

Web/Python Programming

웹/파이썬 프로그래밍

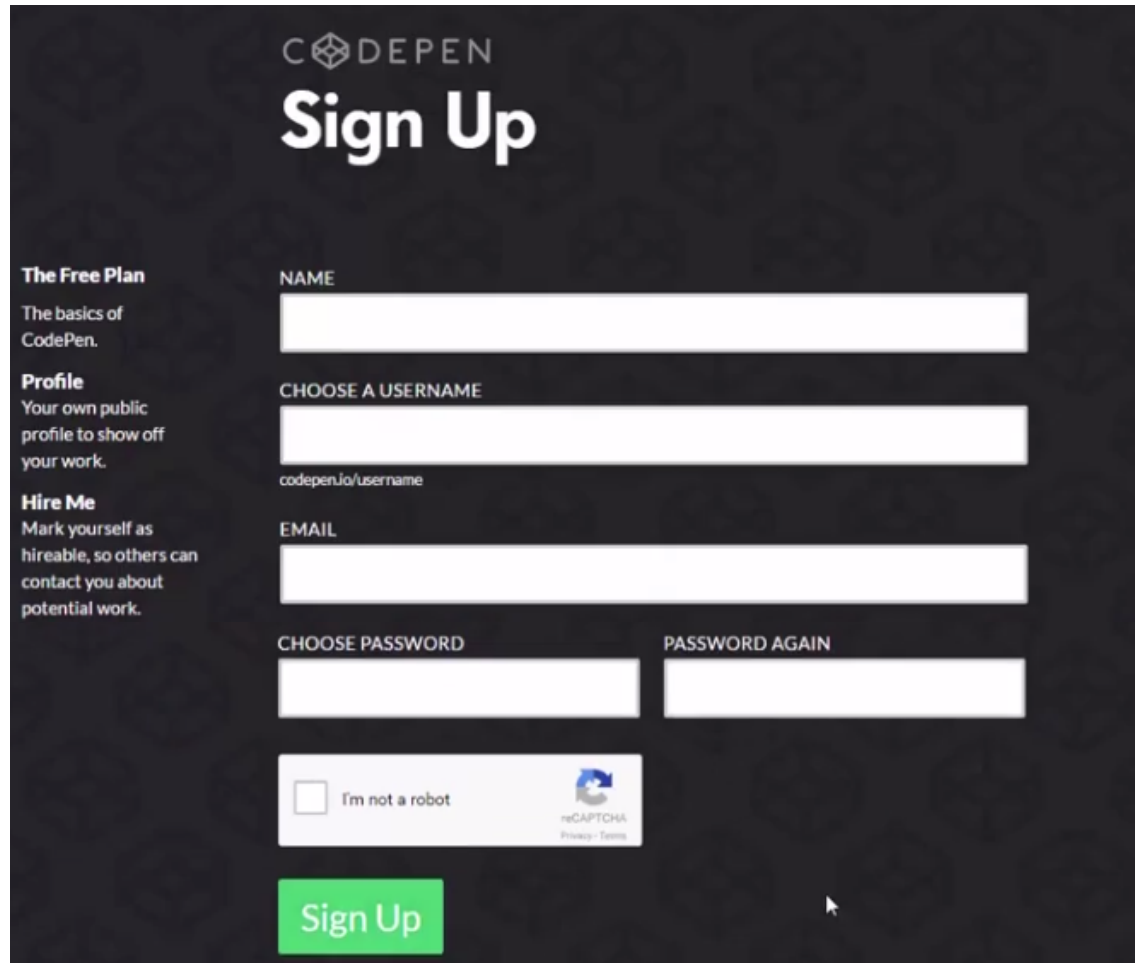
```
21 <?php language_attributes(); ?>
22 <?php bloginfo( 'charset' ); ?>
23 <?php wp_title( '|', true, 'right' ); ?>
24 <?php rel="profile" href="http://gmpg.org/xfn/11" ?>
25 <?php rel="pingback" href="http://gmpg.org/xfn/11" ?>
26 <?php fruitful_get_favicon(); ?>
27 <?php wp_head(); ?>
28 </head>
29 <?php body_class(); ?>
30 <div id="page-header" class="hfeed site">
31     $theme_options = fruitful_get_theme_options();
32     $logo_pos = $menu_pos = '';
33     if (isset($theme_options['logo_position']))
34         $logo_pos = esc_attr($theme_options['logo_position']);
35     if (isset($theme_options['menu_position']))
36         $menu_pos = esc_attr($theme_options['menu_position']);
37     $logo_pos_class = fruitful_get_class($logo_pos);
38     $menu_pos_class = fruitful_get_class($menu_pos);
39     $responsive_menu_type = fruitful_get_responsive_menu_type();
40     $responsive_menu_class = fruitful_get_class($responsive_menu_type);
```

