
5   <link href="jquery-ui.css" rel="stylesheet">
6   <script src="external/jquery/jquery.js"></script>
7   <script src="jquery-ui.js"></script>
8   <style>
9   body{
10      font-family: "Trebuchet MS", sans-serif;
11      margin: 50px;
12  }
13  .demoHeaders {
14      margin-top: 2em;
15  }
16  </style>
17 </head>
18 <body>
19 <!-- Datepicker -->
20 <h2 class="demoHeaders">Datepicker</h2>
21 <div id="datepicker"></div>
22
23 <script>
24 $( "#datepicker" ).datepicker({
25     inline: true
26 });
27 </script>
28 </body>
```

해당부분만 남기기

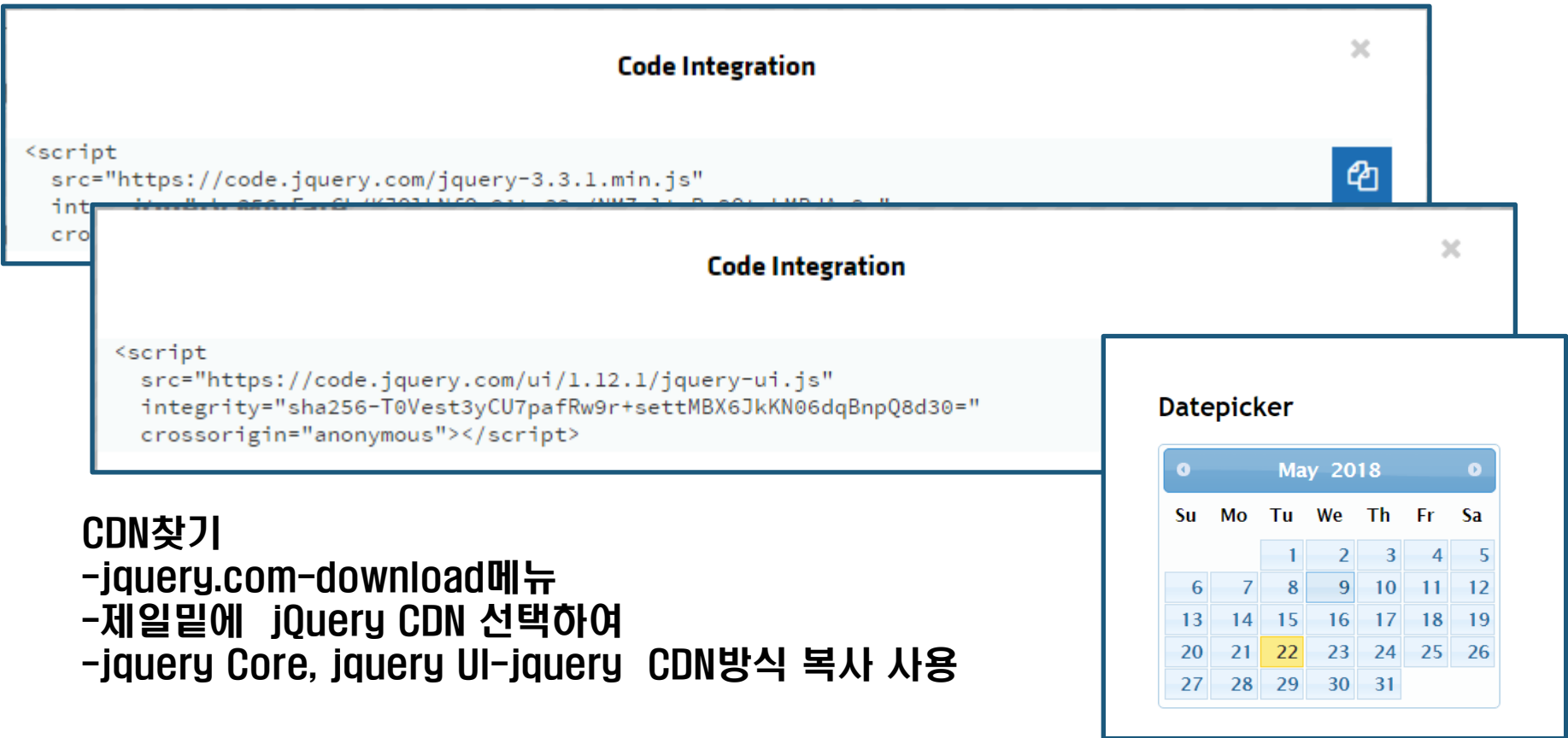
## Datepicker



<실습13>prob4\_mobile > method2\_calendar\_CDN(1/2)

# Index.html

