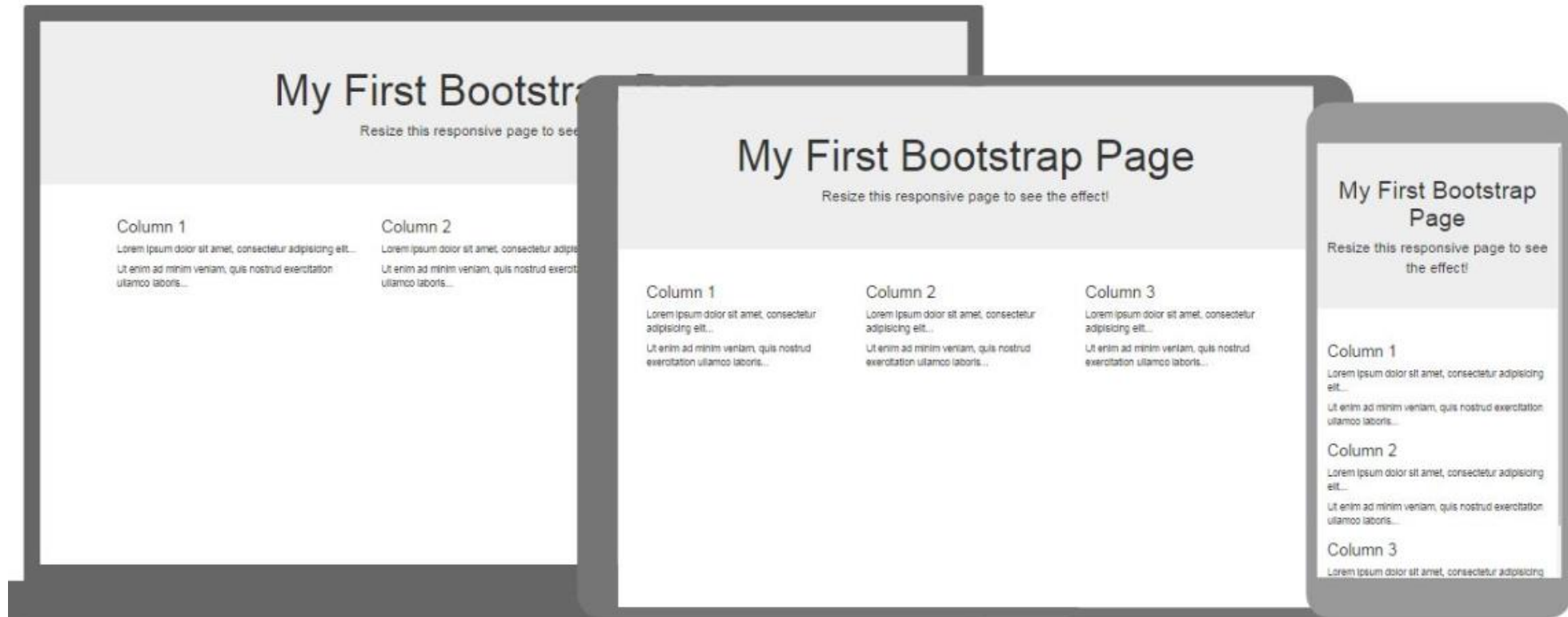


반응형 웹 만들기

bootstrap

- 4 bootstrap 최신 버전 인 bootstrap 반응, 모바일 최초의 웹 사이트 개발을 위한 가장 인기 있는 HTML, CSS, 자바 스크립트 프레임 워크입니다.
- 4 bootstrap 다운로드하고 사용은 완전 무료입니다!



bootstrap은 무엇인가?

- bootstrap 은 빠르고 쉽게 웹 개발을 위한 무료 프론트엔드 프레임 워크입니다.
- bootstrap 은 타이포그래피, 양식, 버튼, 테이블, 네비게이션, 모델, 이미지 회전 및 기타 여러 뿐만 아니라 옵션으로 자바 스크립트 플러그인에 대한 HTML 및 CSS 기반의 디자인 템플릿이 포함되어 있습니다.
- bootstrap 은 또한 당신에게 쉽게 반응하는 디자인을 만들 수 있는 기능을 제공합니다.

What is Responsive Web Design?

Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.



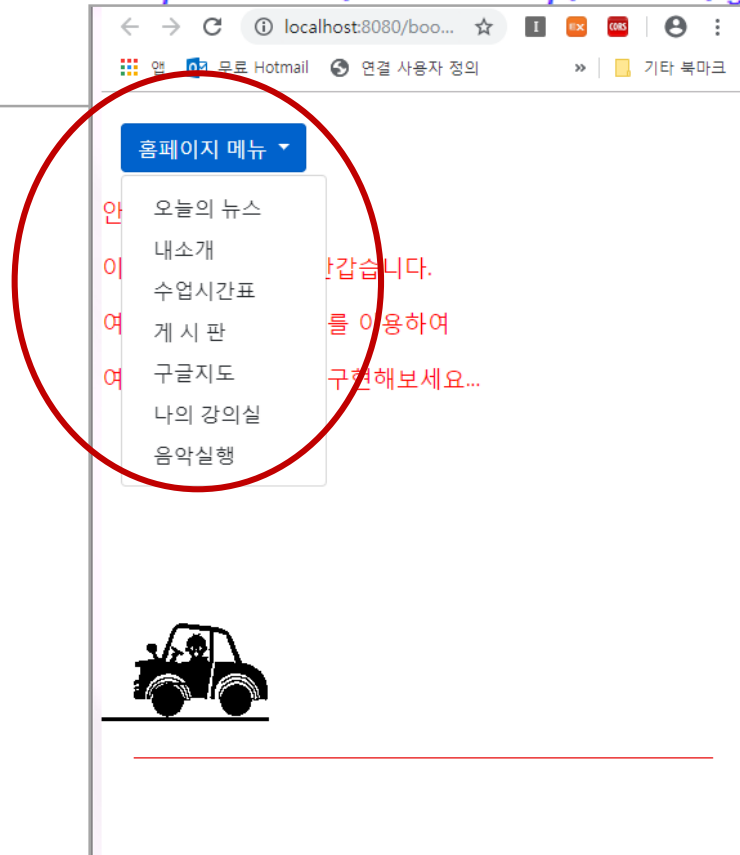
반응 형 웹 디자인이란 무엇입니까?

반응이 빠른 웹 디자인은 작은 전화기에서부터 대형 데스크탑에 이르기까지 모든 장치에 맞게 자동으로 조정되는 웹 사이트를 만드는 것입니다.

1. 19dropdowns - index.html(1/2)

항상 입력

```
2 <head>
3   <title>Bootstrap 4 Navs bars</title>
4   <meta charset="utf-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1">
6   <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css">
7   <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
8   <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.min.js"></script>
9   <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js"></script>
10 </div>
11 </head>
```



1. 19dropdowns - index.html(2/2)

```
14<div class="container">
15  <div class="dropdown">
16    <button type="button" class="btn btn-primary dropdown-toggle" data-toggle="dropdown">
17      홈페이지 메뉴
18    </button>
19    <div class="dropdown-menu">
20      <a class="dropdown-item" href="https://www.naver.com">오늘의 뉴스</a>
21      <a class="dropdown-item" href="profile.html">내 소개</a>
22      <a class="dropdown-item" href="table.html">수업시간표</a>
23      <a class="dropdown-item" href="board.html">게 시 판</a>
24      <a class="dropdown-item" href="http://maps.google.com">구글지도</a>
25      <a class="dropdown-item" href="lecture.html">나의 강의실</a>
26      <a class="dropdown-item" href="midwav.html">음악실험</a>
27    </div>
28  </div>
29</div>
```

2. 21nav-tabs - index.html(1/2)

localhost:8080/boot/1gradeboot-ok/16navs_ok/index.html


오늘의 뉴스 | 내소개 | 수업시간표 | 게 시 판 | 구글지도 | 나의 강의실 | 음악실행 | 기타1 | 기타2 | 기타3 | 기타4 | 기타5

안녕하세요...

이렇게 만나게 되어 반갑습니다.

여러가지 기능의 태그를 이용하여

여러분의 홈페이지를 구현해보세요...



localhost:8080/boot/1gradeboot-ok...

오늘의 뉴스 | 내소개 | 수업시간표 | 게 시 판 |
구글지도 | 나의 강의실 | 음악실행 | 기타1 | 기타2
기타3 | 기타4 | 기타5


안녕하세요...

이렇게 만나게 되어 반갑습니다.

여러가지 기능의 태그를 이용하여

여러분의 홈페이지를 구현해보세요...