Today

- HTML forms
 - Purpose
 - Basic forms
 - Validating HTML input
- How HTML5 works with forms in validation using pattern recognition
- JavaScript
 - Validate user input
 - Applying consistent style to labels, input, and feedback in forms
 - Regular expression
 - Basic Javascript syntax

HTML form

- Collect information from a user
- Sign-up
- Survey



The image shows the CodePen 'Sign Up' page. It features a dark background with white text and form fields. On the left, there are three sections: 'The Free Plan' (The basics of CodePen), 'Profile' (Your own public profile to show off your work), and 'Hire Me' (Mark yourself as hireable, so others can contact you about potential work). The main form area on the right includes fields for 'NAME', 'CHOOSE A USERNAME' (with a hint 'codepen.io/username'), 'EMAIL', 'CHOOSE PASSWORD', and 'PASSWORD AGAIN'. Below these is a reCAPTCHA checkbox labeled 'I'm not a robot' and a 'Sign Up' button.

CODEPEN
Sign Up

The Free Plan
The basics of CodePen.

Profile
Your own public profile to show off your work.

Hire Me
Mark yourself as hireable, so others can contact you about potential work.

NAME

CHOOSE A USERNAME

codepen.io/username

EMAIL

CHOOSE PASSWORD

PASSWORD AGAIN

☐ I'm not a robot reCAPTCHA Privacy - Terms

Sign Up

HTML form example

First name:

Last name:

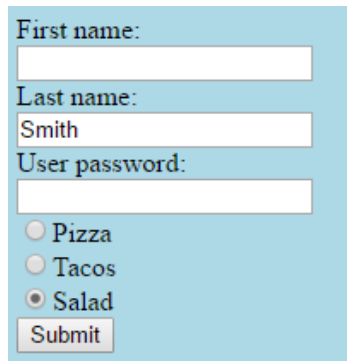
User password:

☐ Pizza
☐ Tacos
☒ Salad

- Input types:
- Text
- Password
- Radio button - name
- Submit

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>HTML Forms 1</title>
5
6   <link rel="stylesheet" type="text/css" href="basic.css">
7
8 </head>
9
10 <body>
11
12   <form>
13     First name:<br>
14     <input type="text" name="firstname"><br>
15     Last name:<br>
16     <input type="text" name="lastname" value="Smith"><br>
17     User password:<br>
18     <input type="password" name="password"><br>
19
20     <input type="radio" name="food" value="Pizza">Pizza<br>
21     <input type="radio" name="food" value="Tacos">Tacos<br>
22     <input type="radio" name="food" value="Salad" checked>Salad<br>
23
24     <input type="submit" value="Submit">
25
26   </form>
27
28 </body>
29
30 </html>
31
```

HTML form - Submit



First name:

Last name:

User password:

☐ Pizza
☐ Tacos
☒ Salad

- When you click “submit”
- The information is sent to the server
- We don’t have the server, yet.

More input types

First name:

Last name:

User password:

☒ Pizza
☐ Tacos
☐ Salad
☐ I know HTML
☐ I know JavaScript

Quantity (between 1 and 5):

Birthday:

Select your favorite color:

- Radio button vs. Check box
- Quantity – mouse over
- Required

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>HTML Forms 2</title>
5
6   <link rel="stylesheet" type="text/css" href="basic.css">
7
8 </head>
9
10 <body>
11
12   <form>
13     First name:<br>
14     <input type="text" name="firstname" required><br>
15     Last name:<br>
16     <input type="text" name="lastname" value="Smith"><br>
17     User password:<br>
18     <input type="password" name="password"><br>
19
20     <input type="radio" name="food" value="Pizza" checked>Pizza<br>
21     <input type="radio" name="food" value="Tacos" >Tacos<br>
22     <input type="radio" name="food" value="Salad" >Salad<br>
23
24     <input type="checkbox" name="skills" value="HTML">I know HTML<br>
25     <input type="checkbox" name="skills" value="JavaScript">I know JavaScript<br>
26
27     Quantity (between 1 and 5):
28     <input type="number" name="quantity" min="1" max="5"><br>
29
30     Birthday:
31     <input type="date" name="birthday"><br>
32
33     Select your favorite color:
34     <input type="color" name="favcolor"><br>
35
36     <input type="submit" value="Submit"><br>
37
38   </form>
39
40 </body>
41
42 </html>
43
```

