Web pages creation using CSS3 and HTML5

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What Program We Use to Make Web Pages?

HTML5

Hypertext Markup Language (HTML)

The standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web.

CSS3

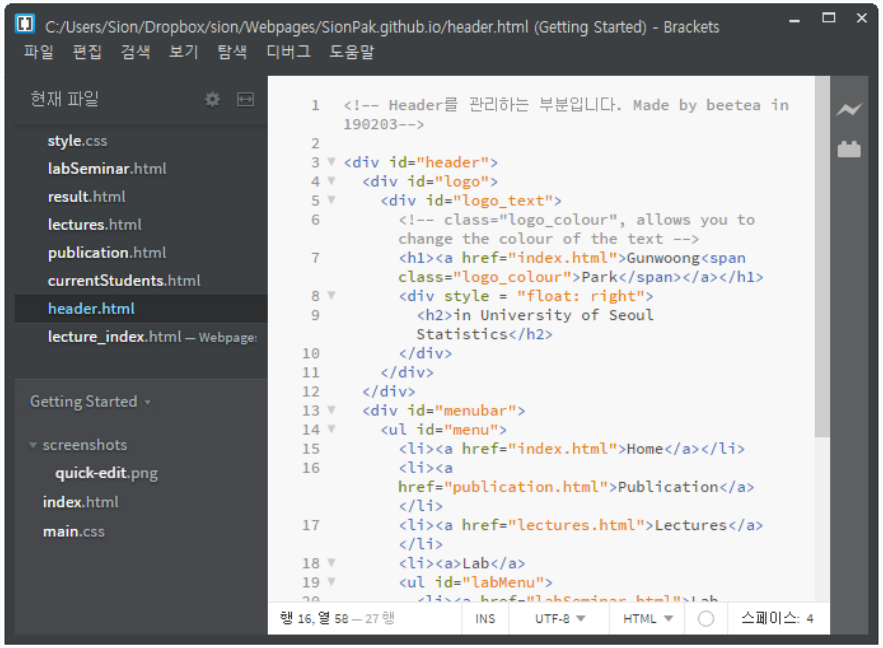
Cascading Style Sheets (CSS)

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JS.

Whether or Not to Apply the CSS3

Editor For HTML5, CSS3

Bracket



How to apply CSS3 to HTML5

```
<head>
    <link href="css/custom.css" rel="stylesheet">
</head>
```

Link to CSS file

```
<head>
    <title>EXAMPLE</title>
    <style>

        *{ color :red;}

    </style>
</head>
```

Direct input in style tag

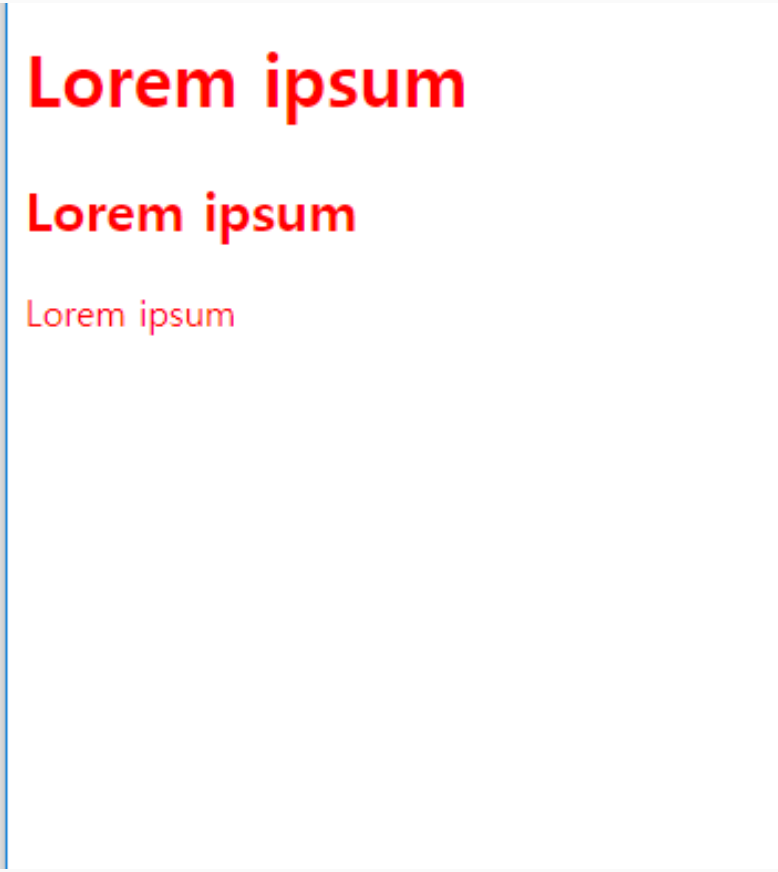
CSS3 - Selector

Selector : function to select specific HTML tags

Selector	Description
*	all tags in html document
tag	select a specific tag
#id	select tag that have id attribute
.class	select tag that have class attribute