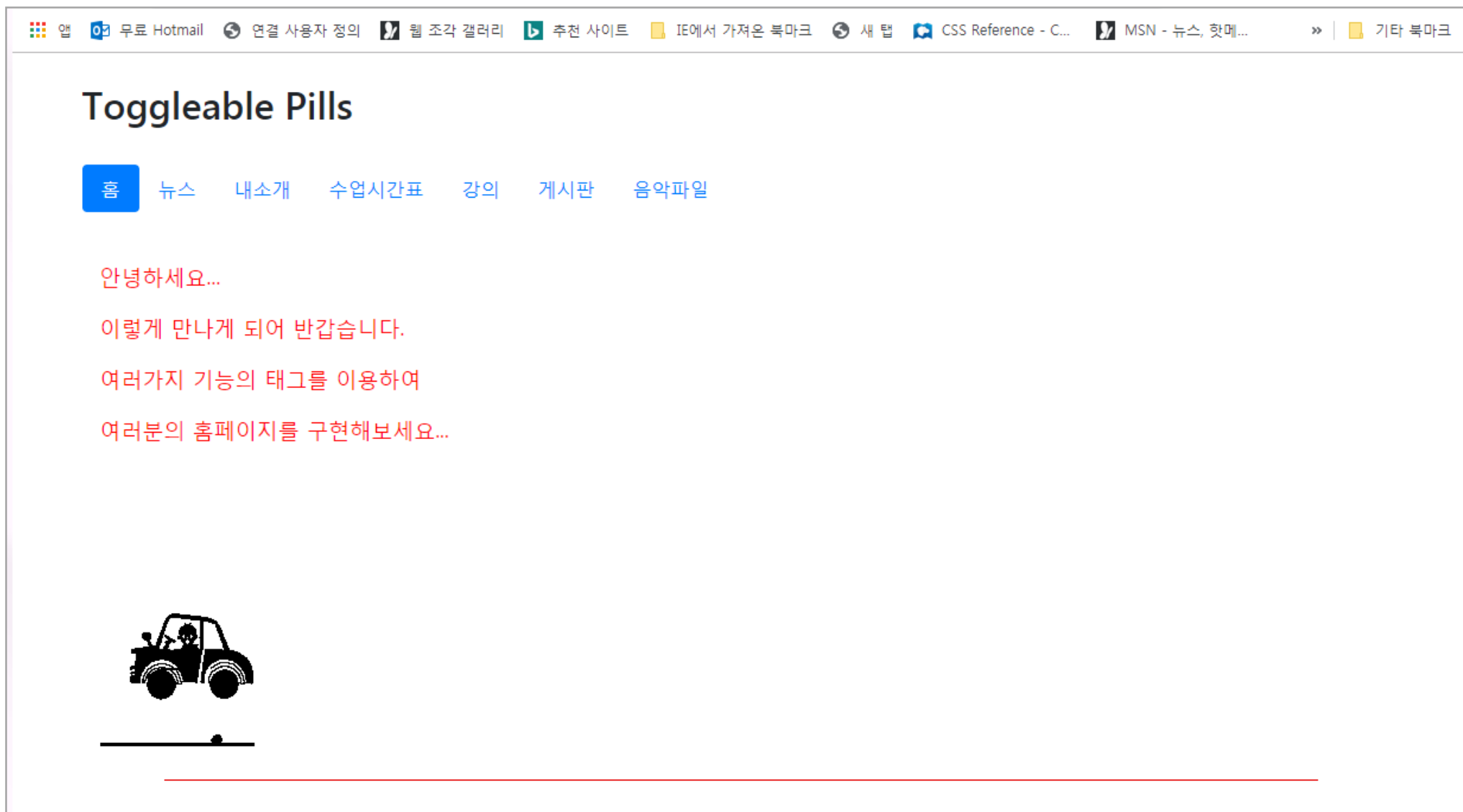




2. 21nav-tabs - index.html(2/2)

```
12 <div class="container">
13   <ul class="nav nav-tabs">
14     <li class="nav-item"><a class="nav-link active" href="https://www.naver.com">오늘의 뉴스</a></li>
15     <li class="nav-item"><a class="nav-link active" href="profile.html">내 소개</a></li>
16     <li class="nav-item"><a class="nav-link active" href="table.html">수업시간표</a></li>
17     <li class="nav-item"><a class="nav-link active" href="board.html">게시판</a></li>
18     <li class="nav-item"><a class="nav-link active" href="http://maps.google.com">구글지도</a></li>
19     <li class="nav-item"><a class="nav-link active" href="lecture.html">나의 강의실</a></li>
20     <li class="nav-item"><a class="nav-link active" href="midwav.html">음악실행</a></li>
21     <li class="nav-item"><a class="nav-link disabled" href="board.html">기타1</a></li>
22     <li class="nav-item"><a class="nav-link disabled" href="board.html">기타2</a></li>
23     <li class="nav-item"><a class="nav-link disabled" href="board.html">기타3</a></li>
24     <li class="nav-item"><a class="nav-link disabled" href="board.html">기타4</a></li>
25     <li class="nav-item"><a class="nav-link disabled" href="board.html">기타5</a></li>
26   </ul>
27 </div>
```

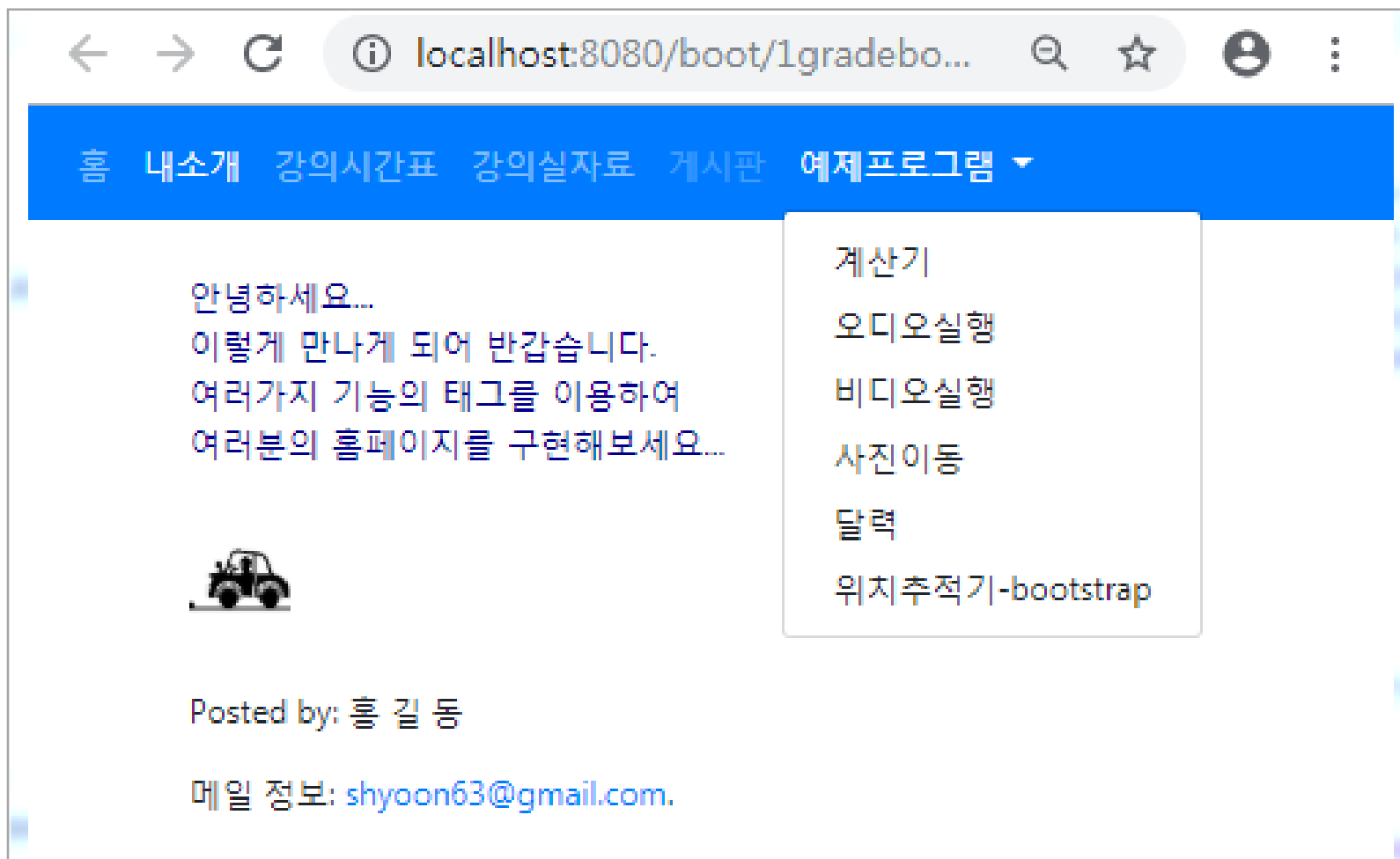
3. 21nav-pills - index.html(1/2)



3. 21nav-pills - index.html(2/2)

```
22<ul class="nav nav-pills" role="tablist">
23  <li class="nav-item">
24    <a class="nav-link active" data-toggle="pill" href="#home">홈</a>
25  </li>
26  <li class="nav-item">
27    <a class="nav-link" data-toggle="pill" href="#news" onclick="linkgo('http://www.naver.com')">뉴스</a>
28  </li>
29  <li class="nav-item">
30    <a class="nav-link" data-toggle="pill" href="#profile" onclick="linkgo('profile.html')">내 소개</a>
31  </li>
32  <li class="nav-item">
33    <a class="nav-link" data-toggle="pill" href="#table" onclick="linkgo('table.html')">수업시간표</a>
34  </li>
35  <li class="nav-item">
36    <a class="nav-link" data-toggle="pill" href="#lecture" onclick="linkgo('lecture.html')">강의</a>
37  </li>
38  <li class="nav-item">
39    <a class="nav-link" data-toggle="pill" href="#board" onclick="linkgo('board.html')">게시판</a>
40  </li>
41  <li class="nav-item">
42    <a class="nav-link" data-toggle="pill" href="#midwav" onclick="linkgo('midwav.html')">음악파일</a>
43  </li>
44</ul>
```

4. 22Navbar With Dropdown - index.html(1/8)