HTML Form validation

- Form validation using JavaScript and using HTML5

JavaScript onBlur Event Tests

Field 1

Field 2

Country code JS:

Country code HTML5:

JavaScript onBlur Event Tests

Field 1 Too short!

Field 2 You must provide input!

Country code JS: Please use a three letter country code

Country code HTML5:

JavaScript onBlur Event Tests

Field 1 Alice That's long enough!

Field 2 20 Input accepted

Country code JS: k Please use a three letter country code

Country code HTML5:

JavaScript onBlur Event Tests

Field 1 Alice That's long enough!

Field 2 20 Input accepted

Country code JS: kor Input accepted

Country code HTML5: k

⚠ Please match the requested format.
Three letter country code

JavaScript onBlur Event Tests

Field 1

Field 2

Country code JS:

Country code HTML5:

⚠ Please fill out this field.

HTML Form validation: regular expression

■ JavaScriptOnBlur2->JavaScriptOnBlur3.html

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>Onblur Event Page</title>
5
6   <script>
7     function checkField1()
8     {
9       var field = document.getElementById("field1").value;
10
11       if (field.length < 5)
12         document.getElementById("message1").innerHTML = "Field 1 is too short";
13       else
14         document.getElementById("message1").innerHTML = "Field 1 is accepted";
15     }
16
17     function checkField2()
18     {
19       var field = document.getElementById("field2").value;
20
21       if (field != "")
22         document.getElementById("message2").innerHTML = "Field 2 is accepted";
23       else
24         document.getElementById("message2").innerHTML = "Field 2 is empty";
25     }
26
27     function checkField3()
28     {
29       var field = document.getElementById("field3").value;
30       var regex = /^[A-Za-z]{3}$/;
31
32       if (regex.test(field))
33         document.getElementById("message3").innerHTML = "Input accepted";
34       else
35         document.getElementById("message3").innerHTML = "Please use a three letter country code";
36     }
37   </script>
38 </head>
39 <body>
40   <p>JavaScript onblur Event Tests</p>