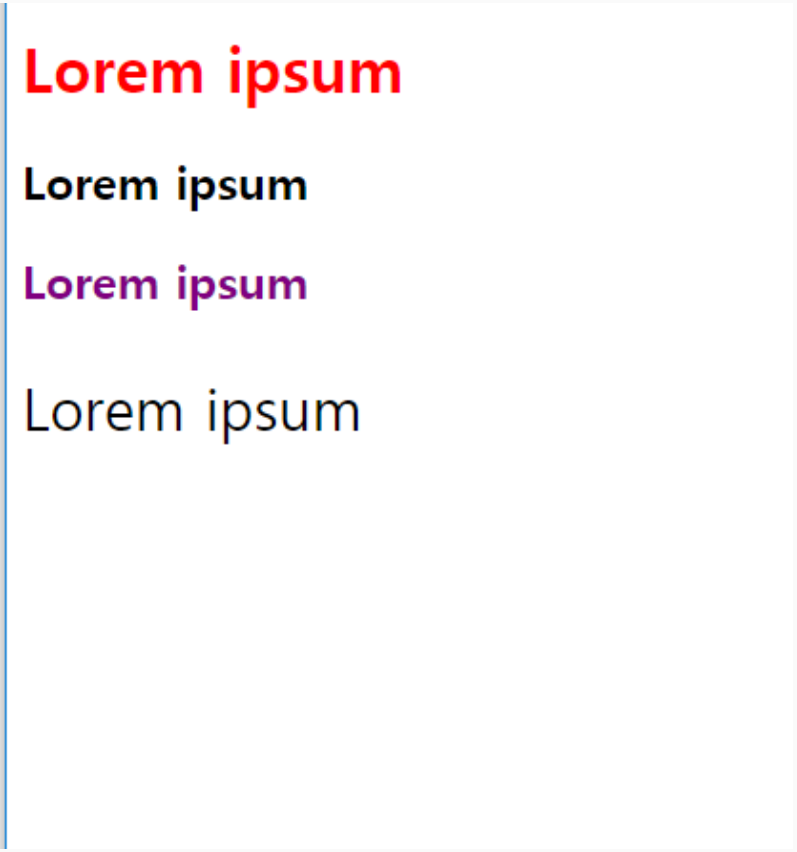
Example - * (full selector)

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>EXAMPLE</title>
5      <style>
6
7          *
8          { color :red;}
9
10     </style>
11 </head>
12
13     <body>
14         <h1>Lorem ipsum</h1>
15         <h2>Lorem ipsum</h2>
16         <p>Lorem ipsum</p>
17     </body>
```



Example - Other Selector

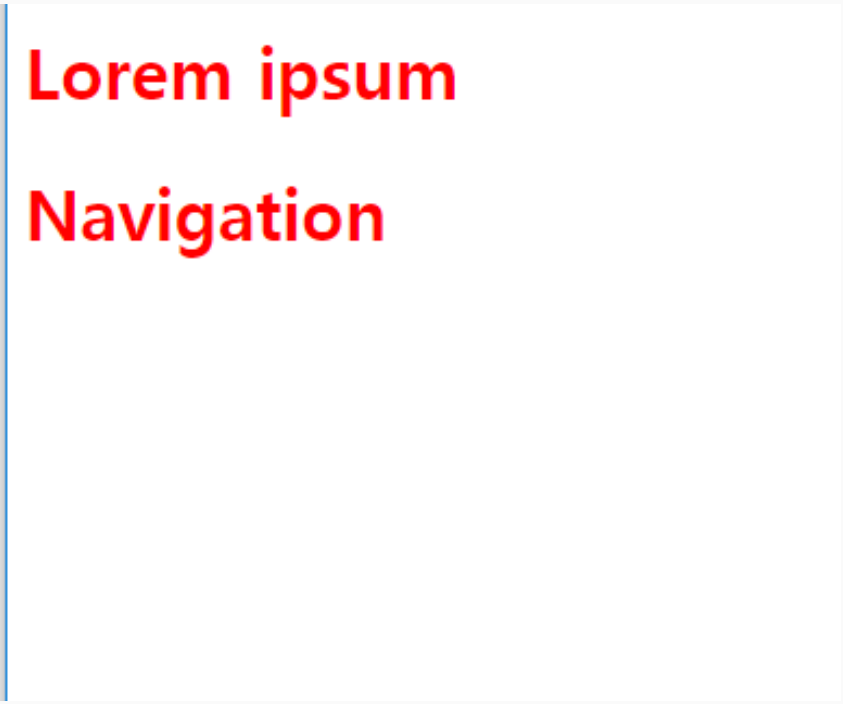
```
<!DOCTYPE html>
<html>
<head>
    <title>EXAMPLE</title>
    <style>

        h1
        { color :red;}

        #scarf
        { color : black;}

        .scarf
        { color : purple;}

        p.scarf
        { color : black;
          font-size :30px}

    </style>
</head>

    <body>
        <h1>Lorem ipsum</h1>
        <h2 id = 'scarf'> Lorem ipsum</h2>
        <h2 class = 'scarf'> Lorem ipsum</h2>
        <p class = 'scarf'> Lorem ipsum</p>
    </body>
</html>
```



Descendant Selector

Selector format	Description
SelectorA SelectorB	Select SelectorB, a descendant of SelectorA.

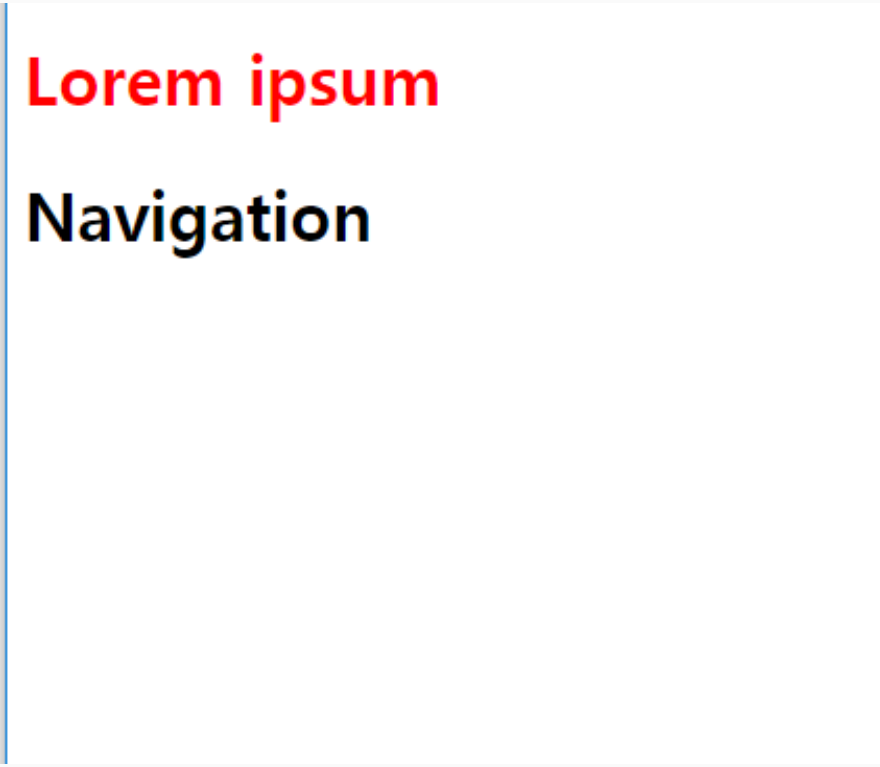
```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>EXAMPLE</title>
5      <style>
6          #header h1 {color :red;}
7      </style>
8  </head>
9      <body>
10         <div id = 'header'>
11             <h1 class = 'title'>Lorem ipsum</h1>
12             <div id = 'nav'>
13                 <h1>Navigation</h1>
14             </div>
15         </div>
16     </body>
17 </html>
```



Child Selector

Selector format	Description
SelectorA > SelectorB	Select SelectorB, a child of SelectorA.