```
5 <!-- 달력추가하기 위해 jquery.ui추가 -->
6 <script src="http://code.jquery.com/jquery-3.1.0.js"></script>
7 <script src="http://code.jquery.com/ui/1.12.0/jquery-ui.js"></script>
8 <link rel="stylesheet" href="//code.jquery.com/ui/1.8.18/themes/redmond/jquery-ui.css" />
9 <!-- 달력추가하기 위해 jquery.ui추가 -->
10 <!-- south-street, sunny, redmond, le-frog, ui-darkness 등을 추가하여 만들어 보기 -->
```



# <실습13>prob4\_mobile > method2\_calendar\_CDN(2/2)

Index\_kor.html

```
19 #datepicker1{
20     font-size :15pt;
21 }
```

```
29 <font size=4>생년월일: <input type="text" id="datepicker1" size=12></font>
30
31 <script>
32 $.datepicker.setDefaults({
33     dateFormat: 'yy년 m월 d일',// dateFormat: 'yy-mm-dd',
34     prevText: '이전 달',
35     nextText: '다음 달',
36     monthNames: ['1월', '2월', '3월', '4월', '5월', '6월', '7월', '8월', '9월', '10월', '11월', '12월'],
37     monthNamesShort: ['1월', '2월', '3월', '4월', '5월', '6월', '7월', '8월', '9월', '10월', '11월', '12월'],
38     dayNames: ['일', '월', '화', '수', '목', '금', '토'],
39     dayNamesShort: ['일', '월', '화', '수', '목', '금', '토'],
40     dayNamesMin: ['일', '월', '화', '수', '목', '금', '토'],
41     showMonthAfterYear: true,
42     yearSuffix: '년'
43 });
44
45 $(function() {
46     $("#datepicker1").datepicker();
47 });
```

```
<font size=4>생년월일: <input type="text" id="datepicker1" size=12></font>
<script>
$.datepicker.setDefaults({
    dateFormat: 'yy년 m월 d일',// dateFormat: 'yy-mm-dd',
    prevText: '이전 달',
    nextText: '다음 달',
    monthNames: ['1월', '2월', '3월', '4월', '5월', '6월', '7월', '8월', '9월', '10월', '11월', '12월'],
    monthNamesShort: ['1월', '2월', '3월', '4월', '5월', '6월', '7월', '8월', '9월', '10월', '11월', '12월'],
    dayNames: ['일', '월', '화', '수', '목', '금', '토'],
    dayNamesShort: ['일', '월', '화', '수', '목', '금', '토'],
    dayNamesMin: ['일', '월', '화', '수', '목', '금', '토'],
    showMonthAfterYear: true,
    yearSuffix: '년'
});
$(function() {
    $("#datepicker1").datepicker();
});
```

# <실습14>prob4\_mobile > method3-mobile(1/2)

```
<!--모바일형태-->
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="http://code.jquery.com/mobile/1.3.2/jquery.mobile-1.3.2.min.css" />
<script src="http://code.jquery.com/jquery-1.9.1.min.js"></script>
<script src="http://code.jquery.com/mobile/1.3.2/jquery.mobile-1.3.2.min.js"></script>
<!--모바일형태-->
```

## CDN찾기

Copy-and-Paste snippet for jQuery CDN hosted files:

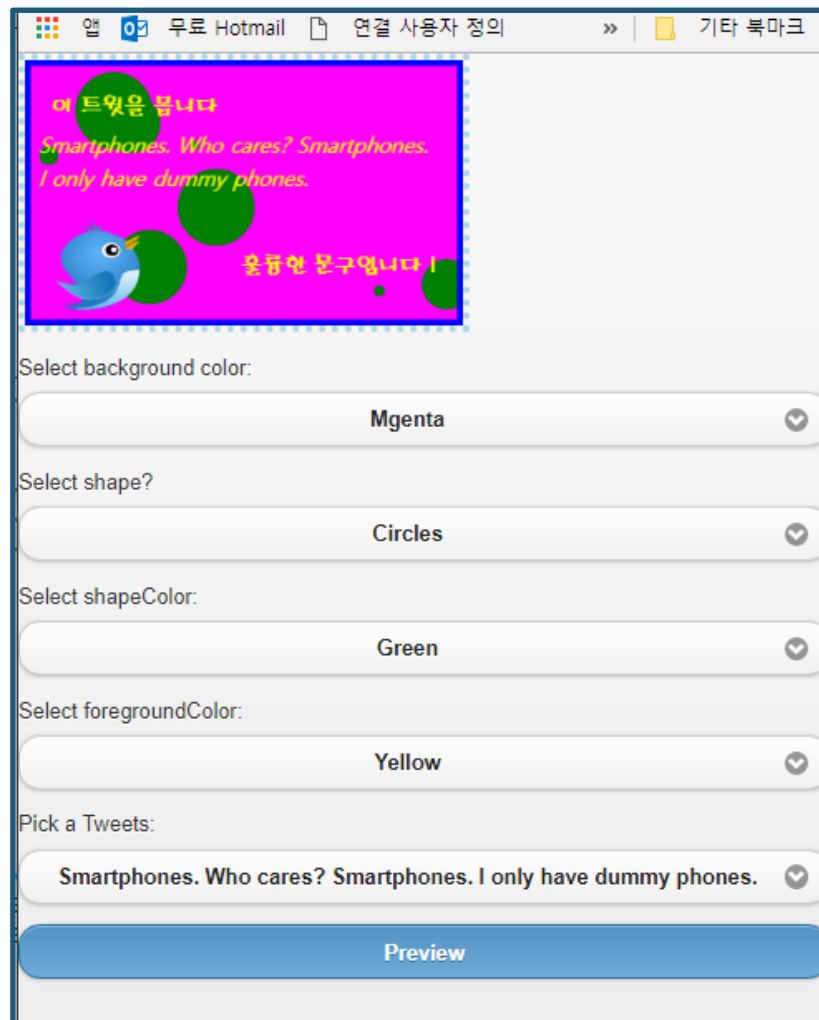
- jquery mobile
- Download메뉴
- 복사하여 사용