41
42   <form>
43     Field 1<input id="field1" type="text" onblur="checkField1();" /> <span id="message1"></span><br>
44     Field 2<input id="field2" type="text" onblur="checkField2();" /> <span id="message2"></span><br>
45     Country code JS: <input id="field3" type="text" onblur="checkField3();" /> <span id="message3"></span><br>
46     Country code HTML5: <input type="text" name="country_code" pattern="[A-Za-z]{3}" title="Three letter country code" required><br>
47     <input type="submit">
48   </form>
49 </body>
50 </html>
```

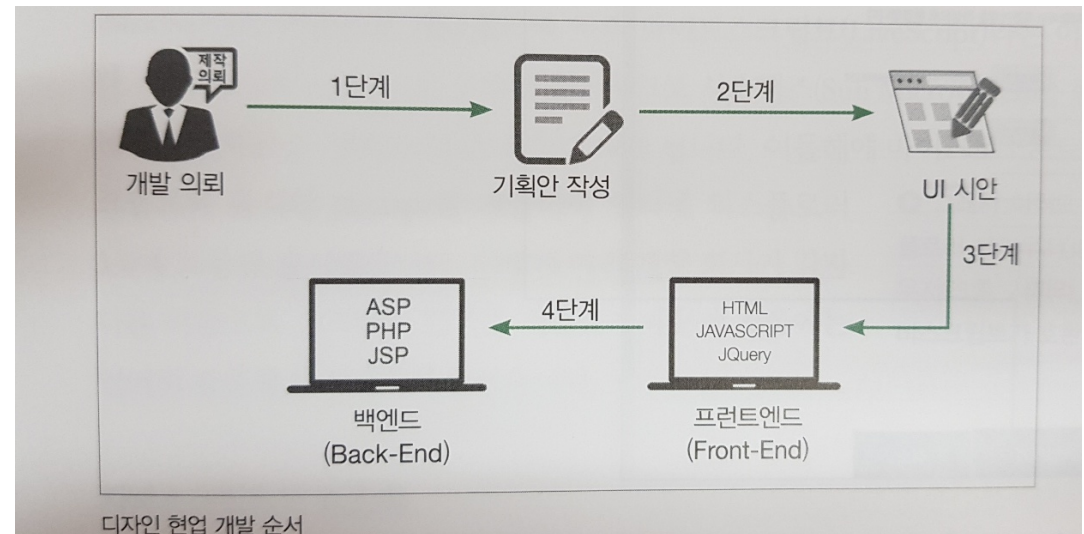

More about Javascript

■ Front-end development

- HTML, CSS – static pages
- Javascript – dynamic pages
- What users see on webpages

■ Back-end development

- ASP, PHP, JSP
- Python, Javascript, Go, etc.,
- What users cannot see
- Ex) managing user database



The screenshot shows a web registration form titled "회원가입" (Sign Up). It includes a table with user details and a form for entering registration information.

NO	아이디	이메일	비밀번호	메일링 수신1	메일링 수신2
1	doit1004	doit1004@naver.com	●●●●●●	y	y

Below the table, the form fields are as follows:

- 이메일: [doit1004@naver.com] (with "중복확인" button)
- 비밀번호: [●●●●●●] (with "중복확인" button)
- 비밀번호 확인: [●●●●●●]
- 이메일 수신: [●] 예 [○] 아니오
- 이메일 수신: [●] 예 [○] 아니오

Buttons at the bottom: 가입하기 (Sign Up), 취소 (Cancel).

회원 가입하기

Example source code

- www.easyspub.co.kr -> 이지스퍼블리싱-> 회원가입/로그인->자료실

이지스퍼블리싱 회사소개 도서 **자료실** 질문답변 동영상 강의

🏠 **자료실**

자료실

전체 ▼ Do it! 자바스크립트 🔍

- 도서와 관련된 추가 자료를 다운로드할 수 있습니다.

- 책 이름을 검색할 때는 [도서명]으로 설정한 후, 책 제목을 정확하게 입력해 주셔야 합니다.
ex: 된다! 엑셀 능력자 (X) 된다! 엑셀 능력자 (O).

혹은 홈페이지 상단의 '도서' 메뉴에서 해당 도서 소개 페이지를 클릭한 후, [자료실 및 정오표] 탭을 보면 쉽게 찾을 수 있습니다.

총 7건이 등록되어 있습니다.



[Do it! 자바스크립트 + 제이쿼리 - 전면 개정판] 소스 코드 전체

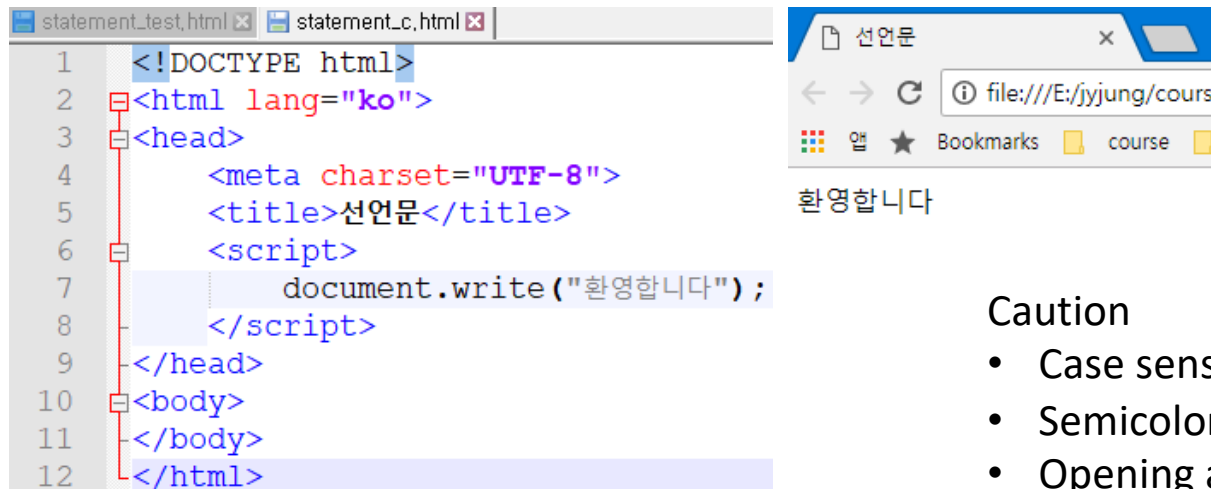
등록일 : 2018.03.26

Do it! 자바스크립트 + 제이쿼리 - 전면 개정판 소스

본문에서 진행하는 실습 코드와 정답 코드를 모두 포함하는 파일입니다.
[\[다운로드 링크\]](#)

Javascript - start

■ Complete your statement_test.html



The screenshot shows a code editor on the left and a web browser on the right. The code editor displays the following HTML code:

```
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4     <meta charset="UTF-8">
5     <title>선언문</title>
6     <script>
7         document.write("환영합니다");
8     </script>
9 </head>
10 <body>
11 </body>
12 </html>
```

The web browser on the right shows the title "선언문" and the content "환영합니다" (Welcome).

Caution

- Case sensitive
- Semicolon ends the statement
- Opening and closing () { }

Javascript - variables

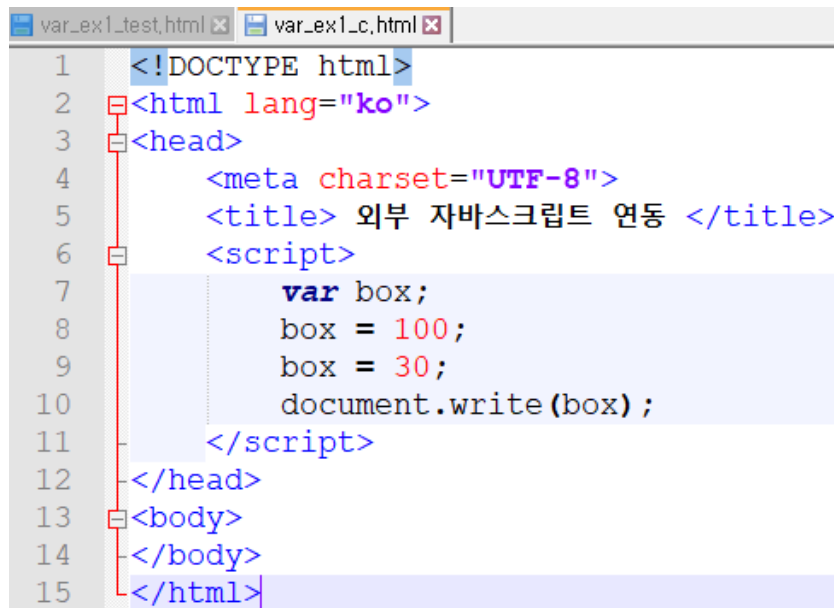
- Data types

- String
- Number
- Boolean
- Null

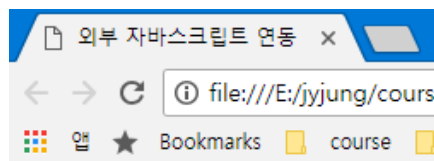
```
var a = 0;  
var box;  
box = 1;
```

Variables

■ Complete your var_ex1_test.html