4. 22Navbar With Dropdown - index.html(2/8)

```
17 <nav class="navbar navbar-expand-sm bg-primary navbar-dark">
18   <!-- Links -->
19   <ul class="navbar-nav">
20     <li class="nav-item">
21       <a class="nav-link" href="index.html">홈</a>
22     </li>
23     <li class="nav-item">
24       <a class="nav-link active" href="profile.html">내소개</a>
25     </li>
26     <li class="nav-item">
27       <a class="nav-link" href="table.html">값의시간표</a>
28     </li>
29     <li class="nav-item">
30       <a class="nav-link" href="lecture.html">값의실자트</a>
31     </li>
32     <li class="nav-item">
33       <a class="nav-link disabled" href="board.html">게시판</a>
34     </li>
35     <!-- Dropdown -->
36     <li class="nav-item dropdown">
51   </ul>
52 </nav>
```

```
36 <li class="nav-item dropdown">
37   <a class="nav-link dropdown-toggle" id="navbardrop" data-toggle="dropdown">
38     예제프로그램
39   </a>
40   <div class="dropdown-menu">
41     <a class="dropdown-item" href="calculator.html">계산기</a>
42     <a class="dropdown-item" href="midwav.html">오디오실습</a>
43     <a class="dropdown-item" href="video.html">비디오실습</a>
44     <!-- <a class="dropdown-item" href="video_change/webvilletv_playlist_change
45     <a class="dropdown-item" href="jquery1/jquery1.html">사전에습</a>
46     <a class="dropdown-item" href="jquery2/sunny.html">달력</a>
47     <!-- <a class="dropdown-item" href="map1/m_myLoc.html">위치추적기-jquery</a>
48     <a class="dropdown-item" href="map2/m_myLoc.html">위치추적기-bootstrap</a>
49   </div>
50 </li>
```

4. 22Navbar With Dropdown - board.html(3/8)

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <title>게시판</title>
5     <meta charset="utf-8">
6     <!-- <meta name="viewport" content="width=device-width, initial-scale=1">
7     <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css">
8     <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
9     <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.min.js"></script>
10    <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js"></script> -->
11  </head>
12  <body>
13    <br>
14    <div class="container mt-3" class="bg-primary">
15      <div class="media border p-3" class="bg-primary" >
16        
17        <div class="media-body">
18          지금 큰 글자입니다.<br>
19          다음거리에 더 좋은 <font size=+3 color=red>게시판</font>으로 연결하겠습니다.</img>
20        </div>
21      </div>
22    </div>
23    <br><br>
24    <center><button type="button" class="btn btn-outline-primary"><a href="index.html">HOME</a></button></center>
25  </body>
26 </html>
```

4. 22Navbar With Dropdown - leture.html(4/8)

```
1 <!DOCTYPE html>
2 <head>
3   <title>22</title>
4   <meta charset="utf-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1">
6   <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css">
7   <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
8   <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.min.js"></script>
9   <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js"></script>
10 </head>
11 <style>
12   #exam {
13     background-image: url("imgs/smallbird.png");
14     background-repeat: repeat-x;
15     background-position: right bottom;
16     /* margin-right: 200px; */
17     background-attachment: fixed;
18   }
19 </style>
20 <body id=exam text="#0033cc" bgcolor="#cc66ff" link="#0000EE" vlink="#551A8B" alink="#FF0000">
21   <div class="container mt-3" class="bg-primary">
22     <!--<div class="media border p-3" class="bg-primary" >-->
23     <br>
24     <ol>
25       <li><a href="Lecture/HTML5">HTML5(파일없음)</a>
26       <li><a href="Lecture/WebApp">WebApp(파일없음)</a>
27       <li><a href="Lecture/jQuery.html/">jQuery(파일없음)</a>
28       <li><a href="multi/multi.hwp">멀티웹사이트</a>
29     </ol>
30     <!--</div>-->
31   </div>
32   <br>
33   <center><button type="button" class="btn btn-outline-primary"><a href="index.html">HOME</a></button></center>
34   <br><br><br><br><br><br><br><br><br>
35 </body>
36 </html>
```

4. 22Navbar With Dropdown - midwav.html(5/8)

```
1 <!DOCTYPE html>
2 <head>
3   <title>오디오코딩</title>
4   <meta charset="utf-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1">
6   <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css">
7   <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
8   <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.min.js"></script>
9   <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js"></script>
10 </head>
11 <body bgcolor=#330000>
12   <font color=blue>
13     <center>
14       <br>
15       <h3>쿠키를박스브이거</h3><br><br>
16       <!-- <embed src="multi/loveme.mp3" width="600" height="100" hidden="false"> <br>
17       </embed> -->
18       <audio controls>
19         <source src="multi/loveme.mp3" type="audio/mpeg">
20       </audio>
21     </center>
22   </font>
23   <br>
24   <center><button type="button" class="btn btn-outline-primary"><a href="index.html">HOME</a></button></center>
25 </body>
26 </html>
```

4. 22Navbar With Dropdown - profile.html(6/8)

```
11 <body>
12 <div class="container mt-3" class="bg-primary">
13   <h3>My profile</h3>
14   <p> 프론트 엔드개발자</p><br>
15   <div class="media border p-1" class="bg-primary" >
16     
17     <div class="media-body">
18       <h4>홍 길 동 <small><i>프론트 앤드 개발자가 되기 위해 공부를 하고 있습니다.</i></small></h4>
19       <p>관심사</p>
20       <ul>
21         <li>jquery</li><li>bootstrap</li><li>vue.js</li><li>node.js</li>
22       </ul>
23     </div>
24   </div>
25 </div>
26 <br>
27 <center><button type="button" class="btn btn-outline-primary"><a href="index.html">HOME</a></button>
28 </center>
29 </body>
```

4. 22Navbar With Dropdown - table.html(7/8)

```

1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <style>
5   </style>
6   <title>시간표</title>
7   <meta charset="utf-8">
8   <meta name="viewport" content="width=device-width, initial-scale=1">
9   <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css">
10  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
11  <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.min.js"></script>
12  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js"></script>
13 </head>
14 <body>
15 <div class="container">
16   <div class="container mt-3" class="bg-primary">
17     <div class="media border p-1" class="bg-primary" >
18       <div class="media-body">
19         <table class="table table-striped">
20           <thead>
21             <tr align=center >
22               <th>T</th>
23               <th>&nbsp;월</th>
24               <th>&nbsp;화</th>
25               <th>&nbsp;수</th>
26               <th>&nbsp;목</th>
27               <th>&nbsp;금</th>
28             </tr>
29           </thead>
30           <tbody>
31           </tbody>
32         </table>
33       </div><!-- <div class="media-body"> -->
34     </div><!-- <div media border p-1" class="bg-primary"> -->
35   </div> <!-- <div class="container mt-3" class="bg-primary" > -->
36 </div><!-- <div class="container"> -->

```

tbody 부분은 생략됨

tbody 부분은 생략됨

```

30 田 <tbody>
70    </tbody>
71  </table>
72    </div><!-- <div class="media-body"> -->
73    </div><!-- <div media border p-1" class="bg-primary"> -->
74    </div> <!-- <div class="container mt-3" class="bg-primary" > -->
75  </div><!-- <div class="container"> -->
76
77  <br>
78  <center><button type="button" class="btn btn-outline-primary"><a href="index.html">HOME</a></button></center>
79  </body>
80  </html>

```



