

# JavaScript

◆ Swiper slider

정수아

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01

**CDN이란?**

# CDN(Contents Delivery Network)

## ❖ CDN이란?

- 콘텐츠 전송 네트워크라는 뜻
- 콘텐츠를 인터넷망을 통해 빠르고 안정적으로 전달해주는 서비스
- 장점
  - 클라이언트는 분산되어 있는 여러 개의 서버 중 가장 빠른 서버에서 데이터를 다운로드할 수 있음
  - 서버 트래픽 감소

# CDN(Contents Delivery Network)

## ❖ CDN 사용 방법

- 예시) jQuery
- 다음 script 태그를 html 파일에 추가해주면 사용 가능

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.1/jquery.min.js">  
</script>
```



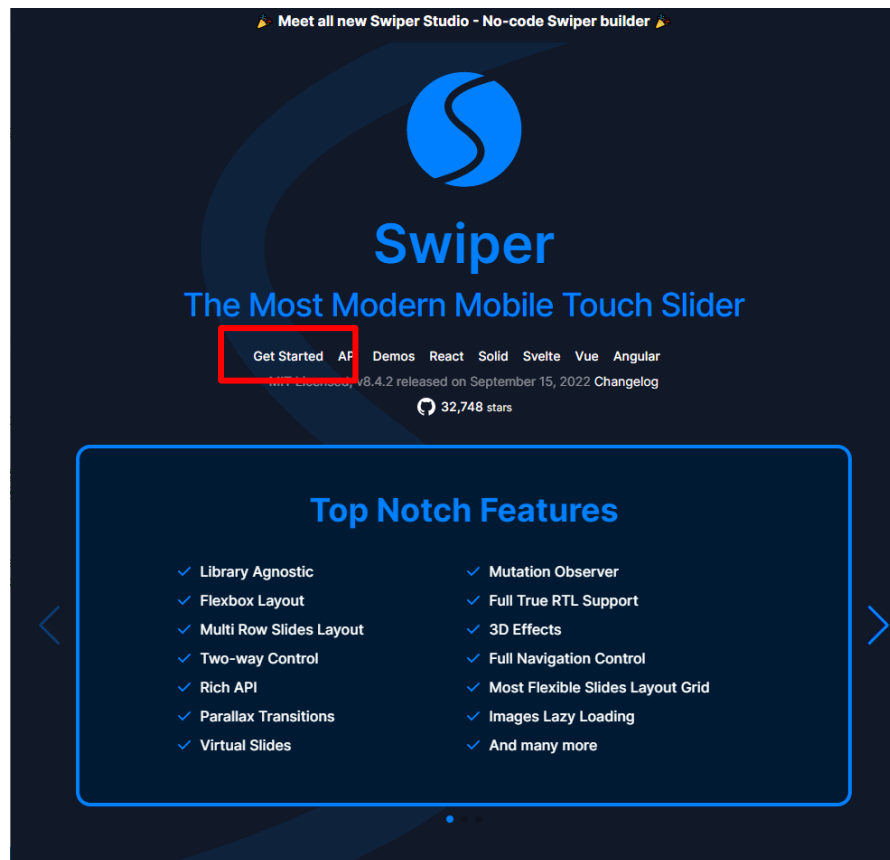
02

## **Swiper slider**

# Swiper slider

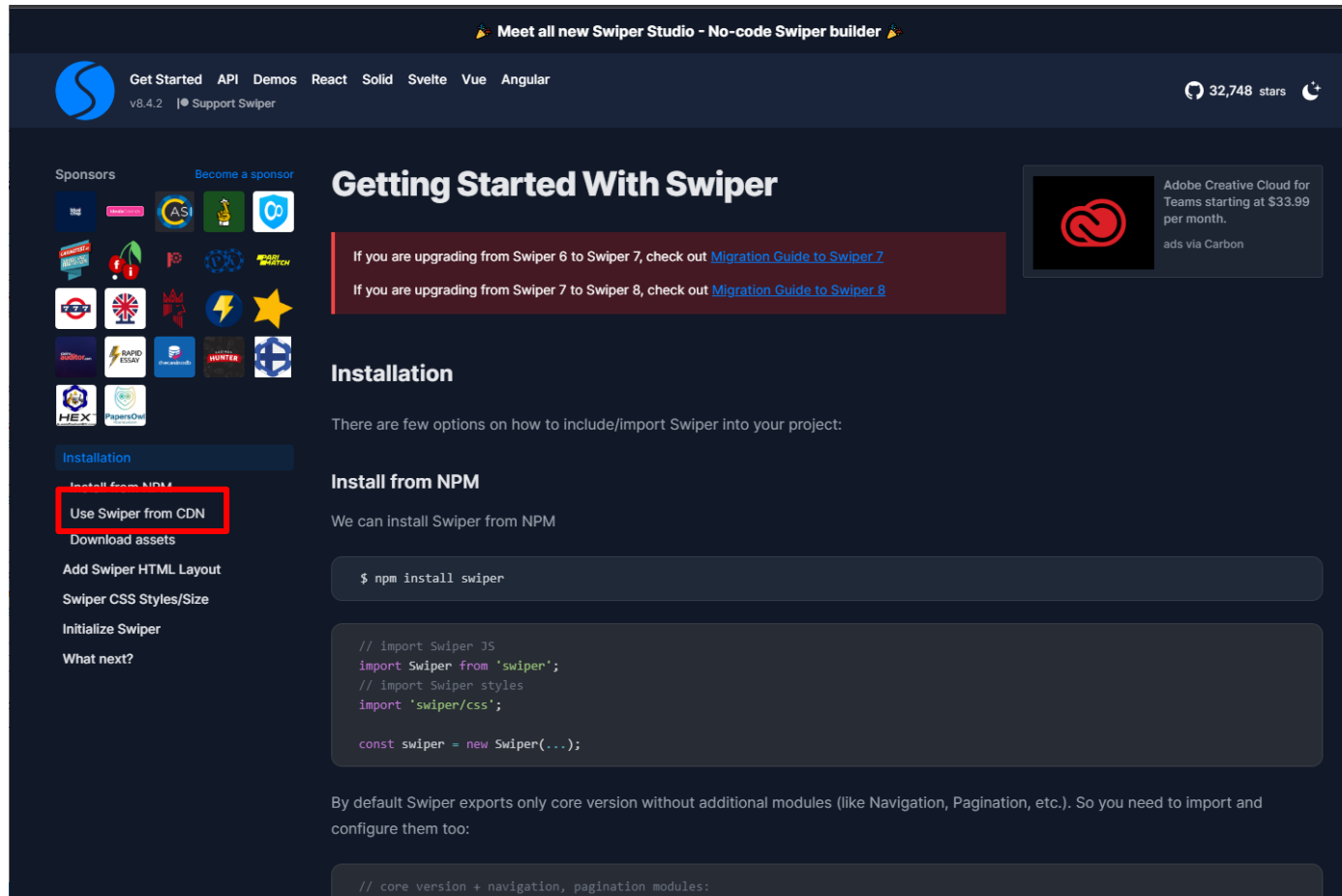
## ❖ Swiper slider

- <https://swiperjs.com/>



# Swiper slider

## ❖ Swiper slider CDN



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**Getting Started With Swiper**

If you are upgrading from Swiper 6 to Swiper 7, check out [Migration Guide to Swiper 7](#)

If you are upgrading from Swiper 7 to Swiper 8, check out [Migration Guide to Swiper 8](#)

**Installation**

There are few options on how to include/import Swiper into your project:

**Install from NPM**

We can install Swiper from NPM

```
$ npm install swiper
```

```
// import Swiper JS
import Swiper from 'swiper';
// import Swiper styles
import 'swiper/css';

const swiper = new Swiper(...);
```

By default Swiper exports only core version without additional modules (like Navigation, Pagination, etc.). So you need to import and configure them too:

```
// core version + navigation, pagination modules:
```

**Use Swiper from CDN**

Download assets

Add Swiper HTML Layout

Swiper CSS Styles/Size

Initialize Swiper

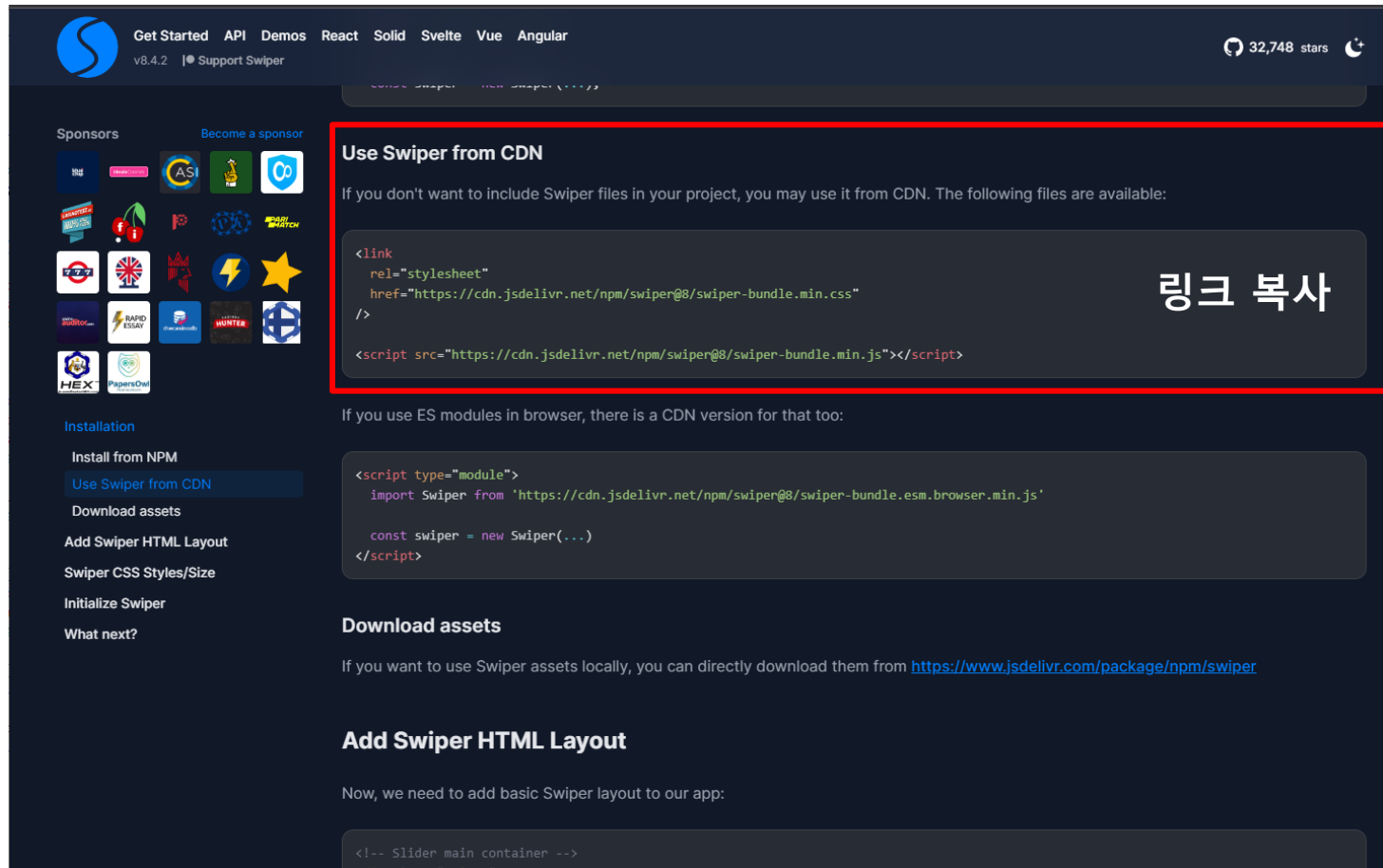
What next?

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# Swiper slider

## ❖ Swiper slider CDN



The screenshot shows the Swiper.js website with a dark theme. The left sidebar contains navigation links: 'Get Started', 'API', 'Demos', 'React', 'Solid', 'Svelte', 'Vue', 'Angular', 'v8.4.2', and 'Support Swiper'. Below these are 'Sponsors' and 'Become a sponsor' sections. The main content area is titled 'Use Swiper from CDN' and includes the text: 'If you don't want to include Swiper files in your project, you may use it from CDN. The following files are available:'. A red box highlights the code snippets for including Swiper from a CDN. To the right of this box, the text '링크 복사' (Copy Link) is visible. Below the highlighted code, there is a section for ES modules and a 'Download assets' section with a link to the package page. At the bottom, there is a section for 'Add Swiper HTML Layout' with a code snippet for the main container.

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### Use Swiper from CDN

If you don't want to include Swiper files in your project, you may use it from CDN. The following files are available:

```
<link  
  rel="stylesheet"  
  href="https://cdn.jsdelivr.net/npm/swiper@8/swiper-bundle.min.css"  
>  
<script src="https://cdn.jsdelivr.net/npm/swiper@8/swiper-bundle.min.js"></script>
```

링크 복사

If you use ES modules in browser, there is a CDN version for that too:

```
<script type="module">  
  import Swiper from 'https://cdn.jsdelivr.net/npm/swiper@8/swiper-bundle.esm.browser.min.js'  
  
  const swiper = new Swiper(...)  
</script>
```

### Download assets

If you want to use Swiper assets locally, you can directly download them from <https://www.jsdelivr.com/package/npm/swiper>

### Add Swiper HTML Layout

Now, we need to add basic Swiper layout to our app:

```
<!-- Slider main container -->  
<div class="swiper">
```

# [실습] Swiper slider

## ❖ HTML 파일에 붙여넣기

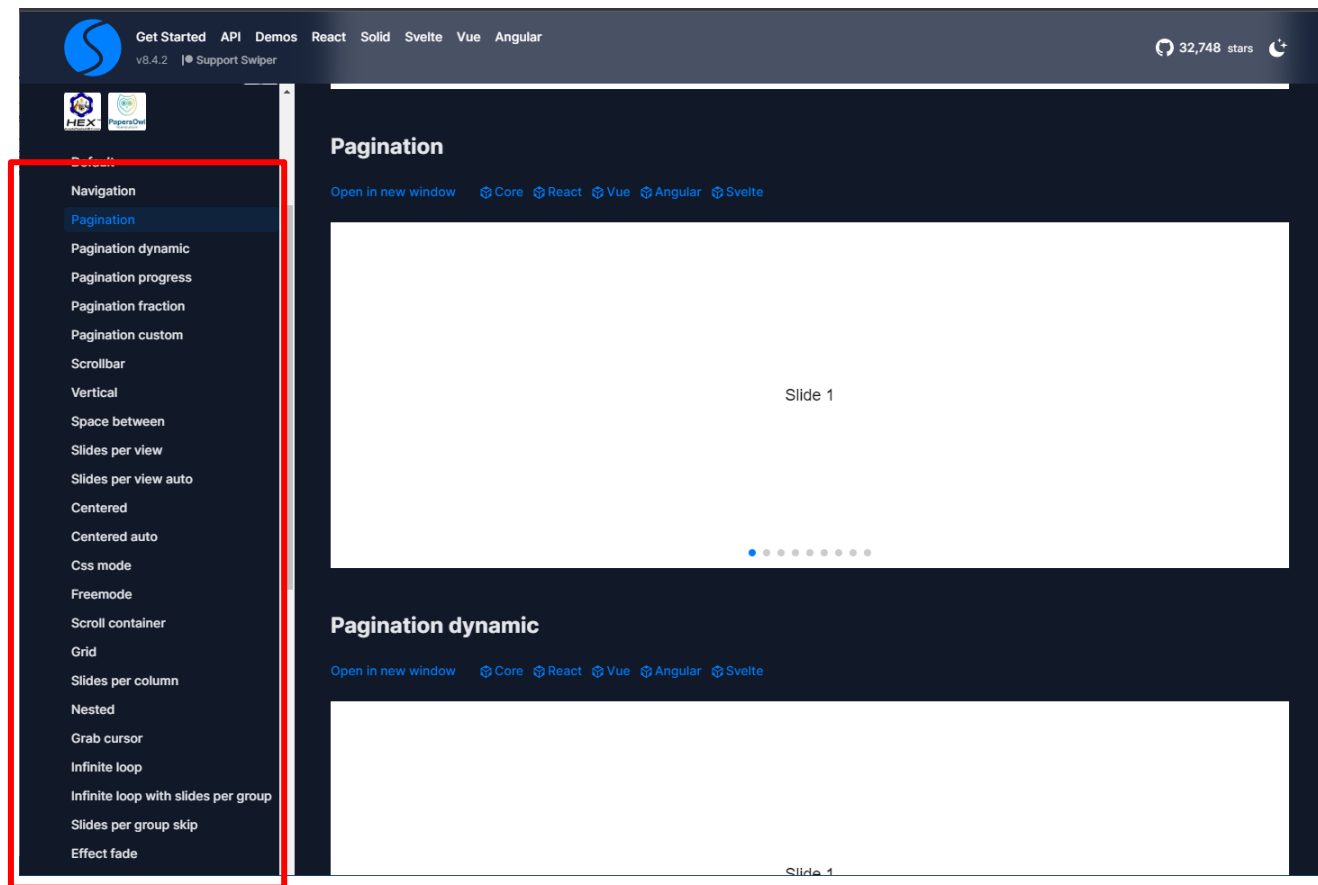
```
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/swiper@8/swiper-bundle.min.css"/>
  <script src="https://cdn.jsdelivr.net/npm/swiper@8/swiper-bundle.min.js"> </script>
  <title>Swiper Slider</title>
</head>
<body>