```
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4   <meta charset="UTF-8">
5   <title> 외부 자바스크립트 연동 </title>
6   <script>
7     var box;
8     box = 100;
9     box = 30;
10    document.write(box);
11  </script>
12 </head>
13 <body>
14 </body>
15 </html>
```



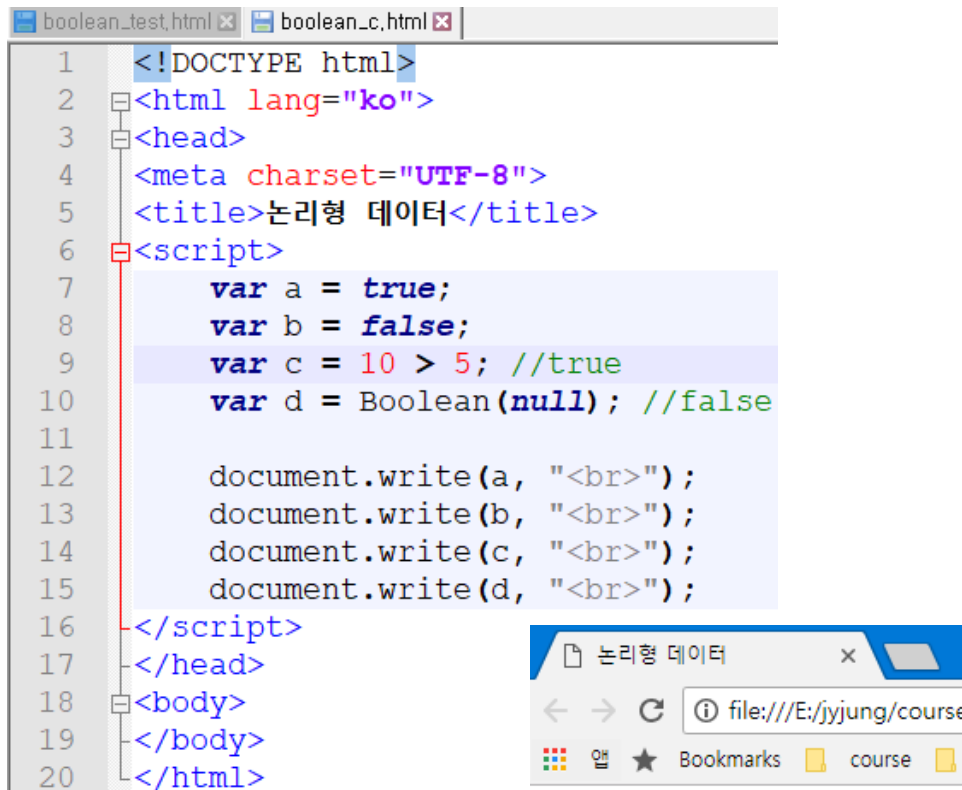
```
var s = "javascript";
var num = '100';
var tag = "<h1>Hello</h1>";
```

```
var p = 100;
var t = Number("500");
```

```
var a; // undefined
var b = null; // null
```

Boolean

■ Complete your boolean_test.html



```
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4 <meta charset="UTF-8">
5 <title>논리형 데이터</title>
6 <script>
7     var a = true;
8     var b = false;
9     var c = 10 > 5; //true
10    var d = Boolean(null); //false
11
12    document.write(a, "<br>");
13    document.write(b, "<br>");
14    document.write(c, "<br>");
15    document.write(d, "<br>");
16 </script>
17 </head>
18 <body>
19 </body>
20 </html>
```

true
false
true
false

■ Boolean()

- 0, null, undefined: false
- Others: true

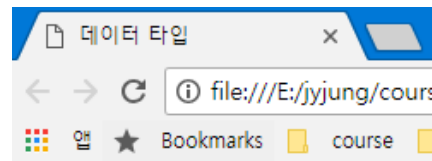
```
var a = true;
var b = 10 >= 100;           // false
var c = Boolean("hello"); // true
var d;                       // undefined
var e = null;                // null
```


typeof

- Complete your typeof_test.html

```
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4   <meta charset="UTF-8">
5   <title>데이터 타입</title>
6   <script>
7     var num = 100;
8     var str = "자바스크립트";
9
10    document.write(typeof num, "<br>");
11    document.write(typeof str);
12  </script>
13 </head>
14 <body>
15 </body>
16 </html>
```

- When you want to check the type of a variable



number
string

Precautions on variables

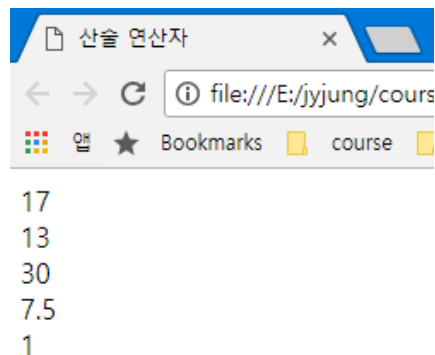
- A variable name starts with \$, _, or character
- A variable name includes \$, _, characters, and numbers.
- Some words cannot be used as a variable names
 - document
 - location
 - Window etc.
- Variable names are case sensitive