```

30 <tbody>
31   <tr>
32     <th>&nbsp;1</th>
33     <td>자바</td>
34     <td rowspan=2>네트<br>워크</td>
35     <td>자바</td>
36     <td rowspan=2>자바<br>실습</td>
37     <td>문명세계</td>
38   </tr>
39   <tr>
40     <th>&nbsp;2</th>
41     <td>수학</td>
42     <td>물리</td>
43     <td rowspan=2>문명실습</td>
44   </tr>
45   <tr>
46     <th>&nbsp;3</th>
47     <td rowspan=2>정보<br>보안</td>
48     <td>영어</td>
49     <td>문학</td>
50     <td rowspan=2>예술</td>
51   </tr>
52   <tr>
53     <th>&nbsp;4</th>
54     <td rowspan=2>c++<br>실습</td>
55     <td>영어</td>
56     <td>영어</td>
57   </tr>
58   <tr>
59     <th>&nbsp;5</th>
60     <td rowspan=2>문명세계</td>
61     <td>전로</td>
62     <td rowspan=2>파로구즈</td>
63   </tr>
64   <tr>
65     <th>&nbsp;6</th>
66     <td>자바</td>
67     <td>수학</td>
68     <td>&nbsp;</td>
69   </tr>
70 </tbody>

```

4. 22Navbar With Dropdown - video.html(8/8)

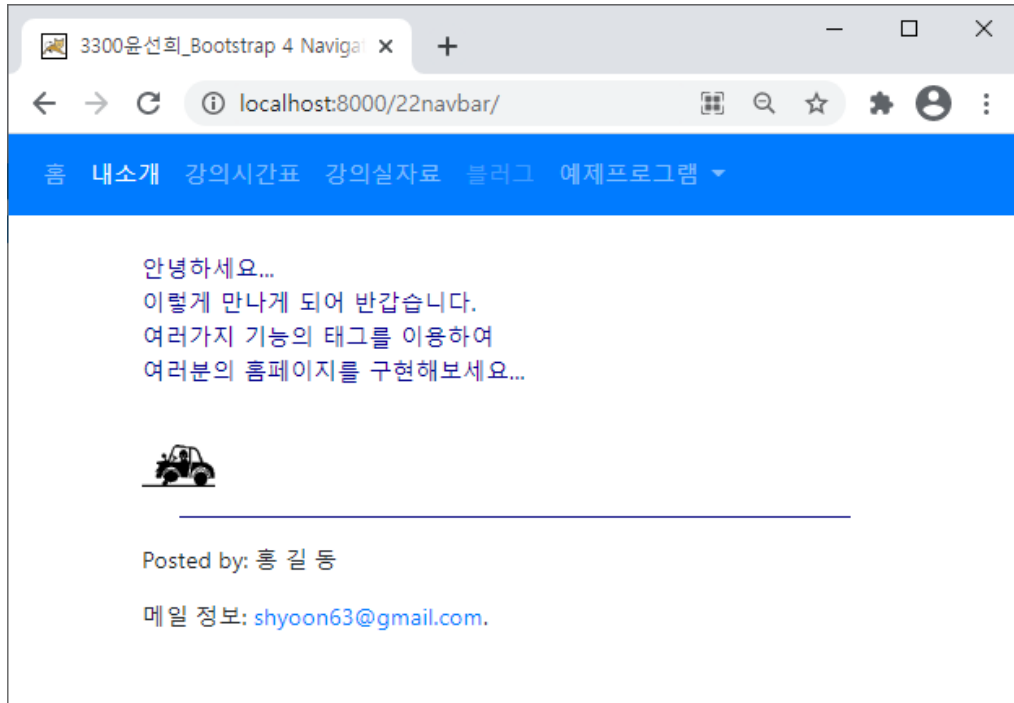
```
1 <!DOCTYPE html>
2 <head>
3   <title>Bootstrap Example</title>
4   <meta charset="utf-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1">
6   <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/css/
7   <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></
8   <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.n
9   <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js"
10 </head>
11 <body>
12 <!-- 사파리 .mp4, 크롬: .webm, 파이어폭스, 오페라: .ogv 모두지원:mp3-->
13 <div class="container">
14   <div class="container mt-3" class="bg-primary">
15     <div class="media border p-1" class="bg-primary" >
16       <div class="media-body">
17         <div style="text-align:center">
18           <video id="video1" width="250">
19             <source src="multi/mov_bbb.mp4" type="video/mp4">
20             <source src="multi/mov_bbb.ogv" type="video/ogg">