```
<!DOCTYPE html>
<html>
<head>
    <title>EXAMPLE</title>
    <style>
        #header > h1 {color :red;}
    </style>
</head>
    <body>
        <div id = 'header'>
            <h1 class = 'title'>Lorem ipsum</h1>
            <div id = 'nav'>
                <h1>Navigation</h1>
            </div>
        </div>
    </body>
</html>
```



Basic Style Attributes

Attribute	Description
color	font color
font-size	font size
text-align	text align
background-color	color of background
width, height	size of tag block

How color is entered : Color names or HEX code.

HEX code: RGB Color in hexadecimal

Basic Style Attributes - Example

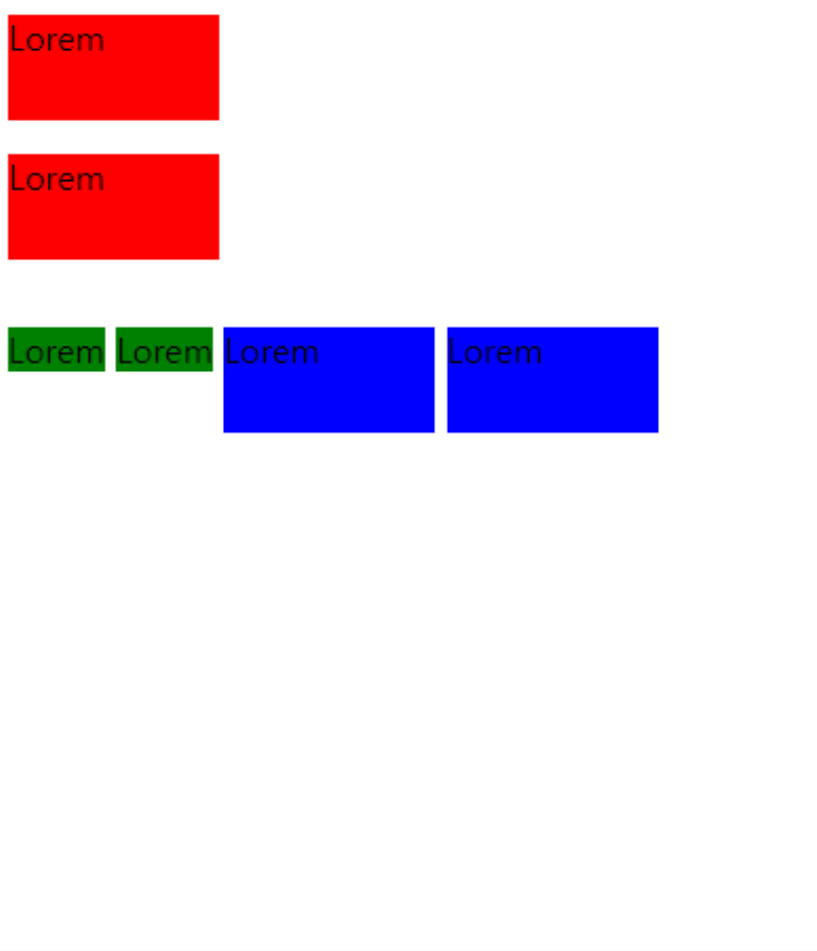
```
<!DOCTYPE html>
<html>
<head>
    <title>EXAMPLE</title>
    <style>

        .scarf
        { color : purple;
          width : 220px;
          height : 40px;
          background-color : green;
          font-size : 20px;
          text-align : center;}

    </style>
</head>

    <body>
        <p class = 'scarf'> Lorem ipsum</p>
    </body>
</html>
```

Block Division Tag Attribute

Attribute	Description
display	Set the alignment format for tags
float	Tag Horizontal Alignment
padding	padding in space
border	border of space
margin	margin of space

Block Division Tag Attribute - Example 1