```
var 1num = 10; (x)
var $num = 10; (o)
var 100num = 10; (x)
var num100 = 10; (o)
var document = 10; (x)
```

```
var num = 10;
document.write(Num) (x)
document.write(num) (o)
```

Operators

	Operation
+	Addition
-	Subtraction
*	Multiplication
/	Division
%	Modulo (나머지)

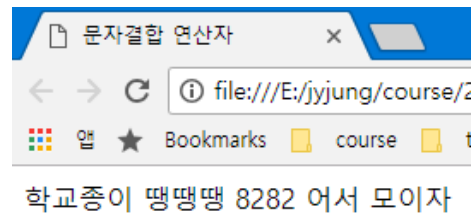


■ Complete your part2-5-1-test.html

```
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4   <meta charset="UTF-8">
5   <title> 산술 연산자 </title>
6   <script>
7     var num1 = 15;
8     var num2 = 2;
9     var result;
10    result = num1 + num2;
11    document.write(result, "<br>"); // 17
12    result = num1 - num2;
13    document.write(result, "<br>"); // 13
14    result = num1 * num2;
15    document.write(result, "<br>"); // 30
16    result = num1 / num2;
17    document.write(result, "<br>"); // 7.5
18    result = num1 % num2;
19    document.write(result, "<br>"); // 1
20  </script>
21 </head>
22 <body>
23 </body>
24 </html>
```

String concatenation

- String + Number is possible!
- String + Number becomes String



- Complete your string_plus_test.html

```
string_plus_test.html string_plus_c.html
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4 <meta charset="UTF-8">
5 <title> 문자결합 연산자 </title>
6 <script>
7     var t1 = "학교종이";
8     var t2 = " 땡땡땡 ";
9     var t3 = 8282;
10    var t4 = " 어서 모이자";
11    var result;
12
13    result = t1 + t2 + t3 + t4;
14    document.write(result);
15 </script>
16 </head>
17 <body>
18 </body>
19 </html>
```

Complex assignment operator

	Operation
A = B	A = B
A += B	A = A + B
A -= B	A = A - B
A *= B	A = A * B
A /= B	A = A / B
A %= B	A = A % B
A++	A = A+1
A--	A = A-1

복합 대입 연산자

file:///E:/jyjung/cours

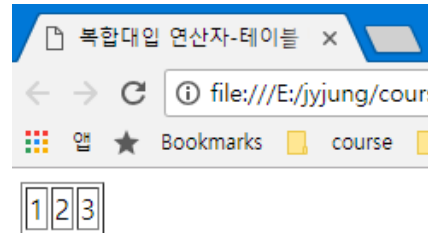
13
10
30
0

Complete your dboperator_test.html

```
dboperator_test.html x dboperator_c.html x
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4 <meta charset="UTF-8">
5 <title> 복합 대입 연산자 </title>
6 <script>
7     var num1 = 10;
8     var num2 = 3;
9     num1 += num2;
10    document.write(num1, "<br>"); // 13
11
12    num1 -= num2;
13    document.write(num1, "<br>"); // 10
14
15    num1 *= num2;
16    document.write(num1, "<br>"); // 30
17
18    num1 %= num2;
19    document.write(num1, "<br>"); // 0
20 </script>
21 </head>
22 <body>
23 </body>
24 </html>
```

Complex assignment operator

- Assign HTML tags to a String variable
- Complete your texttable_test.html



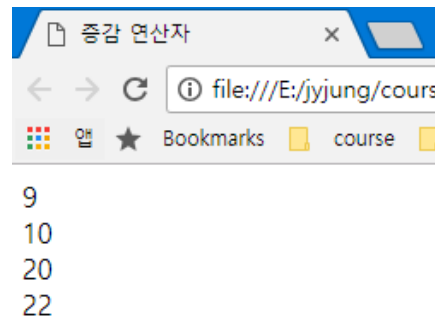
```
texttable_test.html x texttable_c.html x
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4 <meta charset="UTF-8">
5 <title> 복합대입 연산자-테이블 만들기 </title>
6 <script>
7     var str = "<table border='1'>";
8     str += "<tr>";
9     str += "<td>1</td><td>2</td><td>3</td>";
10    str += "</tr>";
11    str += "</table>";
12    document.write( str );
13 </script>
14 </head>
15 <body>
16 </body>
17 </html>
```


Complex assignment operator

- Complete your growth_test.html