21             Your browser does not support HTML5 video.
22           </video>
23           <br>
24           <button type="button" class="btn btn-danger btn-sm" onclick="playPause()">Play/Pause</button>
25           <button type="button" class="btn btn-success btn-sm" onclick="makeBig()">Big</button>
26           <button type="button" class="btn btn-info btn-sm" onclick="makeSmall()">Small</button>
27           <button type="button" class="btn btn-dark btn-sm" onclick="makeNormal()">Normal</button>
28           <br>
29         </div>
```

```
30 </script>
31   var myVideo = document.getElementById("video1");
32   function playPause() {
33     if (myVideo.paused)
34       myVideo.play();
35     else
36       myVideo.pause();
37   }
38   function makeBig() {
39     myVideo.width = 300;
40   }
41   function makeSmall() {
42     myVideo.width = 200;
43   }
44   function makeNormal() {
45     myVideo.width = 250;
46   }
47 </script>
48 </div>
49 </div>
50 </div>
51 </div>
52 <br><br>
```

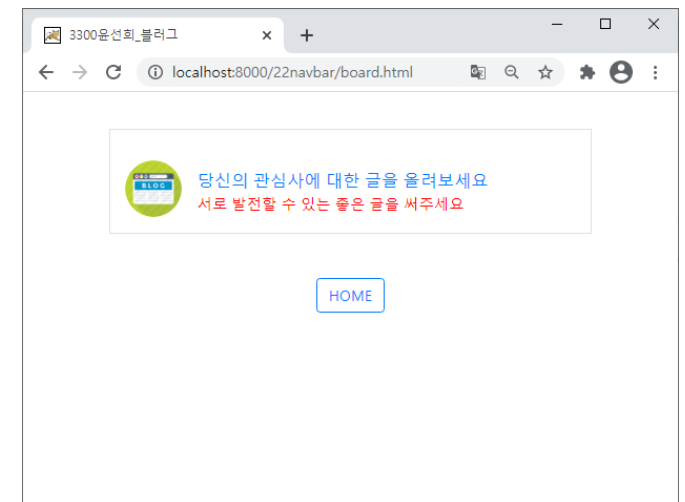
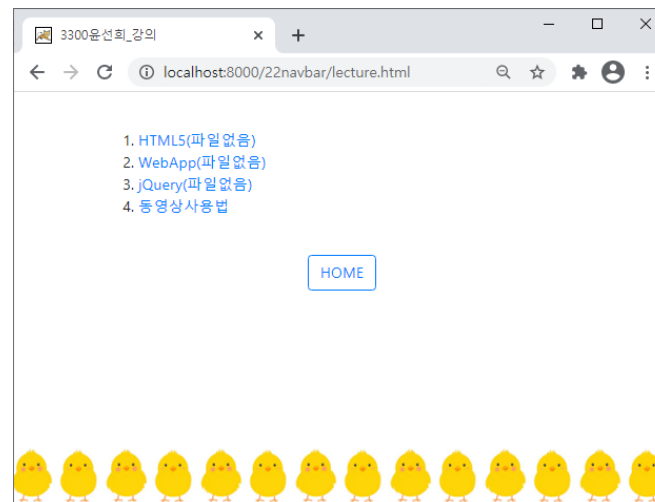
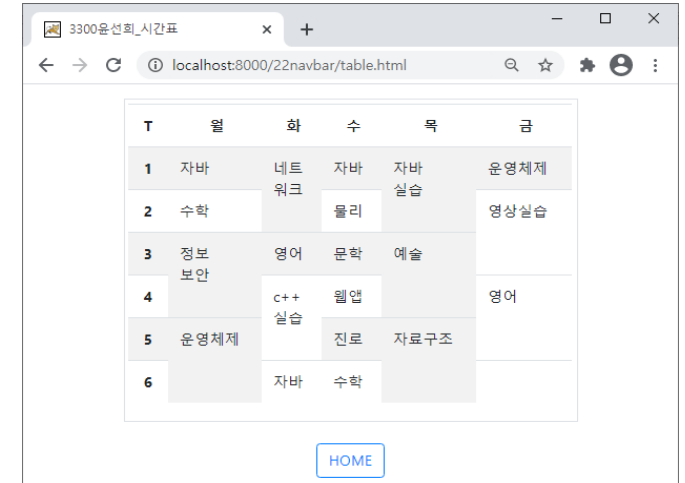
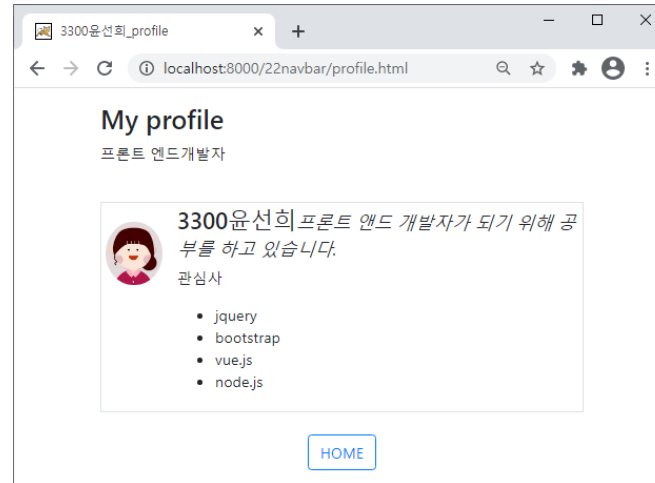
```
53 <center><button type="button" class="btn btn-outline-primary"><a href="index.html">HOME</a></button></center>
54 </body>
55 </html>
```

<실습> bootstrap - 22Navbar With Dropdown(1/2)

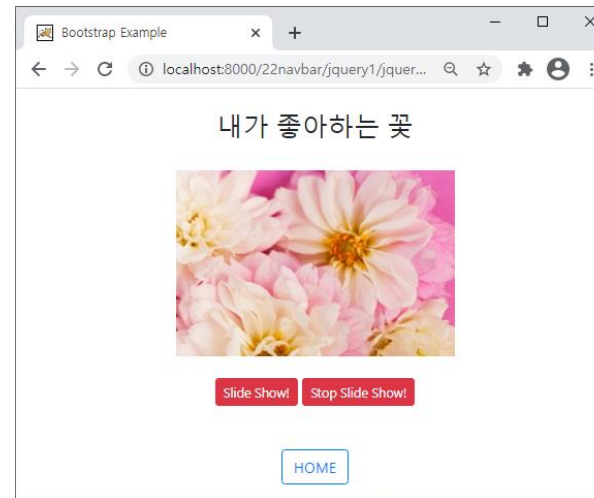
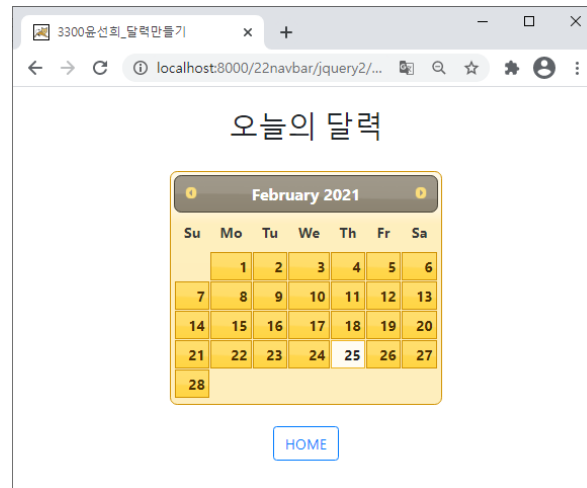
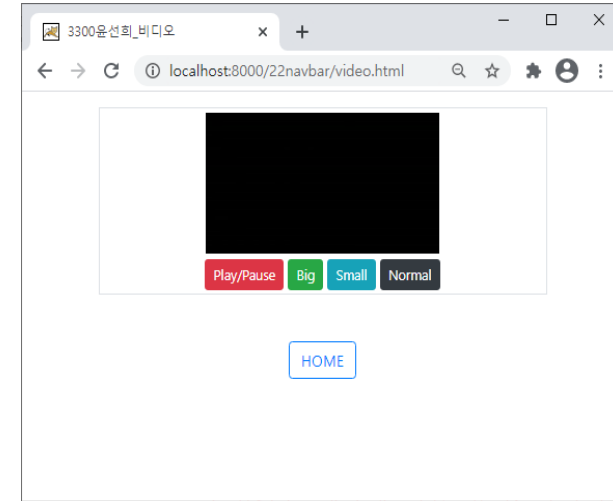
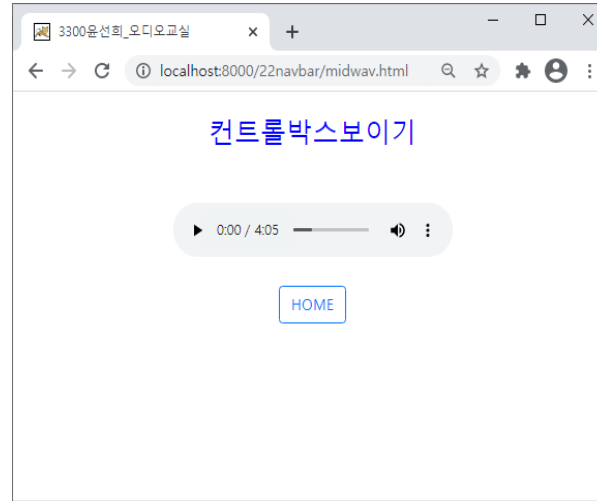
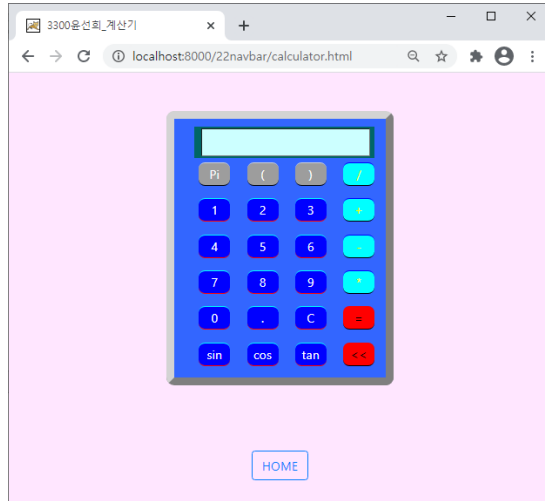
1. <http://localhost:8000/22navbar/>



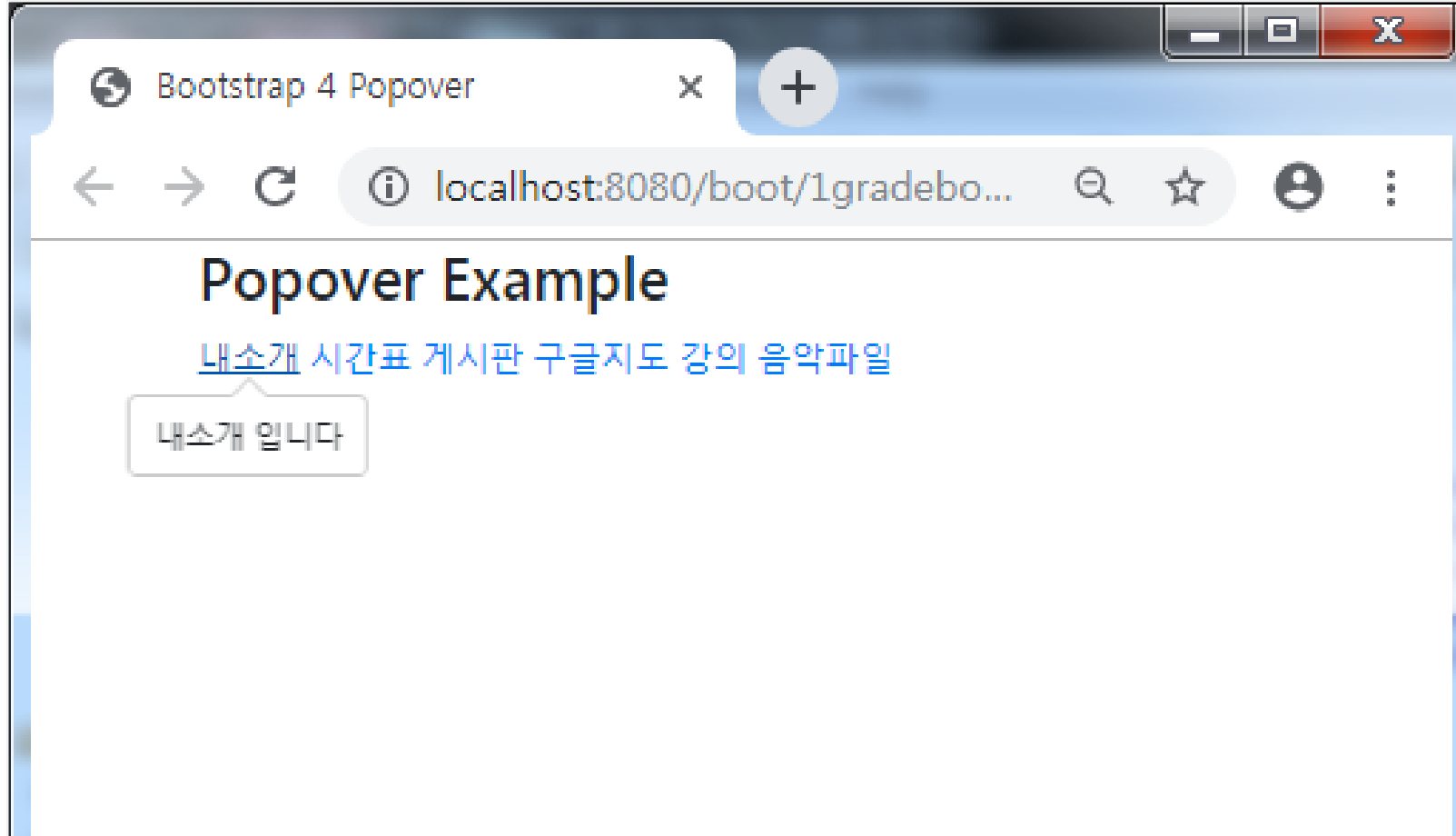
localhost에서 실행



<실습> bootstrap - 22Navbar With Dropdown(2/2)



5. 30popover - index.html(1/3)



5. 30popover - index.html(2/3)