```
<!DOCTYPE html>
<html>
<head>
    <title>EXAMPLE</title>
    <style>
        p
        {width:100px; height: 50px;}
        .att1
        {display : block ;
        background-color: red;}
        .att2
        {display : inline ;
        background-color: green;}
        .att3
        {display : inline-block ;
        background-color: blue;}
    </style>
</head>
    <body>
        <p class = 'att1'>Lorem</p>
        <p class = 'att1'>Lorem</p>
        <p class = 'att2'>Lorem</p>
        <p class = 'att2'>Lorem</p>
        <p class = 'att3'>Lorem</p>
        <p class = 'att3'>Lorem</p>
    </body>
</html>
```

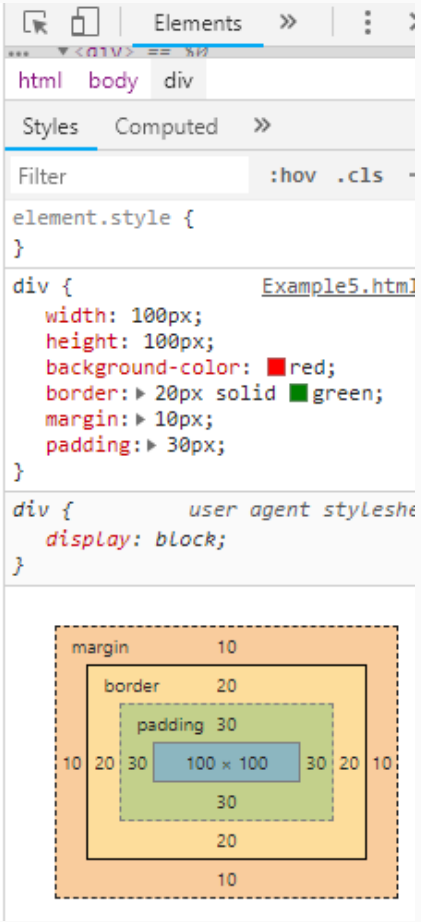


Block Division Tag Attribute - Example 2

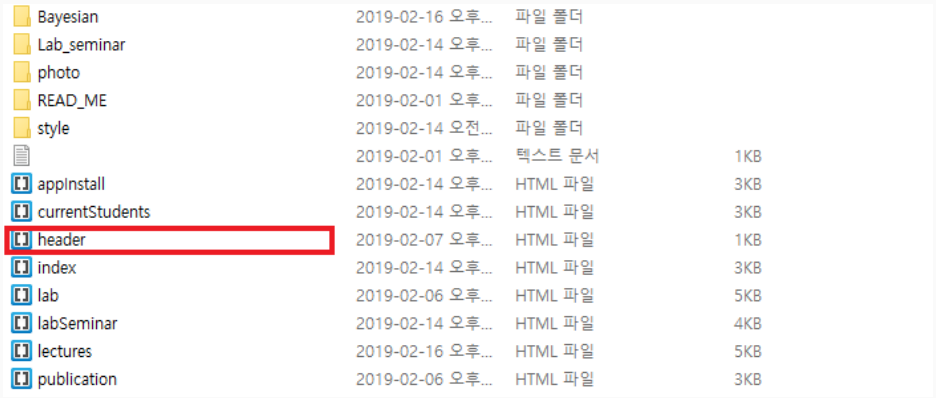
```
<!DOCTYPE html>
<html>
<head>
    <title>EXAMPLE</title>
    <style>
        div{width : 70px; height: 70px;
        margin: 5px; background-color:purple;}
       .box1
        {background-color: red;
         float: left; color:blue;}
       .box2
        {background-color: blue;
         float: right;color: red;}
    </style>
</head>
    <body>
        <div class= 'box1'><h1>1</h1></div>
        <div class= 'box1'><h1>2</h1></div>
        <div class= 'box2'><h1>3</h1></div>
        <div class= 'box2'><h1>4</h1></div>
    </body>
</html>
```

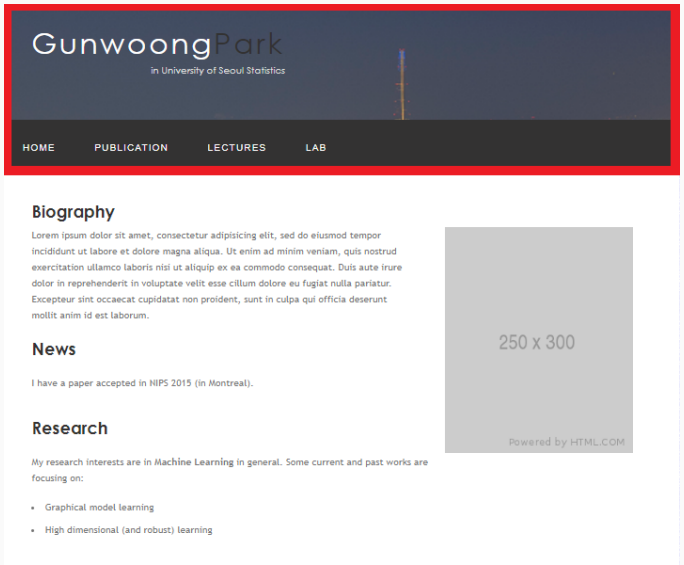
Block Division Tag Attribute - Example 3

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>EXAMPLE</title>
5      <style>
6          div{
7              width:100px;height: 100px;
8              background-color: red;
9              border: 20px solid green;
10             margin: 10px; padding:30px;}
11     </style>
12 </head>
13     <body>
14         <div><p>Lorem ipsum dolor sit amet, </p><
15     </body>
16 </html>
```



Process of Creating Our Webpages





Create each web page based on HTML5 and CSS3 and link each page using anchor tags.

```
<ul id="menu">
  <li><a href="index.html">Home</a></li>
  <li><a href="publication.html">Publication</a></li>
  <li><a href="lectures.html">Lectures</a></li>
  <li><a>Lab</a>
  <ul id="labMenu">
    <li><a href="labSeminar.html">Lab Seminar</a></li>
    <li><a href="currentStudents.html">Current Student</a></li>
    <li><a href="appInstall.html">App Install</a></li>
  </ul>
  </li>
</ul>
```

Header Batch Management with jQuery

```
<script src="//code.jquery.com/jquery-3.3.1.min.js"></script>
<script>
$(document).ready( function() {
  $("#nav").load("header.html #header");
  // Jquery : "nav" 태그에 header.html의 header부분을 가지고온다 - html import
});
</script>
```