</body>
</html>
```

# [실습] Swiper slider

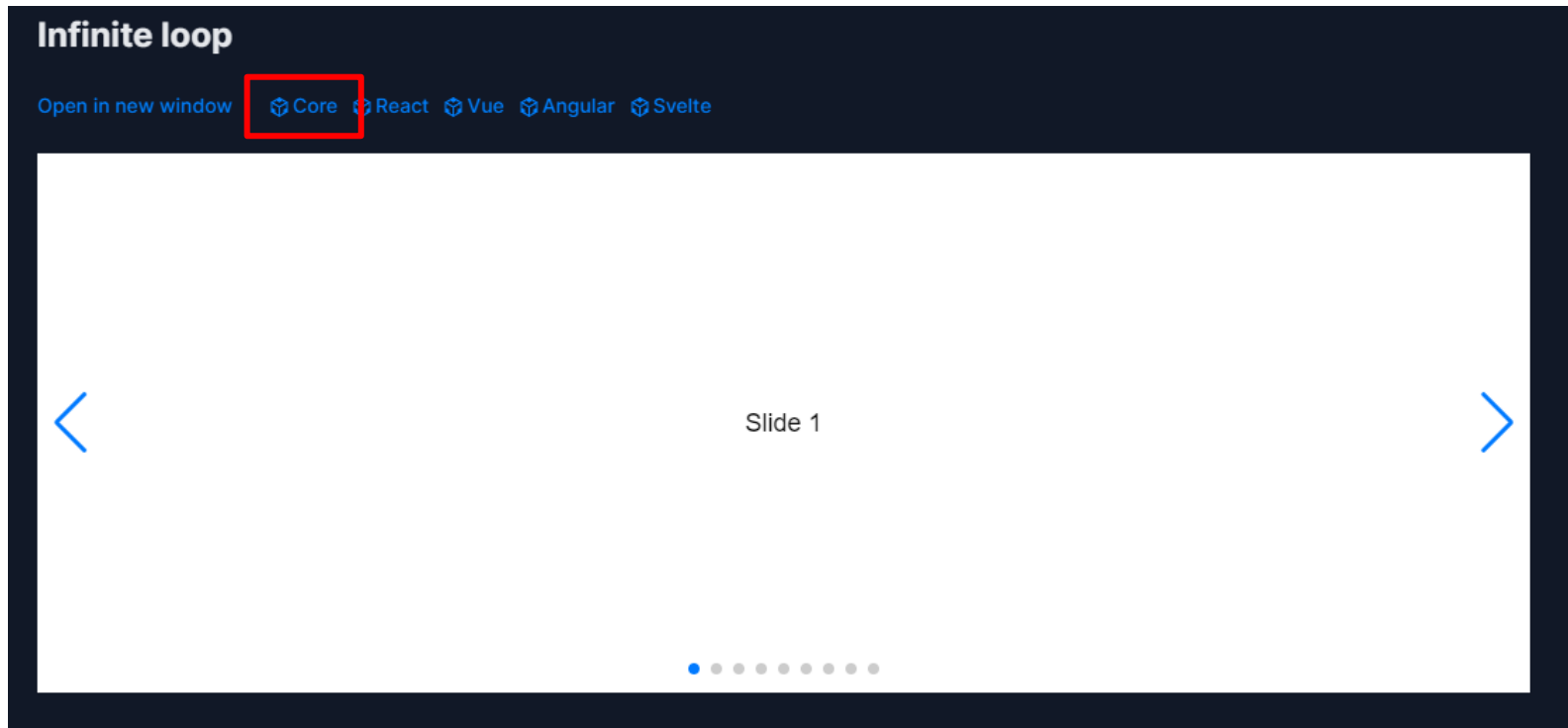
## ❖ Swiper Slider 데모 페이지

- <https://swiperjs.com/demos>