```
1 <html>
2 <head>
3   <title>Bootstrap 4 Popover</title>
4   <meta charset="utf-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1">
6   <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css">
7   <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
8   <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.min.js"></script>
9   <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js"></script>
10  <script>
11    $(document).ready(function(){
12      $('[data-toggle="popover"]').popover();
13    });
14  </script>
15 </head>
16 <body>
17 <div class="container">
18   <h3>Popover Example</h3>
19   <a href="profile.html" title="" data-toggle="popover" data-trigger="hover" data-placement="bottom" data-content="내소개입니다">내소개</a>
20   <a href="table.html" title="" data-toggle="popover" data-trigger="hover" data-placement="bottom" data-content="시간표입니다">시간표</a>
21   <a href="board.html" title="" data-toggle="popover" data-trigger="hover" data-placement="bottom" data-content="게시판입니다">게시판</a>
22   <a href="http://maps.google.com" title="" data-toggle="popover" data-trigger="hover" data-placement="bottom" data-content="구글지도입니다">구글지도</a>
23   <a href="lecture.html" title="" data-toggle="popover" data-trigger="hover" data-placement="bottom" data-content="강의내용입니다">강의</a>
24   <a href="midwav.html" title="" data-toggle="popover" data-trigger="hover" data-placement="bottom" data-content="음악감상하세요">음악파악</a>
25 </div>
26 <script>
27   $(document).ready(function(){
28     $('[data-toggle="popover"]').popover();
29   });
30 </script>
31 </body>
32 </html>
```

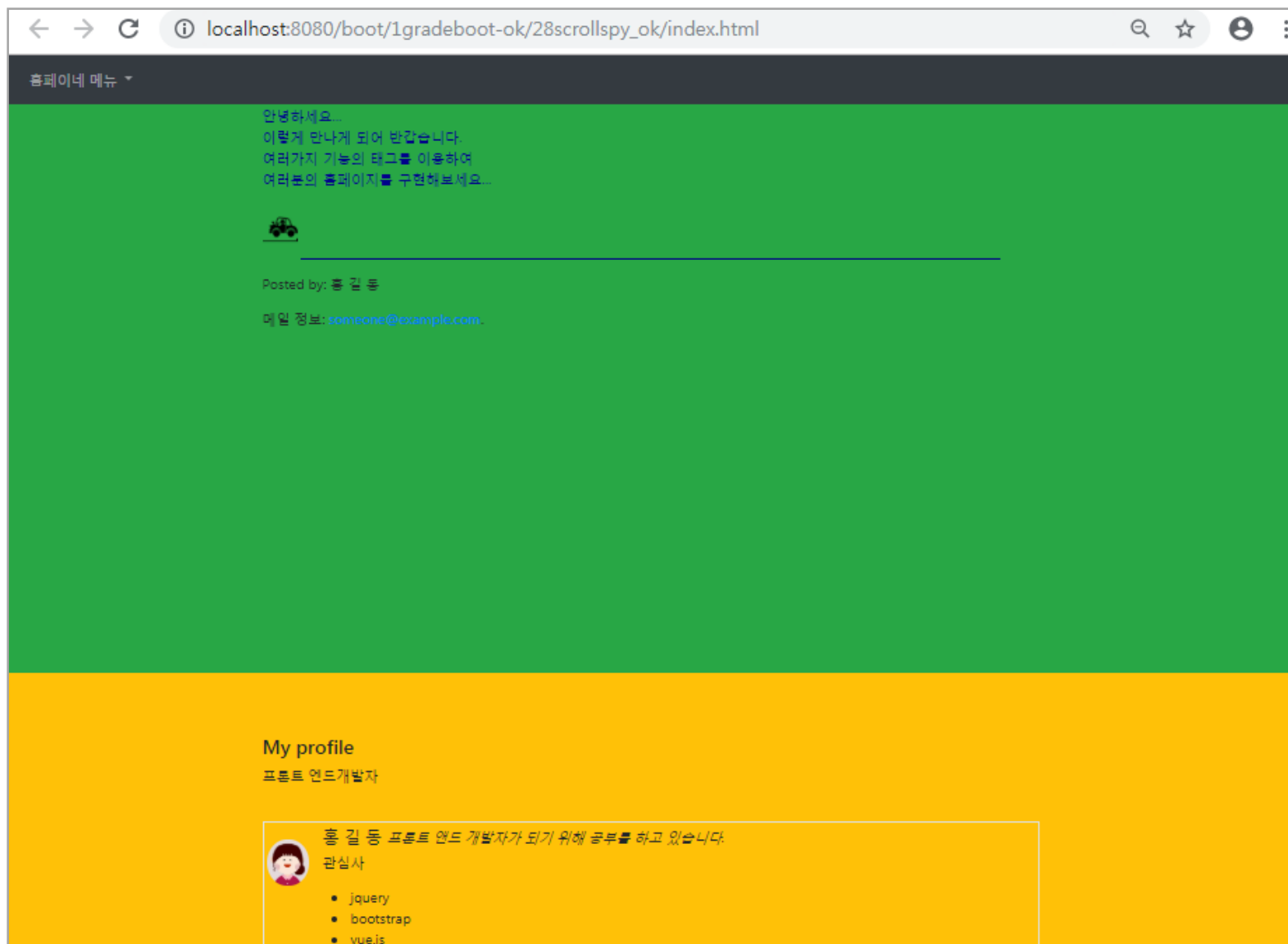
앞의 완성된 19navbar 의 board.html, lecture.html, midwav.html, profile.html, table.html, video.html 활용

5. 22navbar의 index.html에 30popover을 적용하기(3/3)

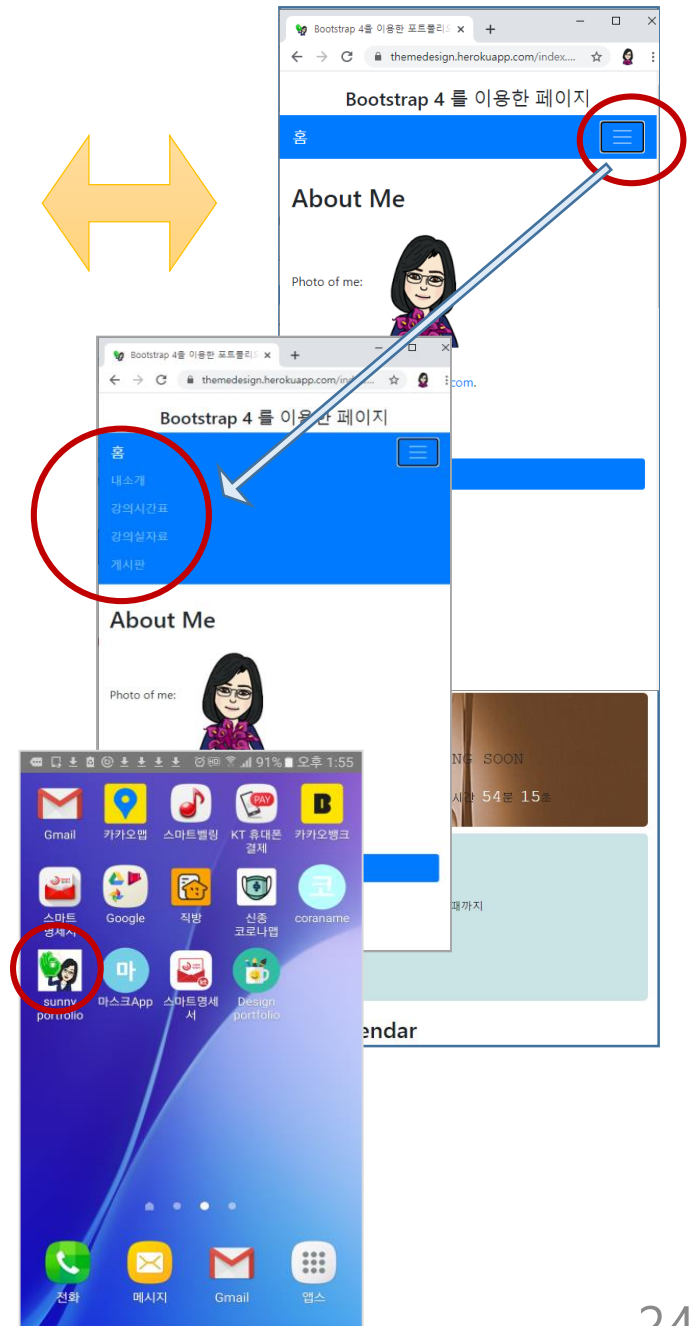
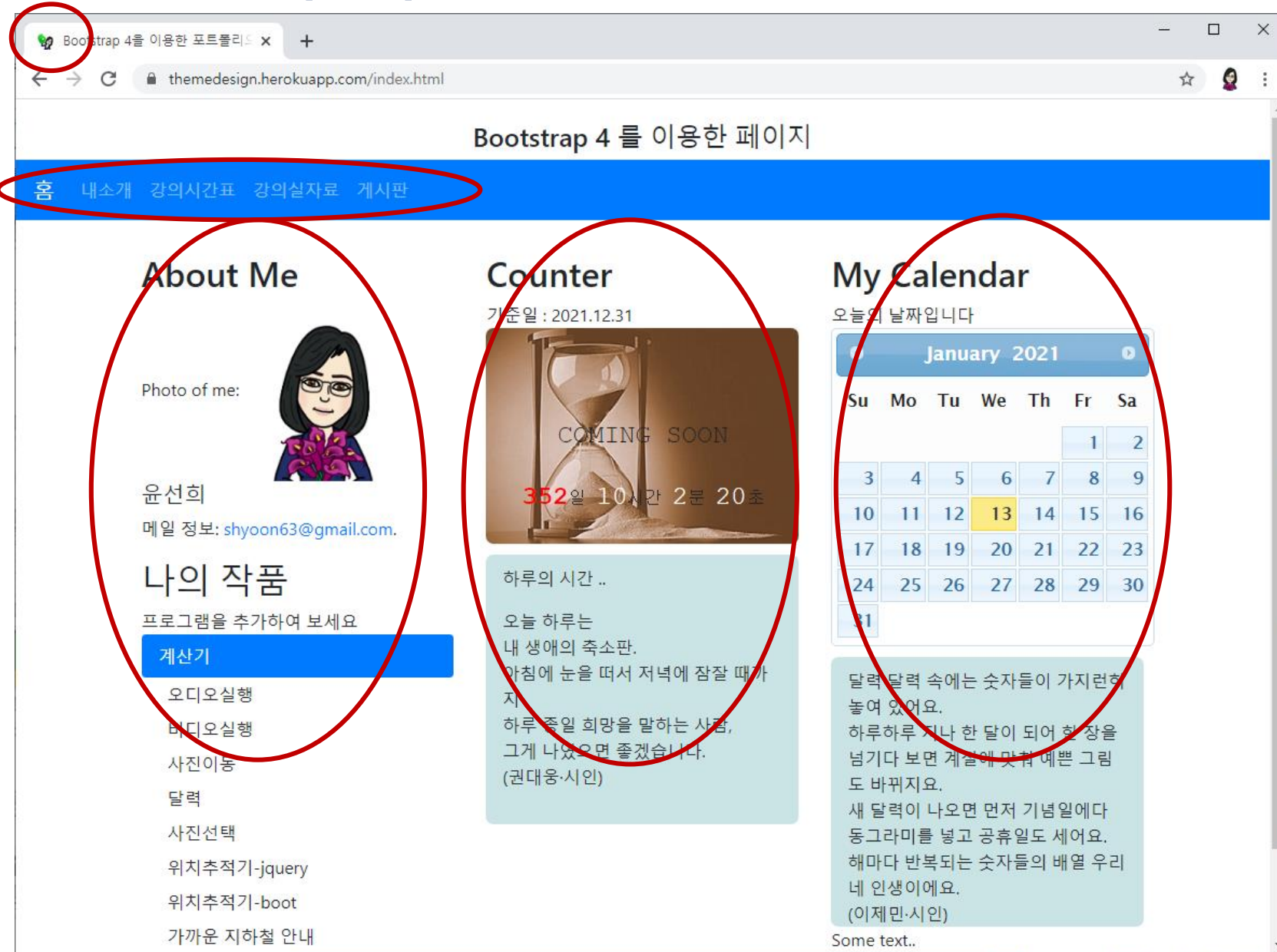
```
10 <script>
11 $(document).ready(function(){
12   $('[data-toggle="popover"]').popover();
13 });
14 </script>
15 </head>
16 <body>
17 <nav class="navbar navbar-expand-sm bg-primary navbar-dark">
18   <!-- Links -->
19   <ul class="navbar-nav">
20     <li class="nav-item">
21       <a class="nav-link" href="index.html" data-toggle="popover" data-trigger="hover" data-content="로그인하러갑니다">로그인</a>
22     </li>
23     <li class="nav-item">
24       <a class="nav-link active" href="profile.html" data-toggle="popover" data-trigger="hover" data-content="나의 프로필입니다">내소개</a>
25     </li>
26     <li class="nav-item">
27       <a class="nav-link" href="table.html" data-toggle="popover" data-trigger="hover" data-content="실시간 반영되는 출고하세요">감의시간표</a>
28     </li>
29     <li class="nav-item">
30       <a class="nav-link" href="lecture.html" data-toggle="popover" data-trigger="hover" data-content="다들 물어봐 사들여주세요">감의실자르</a>
31     </li>
32     <li class="nav-item">
33       <a class="nav-link disabled" href="board.html" data-toggle="popover" data-trigger="hover" data-content="아직은 글사들입니다">게시판</a>
34     </li>
35     <!-- Dropdown -->
36     <li class="nav-item dropdown">
37       <a class="nav-link dropdown-toggle" href="lecture.html" id="navbardrop" data-trigger="hover" data-toggle="dropdown"
38         data-content="예제프로그램을 만들어 메뉴에 추가하여 보시다">
39       <!--data-toggle="dropdown", data-toggle="popover" 둘중에 하나만 -->
40     예제프로그램
```

22navbar 의 index.html 에 30Popover가 적용된 소스
나머지 dropdown-menu에도 적용하기

6. 32scrollspy - 소스살펴보기



7. theme(1/5) – 목표



7. theme- index.html에 22Navbar 의 Collapsing The Navigation Bar 적용하기1(2/5)

- https://www.w3schools.com/bootstrap4/bootstrap_navbar.asp