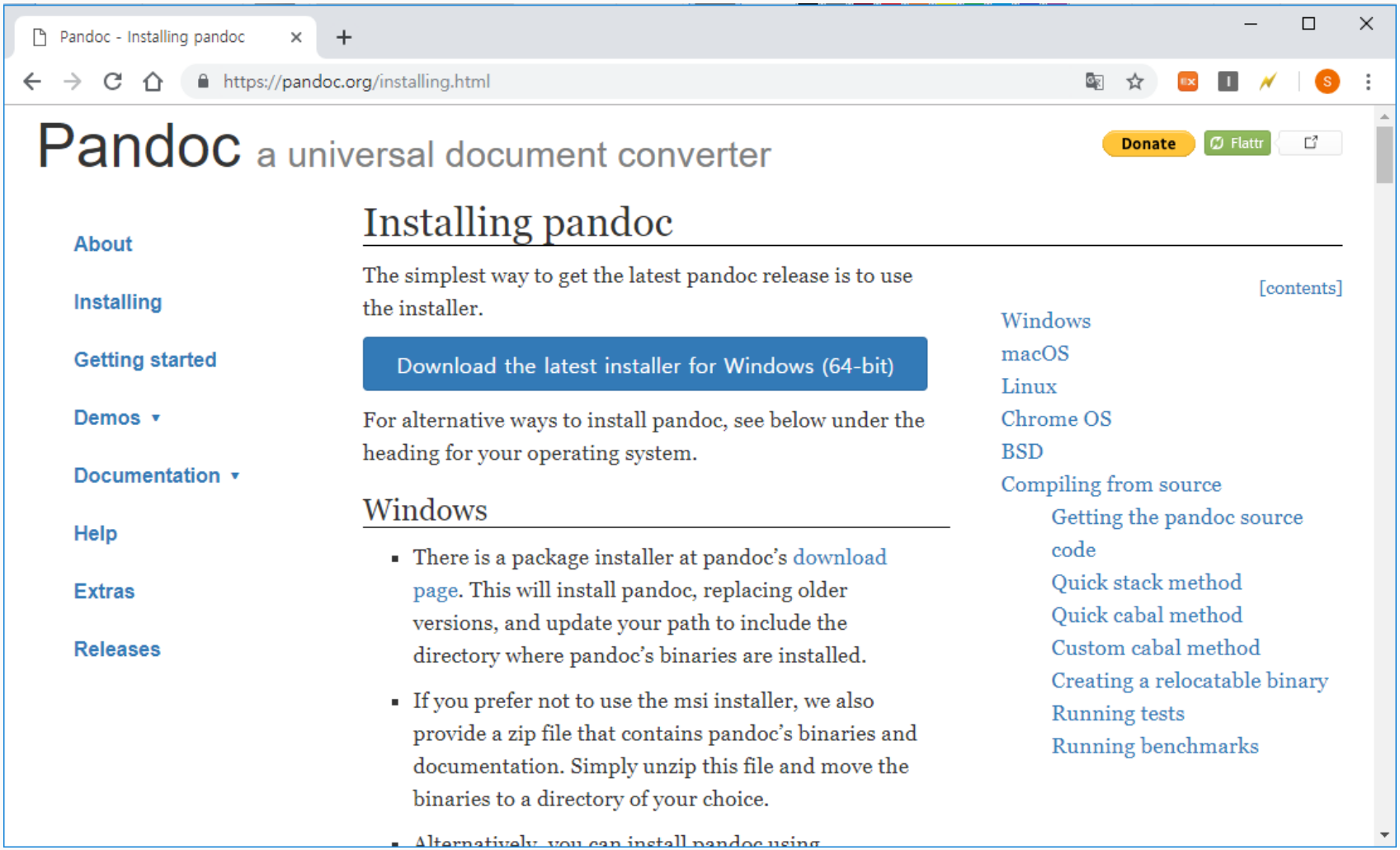
```
<body>
  <div id="main">
    <div id="nav"></div>
    <div id="site_content">
      <div id="content">
```

header

```
<div id="header">
  <div id="logo">
    <div id="logo_text">
      <!-- class="logo_colour", allows you to change the colour of the text -->
      <h1><a href="index.html">Gunwoong<span class="logo_colour">Park</span></a></h1>
      <div style = "float: right">
        <h2>in University of Seoul Statistics</h2>
      </div>
    </div>
  </div>
  <div id="menubar">
    <ul id="menu">
      <li><a href="index.html">Home</a></li>
      <li><a href="publication.html">Publication</a></li>
      <li><a href="lectures.html">Lectures</a></li>
      <li><a>Lab</a>
      <ul id="labMenu">
        <li><a href="labSeminar.html">Lab Seminar</a></li>
        <li><a href="currentStudents.html">Current Student</a></li>
        <li><a href="appInstall.html">App Install</a></li>
        <li><a href="Others.html">Others</a></li>
      </ul>
      </li>
    </ul>
  </div>
</div>
```

Pandoc

Pandoc : a free and open-source document converter.