```
1 <link rel="stylesheet" href="http://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.css" />
2 <script src="http://code.jquery.com/jquery-1.11.1.min.js"></script>
3 <script src="http://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.js"></script>
```

## =>최신버전으로 모양이 바뀜

```
<link rel="stylesheet" href="http://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.css" />
<script src="http://code.jquery.com/jquery-1.11.1.min.js"></script>
<script src="http://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.js"></script>
```

# <실습14>prob4\_mobile > method3-mobile(2/2)



에 트윗을 봅니다  
Smartphones. Who cares? Smartphones.  
I only have dummy phones.  
올바른 친구입니다!

Select background color:  
Magenta

Select shape?  
Circles

Select shapeColor:  
Green

Select foregroundColor:  
Yellow

Pick a Tweets:  
Smartphones. Who cares? Smartphones. I only have dummy phones.

Preview

# <실습15>prob4\_mobile > method4\_mobile-width(1/2)

```
<link rel="stylesheet" href="http://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.css" />
<script src="http://code.jquery.com/jquery-1.11.1.min.js"></script>
<script src="http://code.jquery.com/mobile/1.4.5/jquery.mobile-1.4.5.min.js"></script>
```

```
<canvas id="tshirtCanvas">
```

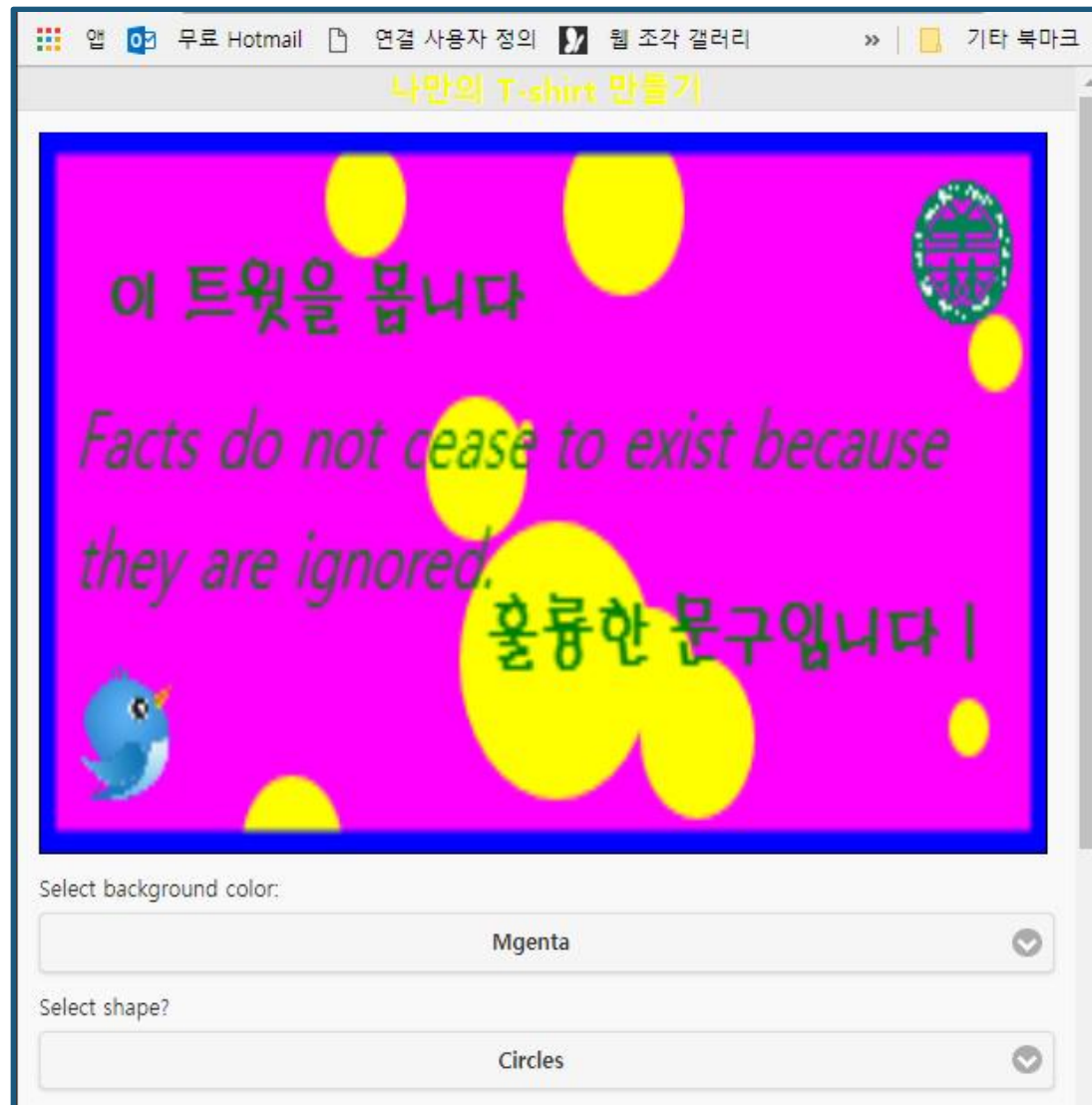
```
1 canvas#tshirtCanvas {
2     margin: 0 auto;
3     height: 66%;
4     width: 99%;
5     border: 1px solid black;
6 }
```