```
<nav class="navbar navbar-expand-md bg-dark navbar-dark">
  <!-- Brand -->
  <a class="navbar-brand" href="#">Navbar</a>

  <!-- Toggler/collapsible Button -->
  <button class="navbar-toggler" type="button" data-toggle="collapse" data-
target="#collapsibleNavbar">
    <span class="navbar-toggler-icon"></span>
  </button>

  <!-- Navbar links -->
  <div class="collapse navbar-collapse" id="collapsibleNavbar">
    <ul class="navbar-nav">
      <li class="nav-item">
        <a class="nav-link" href="#">Link</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">Link</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">Link</a>
      </li>
    </ul>
  </div>
</nav>
```

Collapsing The Navigation Bar

Navbar

Navbar의

링크

링크

링크

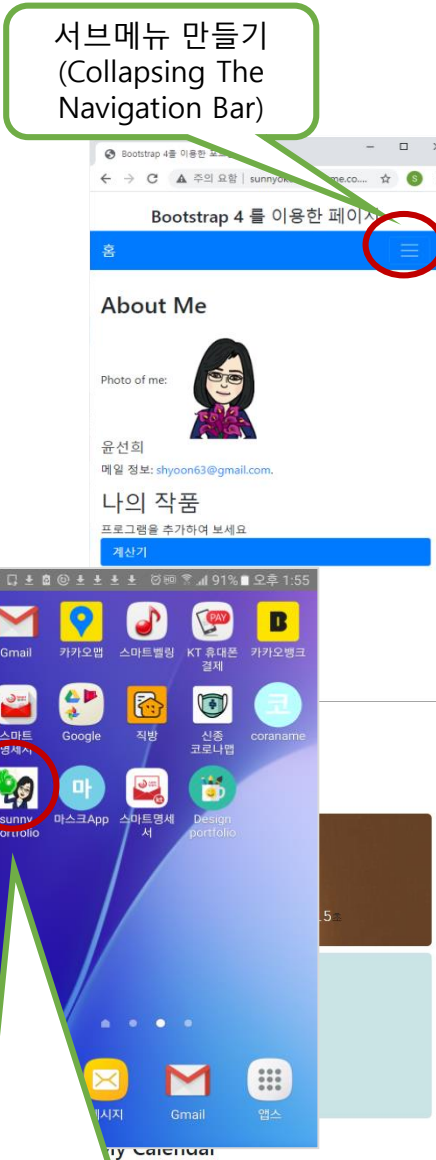
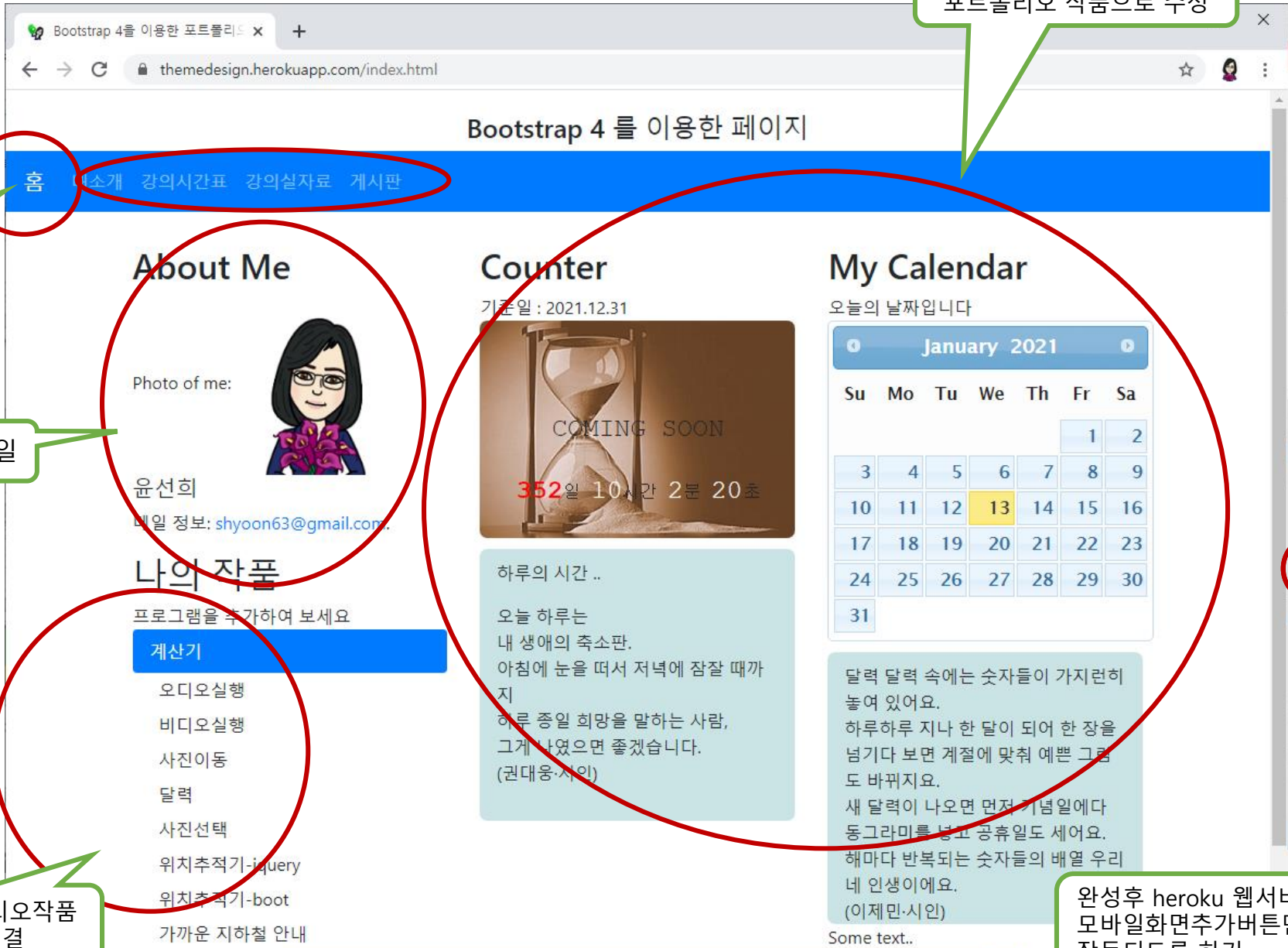
7. theme- index.html에 상단 메뉴 만들기 : 22Navbar 의 Collapsing The Navigation Bar 적용(3/5)