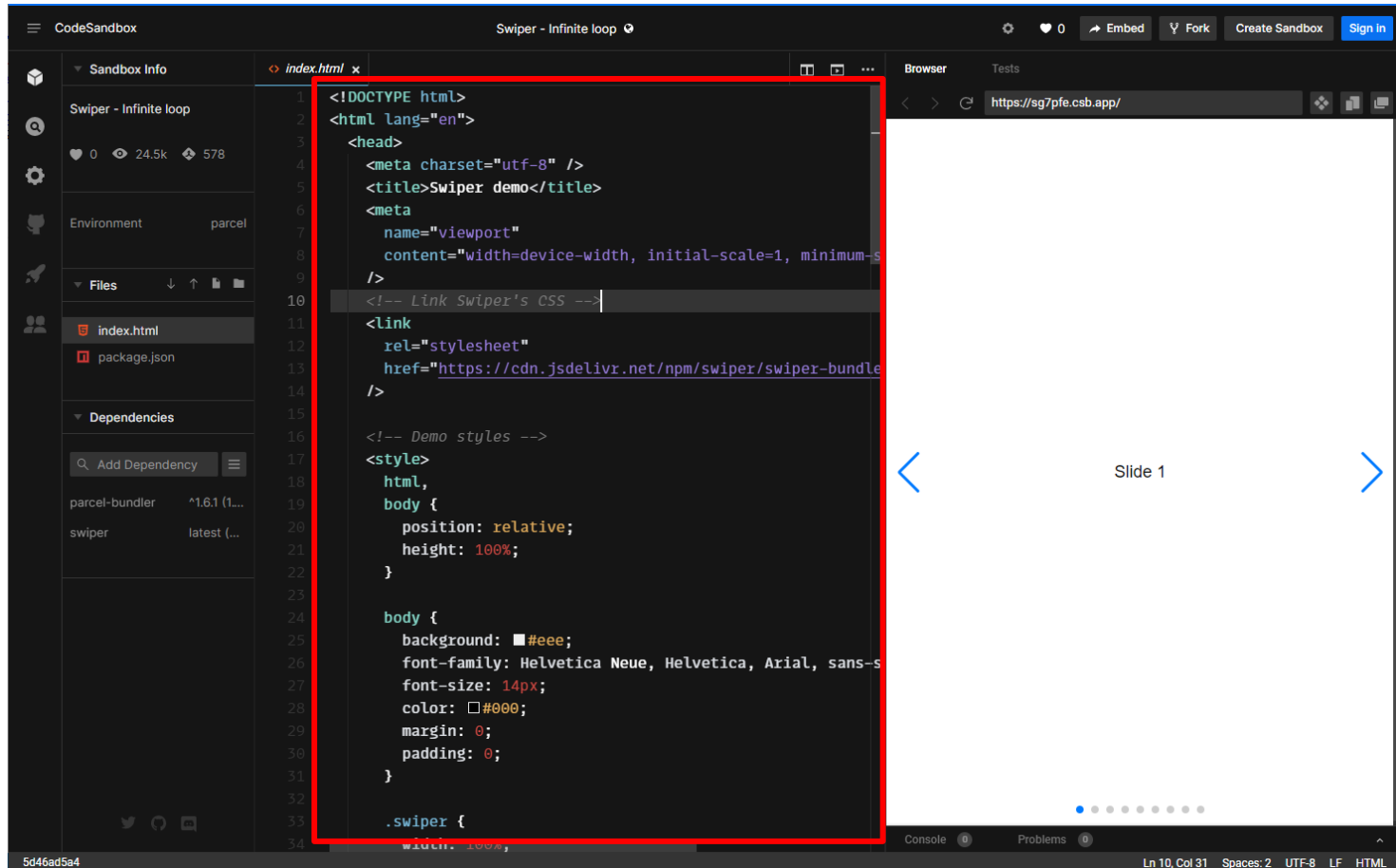
# [실습] Swiper slider

## ❖ Infinite loop 선택



# [실습] Swiper slider

## ❖ Infinite loop 코드 복사