```
1 canvas#tshirtCanvas {
2     margin: 0 auto;
3     /* height: 66%; */
4     height: 200pt;
5     width: 99%;
6     border: 1px solid black;
7 }
```

```
135 context.drawImage(twitterBird, 10, canvas.height-40, 30, 30);
136 context.drawImage(mirim, canvas.width-40, 10, 30, 30);
```

```
165 function splitIntoLines(str) {
166     var strs = new Array();
167     var space = str.indexOf(' ', 30);
168     strs[0] = str.substring(0, space);
169     strs[1] = str.substring(space + 1);
170
171     if(strs[1].length>30){
172         var space = str[1].indexOf(' ', 30);
173         strs[1] = str[1].substring(space+1);
174     }
175 }
```

# <실습15>prob4\_mobile > method4\_mobile-width(2/2)



# <실습16> 모바일용 - 사이트 올린 후 핸드폰 확인

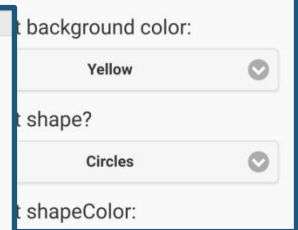
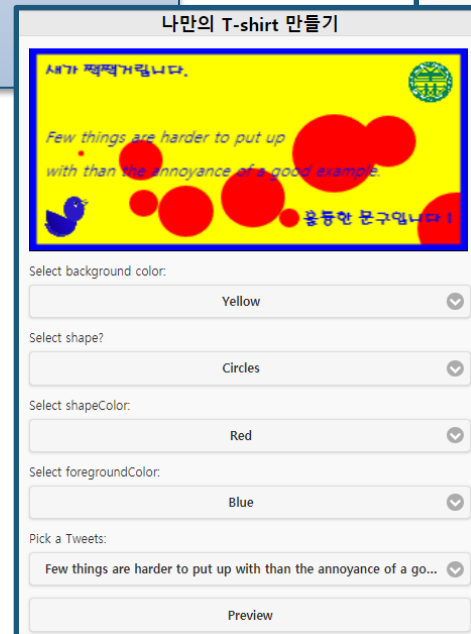
무지개색으로 메뉴 수정 후 모바일용으로 만들어 웹서버 올리기

URL <http://shyoon82.dothome.co.kr/pro/index.html>

```
<option value="red">Red</option>
<option value="magenta">Magenta</option>
<option value="yellow">Yellow</option>
<option value="green">Green</option>
<option value="lightblue">Lightblue</option>
<option value="blue">Blue</option>
<option value="violet">Violet</option>
```

사용되는 그림 등은 직접 그리기

화면 3개이상 캡처하여 저장하기





# Q & A