```
47      <!--메뉴버튼-->
48      <nav class="navbar navbar-expand-sm bg-primary navbar-dark">
49  ▢ <a class="navbar-brand" href="index.html" data-toggle="popover" data-trigger="hover" data-content="초기화면입니다">홈</a>
50  ▢ <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#collapsibleNavbar">
51      <span class="navbar-toggler-icon"></span>
52  </button>
53  ▢ <div class="collapse navbar-collapse" id="collapsibleNavbar">
54      <ul class="navbar-nav">
55  ▢ <li class="nav-item">
56      <a class="nav-link" href="profile.html">내소개</a>
57  </li>
58  ▢ <li class="nav-item">
59      <a class="nav-link" href="table.html">강의시간표</a>
60  </li>
61  ▢ <li class="nav-item">
62      <a class="nav-link" href="lecture.html">강의실자료</a>
63  </li>
64  ▢ <li class="nav-item">
65      <a class="nav-link" href="board.html">게시판</a>
66  </li>
67  </ul>
68  </div>
69  </nav>
```

7. theme- index.html에 왼쪽아래 메뉴만들기 - <div class="col-sm-4">(4/5)

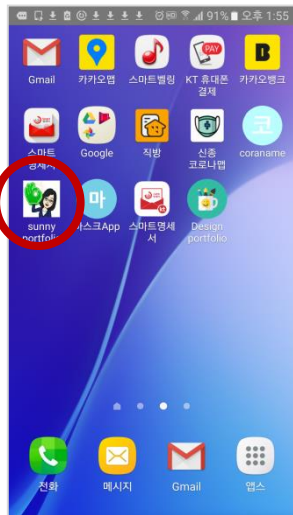
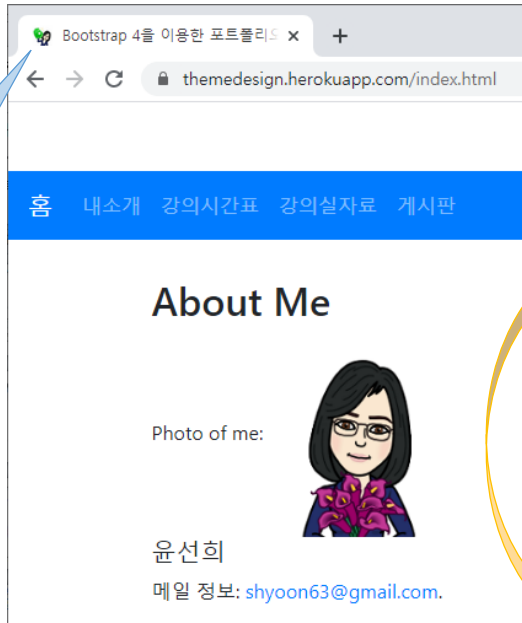
```
84 <h2>나의 작품</h2>
85 <font size=3>프로그램을 추가하여 보세요</font>
86 <ul class="nav nav-pills flex-column">
87   <li class="nav-item">
88     <a class="nav-link active" href="calculator.html" data-toggle="popover" data-content="계산하는프로그램">계산기</a>
89   </li>
90   <li class="nav-item">
91     <a class="dropdown-item" href="midwav.html" data-toggle="popover" data-content="좋아하는 노래가 실행이 됩니다">오디오실행</a>
92   </li>
93   <li class="nav-item">
94     <a class="dropdown-item" href="video.html" data-toggle="popover" data-content="비디오가 실행됩니다">비디오실행</a>
95   </li>
96   <li class="nav-item">
97     <a class="dropdown-item" href="jquery1/jquery1.html" data-toggle="popover" data-content="jquery로 작성된 달력입니다. 좋아하는 사진으로 바꾸어보세요">사진이동</a>
98   </li>
99   <li class="nav-item">
100    <a class="dropdown-item" href="jquery2/sunny.html" data-toggle="popover" data-content="jquery로 작성된 달력입니다">달력</a>
101  </li>
102  <li class="nav-item">
103    <a class="dropdown-item" href="map1/m_myLoc.html" data-toggle="popover" data-content="jquery mobile를 이용한 위치추적기 입니다">위치추적기-jquery</a>
104  </li>
105  <li class="nav-item">
106    <a class="dropdown-item" href="map2/m_myLoc.html" data-toggle="popover" data-content="bootstrap를 이용한 위치추적기 입니다">위치추적기-bootstrap</a>
107  </li>
108  <li class="nav-item">
109    <a class="dropdown-item" href="subway/subway.html" data-toggle="popover" data-content="가까운 지하철 안내 입니다">가까운 지하철 안내</a>
110  </li>
111  <li class="nav-item">
112    <a class="dropdown-item" href="parking/parking.html" data-toggle="popover" data-content="가까운 주차장 안내 입니다">가까운 주차장 안내</a>
113  </li>
114  <li class="nav-item">
115    <a class="dropdown-item" href="dust/index.html" data-toggle="popover" data-content="실시간 기상지수 정보 안내 입니다">실시간 기상지수 정보 안내</a>
116  </li>
117  <li class="nav-item">
118    <a class="dropdown-item" href="#" data-toggle="popover" data-content="예제프로그램을 추가하세요">Disabled</a>
119  </li>
120 </ul>
```


7. theme- bootstrap가 적용된 웹앱만들기(5/5)



Index.html - 모바일화면에서 사용할 로고 만들고 홈화면 추가 - localhost에서 확인

로컬실행에서 그림 (logo.png) 이 브라우저 좌측 상단에 변경된 것을 확인



- <https://themedesign.herokuapp.com>

- heroku에 themedesign(app이름)만들기

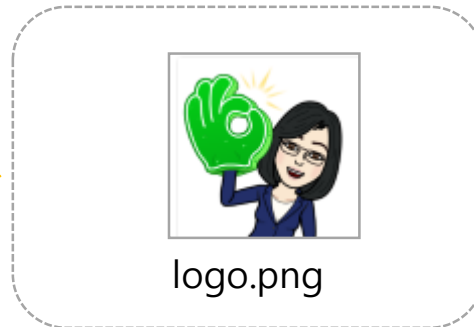
- 아래와 같이 로그파일을 만든 후 /imgs에 저장하고 index.html 소스 수정

- Android

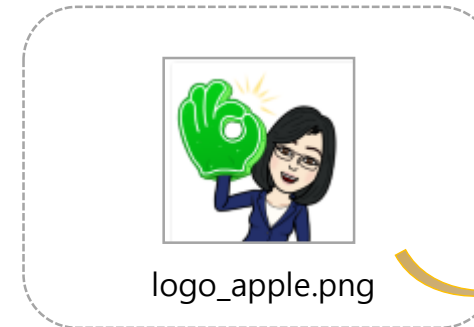
```
<link rel="shortcut icon" href="./logo.png">
```

- Apple

```
<link rel="apple-touch-icon" href="./logo_apple.png">
```



Android 기기: 192 X 192 픽셀



Apple 기기: 180 X 180 픽셀

뒤에 배경색이 있어야
없으면 검정색으로
표시

홈화면 추가

1)안드로이드Mobile phone - url 입력 후 메뉴[⋮] - 홈화면추가 - 이름 붙이기(Map Tracker)

2)아이폰Mobile phone - 사파리브라우저(나침판)-url 입력 후 -가운데 밑에 버튼[+] 누른 후- 홈화면추가

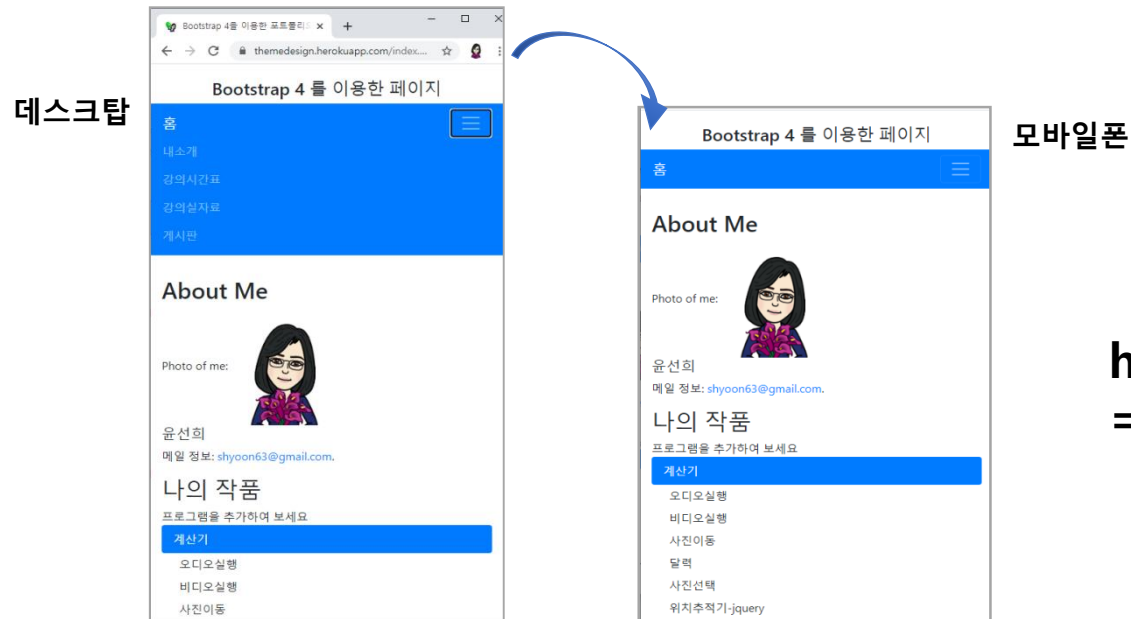
index.html – 주소창을 보이지 않도록 하여 앱으로 보이도록 하기 – heroku에서 확인

index.html

```
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, height=device-height, initial-scale=1">
<link rel="apple-touch-icon" sizes="180x180" href="imgs/logo.png" />
<link rel="icon" type="image/png" href="imgs/logo.png" sizes="192x192"/>
<meta name="mobile-web-app-capable" content="yes">
<meta name="apple-mobile-web-app-capable" content="yes">
```

모바일폰에서는 주소창이 나타나지 않도록 만들기

- Pt에서 복사하여 사용하면 보이지 않는 문자가 포함되어 실행이 안되는 경우 발생함!!!



heroku에서 올려보자!
=> heroku_cloudupload_design.ppt 활용

감사합니다.