Convert LaTex to Rmarkdown Using Pandoc

```
pandoc test.tex -f latex -t markdown --mathjax -o test.rmd
```

```latex
\documentclass[a4, 11pt]{article}

\usepackage{amsmath,amssymb,amsfonts,amscd,xspace,pifont}
\usepackage[inner=2cm,outer=2cm,top=2.5cm,bottom=2.5cm]{geometry}
\usepackage{kotex}
\usepackage{graphics,graphicx}
\usepackage{fancyhdr}
\usepackage{multirow}
\usepackage{array}
\usepackage{verbatim}
\usepackage{mathrsfs}
\usepackage{yfonts}
\usepackage{eufrak}
\usepackage{xspace}
\usepackage{graphicx}
\usepackage{pstricks,psfrag}
\usepackage{amsmath,amssymb,amsfonts,amscd,xspace,pifont, pdfpages}
%링크 추가
\usepackage{hyperref}
\hypersetup{ colorlinks=true, linkcolor=blue, filecolor=magenta, urlcolor=cyan, }
\newcommand{\tcr}{\textcolor{red}}
\pagestyle{fancy}
\rhead{교수: 박건웅, 작성: 박보현}


\begin{document}
    \title{기본적인 안내사항}
    \begin{center}
        \textbf{\huge {기본적인 안내사항}}\\
        \vspace{3mm}
        \textbf{ (문의사항은 박보현에게....) }
        \vspace{5mm}
    \end{center}

    \section{Latex 설치}
    \begin{enumerate}
        \item Latex 설치 \\
        아래 사이트에 들어가서 Livetex2018 Full로 설치.\\
        \url{https://www.tug.org/texlive/acquire-netinstall.html}

        \item Latex studio 설치\\
```

```
****\
**(문의사항은 박보현에게....)**

Latex 설치
==========

1.  Latex 설치\
    아래 사이트에 들어가서 Livetex2018 Full로 설치.\
    <https://www.tug.org/texlive/acquire-netinstall.html>

2.  Latex studio 설치\
    Latex설치가 완료된 후 아래의 사이트에서 Latex studio를 설치.\
    <https://www.texstudio.org/>

R 설치
======

1.  R 설치\
    아래 사이트에 들어가서 R 설치.\
    <https://cran.r-project.org/mirrors.html>

2.  Rstudio 설치\
    R설치가 완료된 후 아래의 사이트에서 Rstudio를 설치.\
    <https://www.rstudio.com/products/rstudio/download/>

Adobe Acrobat Pro Xi 설치
=========================

1.  Adobe Acrobat Pro Xi 설치

    1.  시작 $\to$ 실행 $\to$ 열기:
        $\backslash\backslash$license.uos.ac.kr 확인.

        ![image](plot2/3_1){width="30.00000%"}

    2.  로그인 계정 : uos-software, 암호 : softdown 입력.

        ![image](plot2/3_2){width="30.00000%"}

    3.  license $\to$ Adobe $\to$ Win $\to$Adobe Acrobat Pro 11 Win KOR
        $\to$ Adobe Acrobat XI 확인.
```

Instruction on Use

- Type of image extension should be specified, because LaTeX can work without specified image extension.
- The available formats are Markdown, HTML, LaTeX, Word Docx, Jupyter Notebook, JSON and so on.
- We can get a lot of help from the official website of Pandoc.

Summary

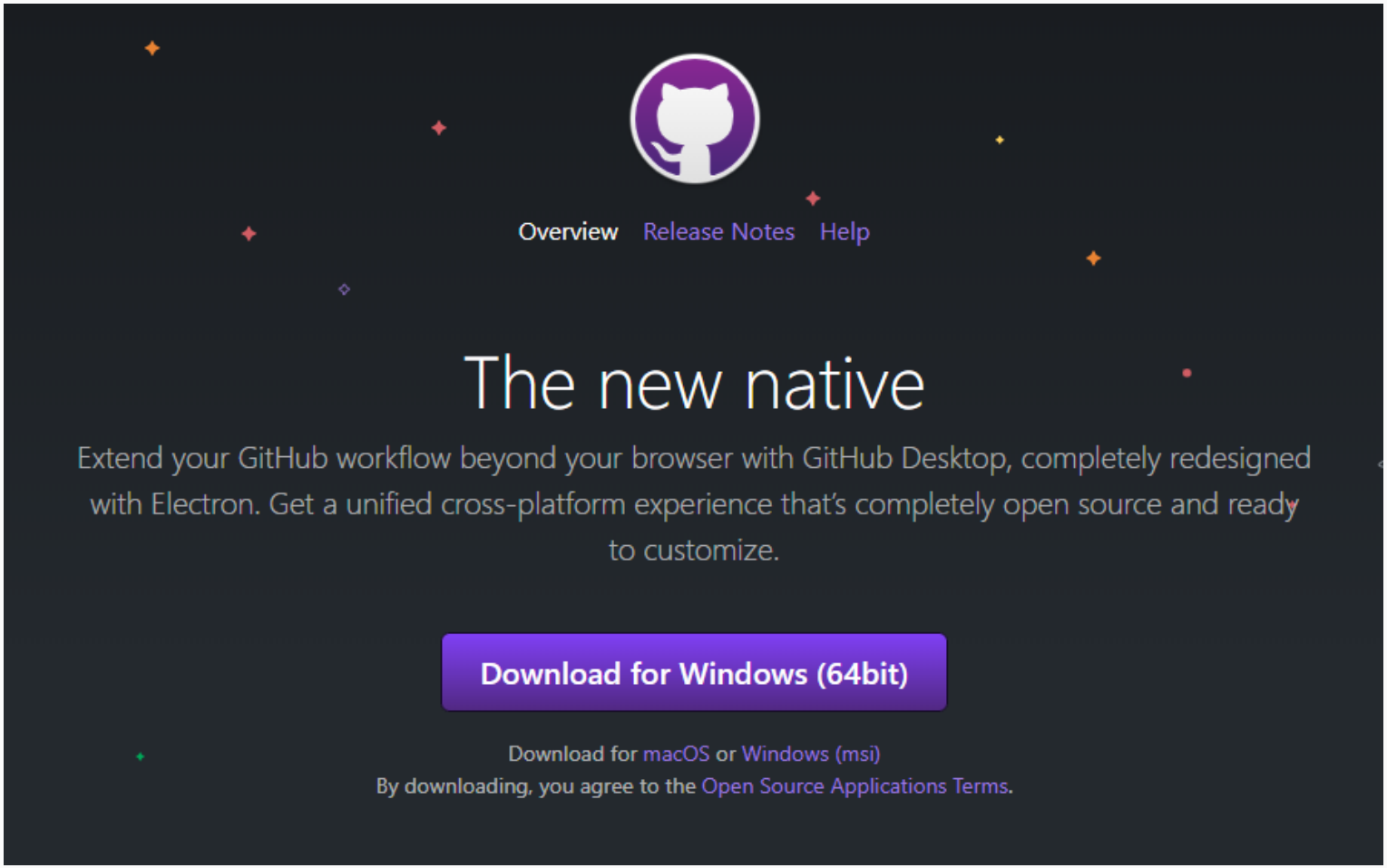
- We can make web pages using CSS3 and HTML5.
- If we use JS more, we can work very efficiently.
- Using Pandoc, we can convert various documents of format into different formats.