```
result = num2++;  
result = num2;  
num2++;
```

```
result = ++num2;  
num2++;  
result = num2;
```



```
growth_test.html x growth_c.html x  
1 <!DOCTYPE html>  
2 <html lang="ko">  
3 <head>  
4 <meta charset="UTF-8">  
5 <title> 증감 연산자 </title>  
6 <script>  
7     var num1 = 10;  
8     var num2 = 20;  
9     var result;  
10  
11     num1--; //9  
12     document.write(num1, "<br>");  
13  
14     num1++; //10  
15     document.write(num1, "<br>");  
16  
17     result = num2++; //result: 20, num2: 21  
18     document.write(result, "<br>");  
19  
20     result = ++num2; //result: 22, num2: 22  
21     document.write(result, "<br>");  
22 </script>  
23 </head>  
24 <body>  
25 </body>  
26 </html>
```

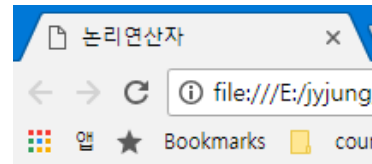
Comparison operator

Symbol	Explanation
A > B	A is greater than B
A < B	A is less than B
A >= B	A is greater than or equal to B
A <= B	A is less than or equal to B
A == B	A is equal to B
A != B	A is not equal to B
A === B	A is equal to B (value and type)
A !== B	A is not equal to B (value and type)

```
var K = 10, M = "10";  
K == 10    // true  
M == 10    // true  
K === 10   // true  
M === 10   // false
```

Logic operators / Precedence

Symbol	Explanation
!	not
&&	and
	or



false
true
false
true
true

■ Precedence

- ① ()
- ② --, ++, !
- ③ *, /, %, +, -
- ④ >, >=, <, <=, ==, !=, ===, !==
- ⑤ &&, ||
- ⑥ =, +=, -=, *=, /=, %=

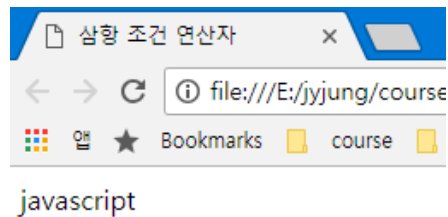
■ Complete your prior_test.html

```
prior_test.html prior_c.html
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4     <meta charset="UTF-8">
5     <title> 논리연산자 </title>
6 </script>
7     var a = 10;
8     var b = 20;
9     var m = 30;
10    var n = 40;
11
12    var result;
13
14    result = a > b || b > m || m > n;
15    document.write(result, "<br>");
16
17    result = a > b || b >= m || m <= n;
18    document.write(result, "<br>");
19
20    result = a <= b && b >= m && m <= n;
21    document.write(result, "<br>");
22
23    result = a <= b && b <= m && m <= n;
24    document.write(result, "<br>");
25
26    result = !(a > b);
27    document.write(result, "<br>");
28 </script>
29 </head>
30 <body>
31 </body>
32 </html>
```

Conditional operator: ?

condition? Code1 : Code2;

```
if (condition == true)
    Code1;
else
    Code2;
```



■ Complete your three_condi_test.html

```
three_condi_test.html three_condi_c.html
1 <!DOCTYPE html>
2 <html lang="ko">
3 <head>
4 <meta charset="UTF-8">
5 <title> 삼항 조건 연산자 </title>
6 <script>
7     var a = 10;
8     var b = 3;
9
10    var result = a > b ? "javascript" : "hello";
11    document.write(result); //jvaascript
12 </script>
13 </head>
14 <body>
15 </body>
16 </html>
```