Reference

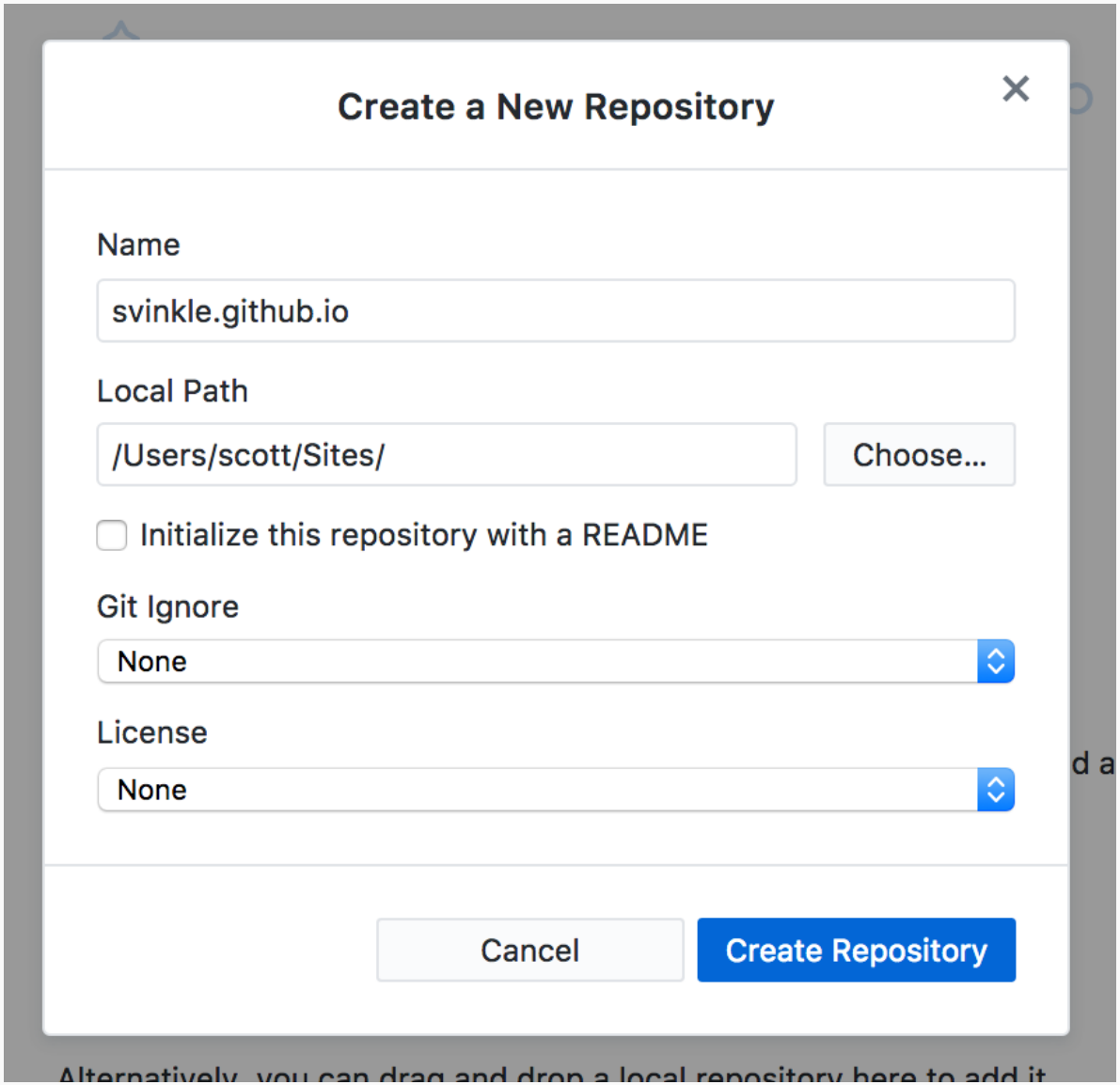
- 윤인성, 모던 웹 디자인을 위한 HTML5 + CSS3, 한빛미디어

Appendix - Publishing Web Pages Using Github

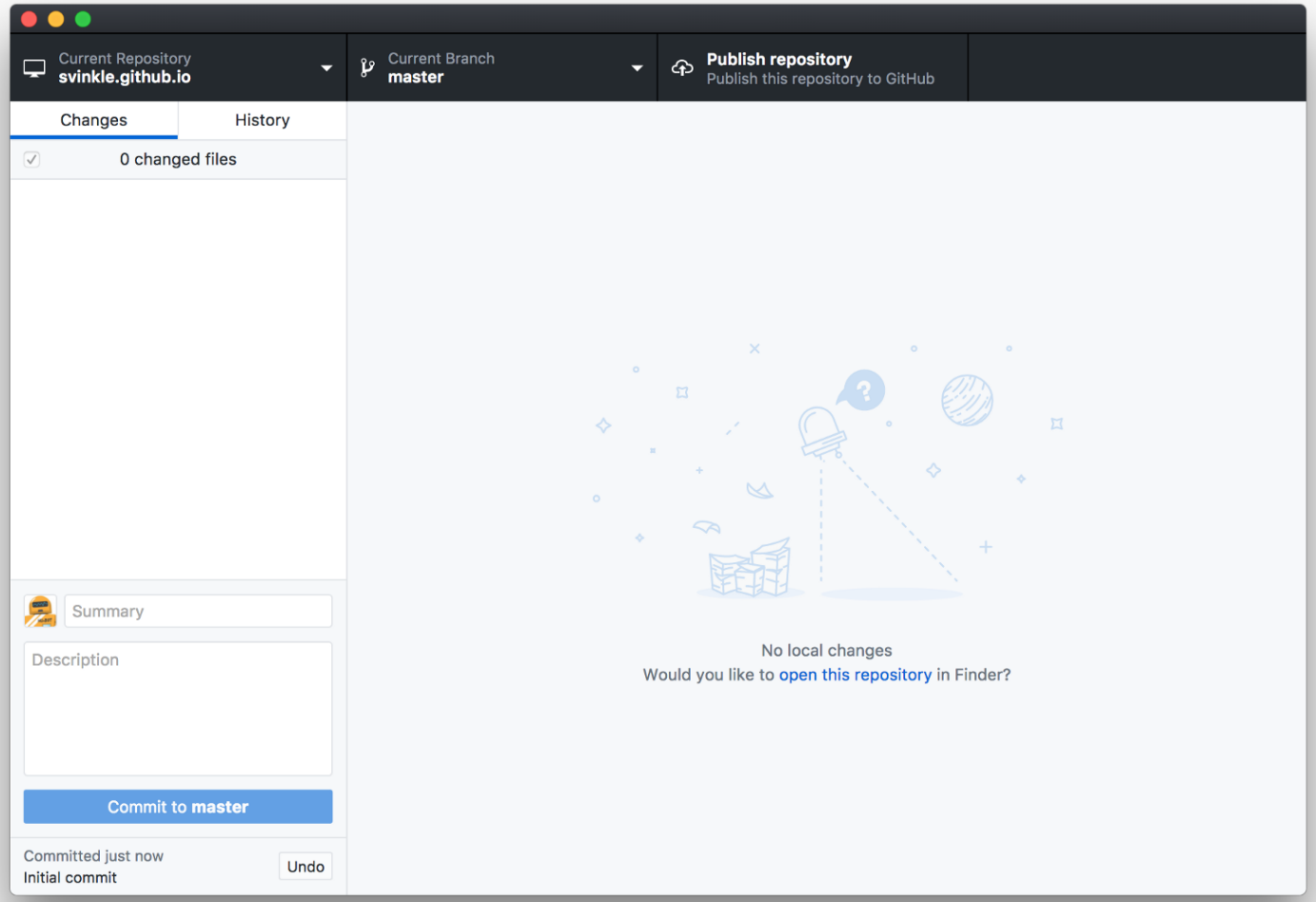
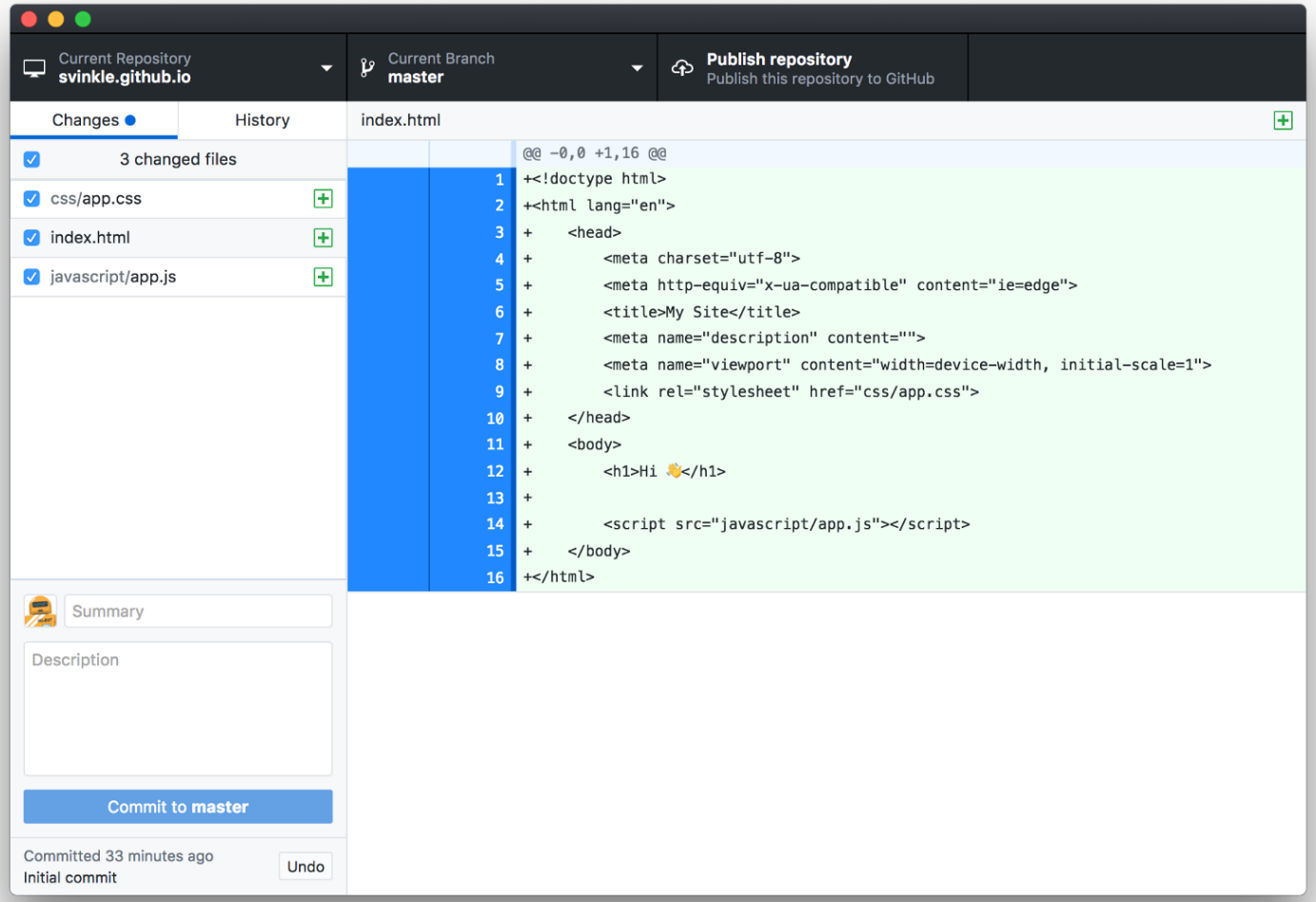
Publishing Web Pages Using Github - Github Desktop



Publishing Web Pages Using Github - Create Repositoty



Publishing Web Pages Using Github - Upload File



Publishing Web Pages Using Github - Publish