```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8" />
5     <title>Swiper demo</title>
6     <meta
7       name="viewport"
8       content="width=device-width, initial-scale=1, minimum-s
9     />
10    <!-- Link Swiper's CSS -->
11    <link
12      rel="stylesheet"
13      href="https://cdn.jsdelivr.net/npm/swiper/swiper-bundle
14    />
15
16    <!-- Demo styles -->
17    <style>
18      html,
19      body {
20        position: relative;
21        height: 100%;
22      }
23
24      body {
25        background: #eee;
26        font-family: Helvetica Neue, Helvetica, Arial, sans-s
27        font-size: 14px;
28        color: #000;
29        margin: 0;
30        padding: 0;
31      }
32
33      .swiper {
34        width: 100%;
```

# [실습] Swiper slider

## ❖ slider.css

```
html,
body {
  position: relative;
  height: 100%;
}

body {
  background: #eee;
  font-family: Helvetica Neue,
  Helvetica, Arial, sans-serif;
  font-size: 14px;
  color: #000;
  margin: 0;
  padding: 0;
}

.swiper {
  width: 100%;
  height: 100%;
}
```

```
.swiper-slide {
  text-align: center;
  font-size: 18px;
  background: #fff;

  /* Center slide text vertically */
  display: -webkit-box;
  display: -ms-flexbox;
  display: -webkit-flex;
  display: flex;
  -webkit-box-pack: center;
  -ms-flex-pack: center;
  -webkit-justify-content: center;
  justify-content: center;
  -webkit-box-align: center;
  -ms-flex-align: center;
  -webkit-align-items: center;
  align-items: center;
}
```

```
.swiper-slide img {
  display: block;
  width: 100%;
  height: 100%;
  object-fit: cover;
}

.swiper {
  margin-left: auto;
  margin-right: auto;
}
```

# [실습] Swiper slider

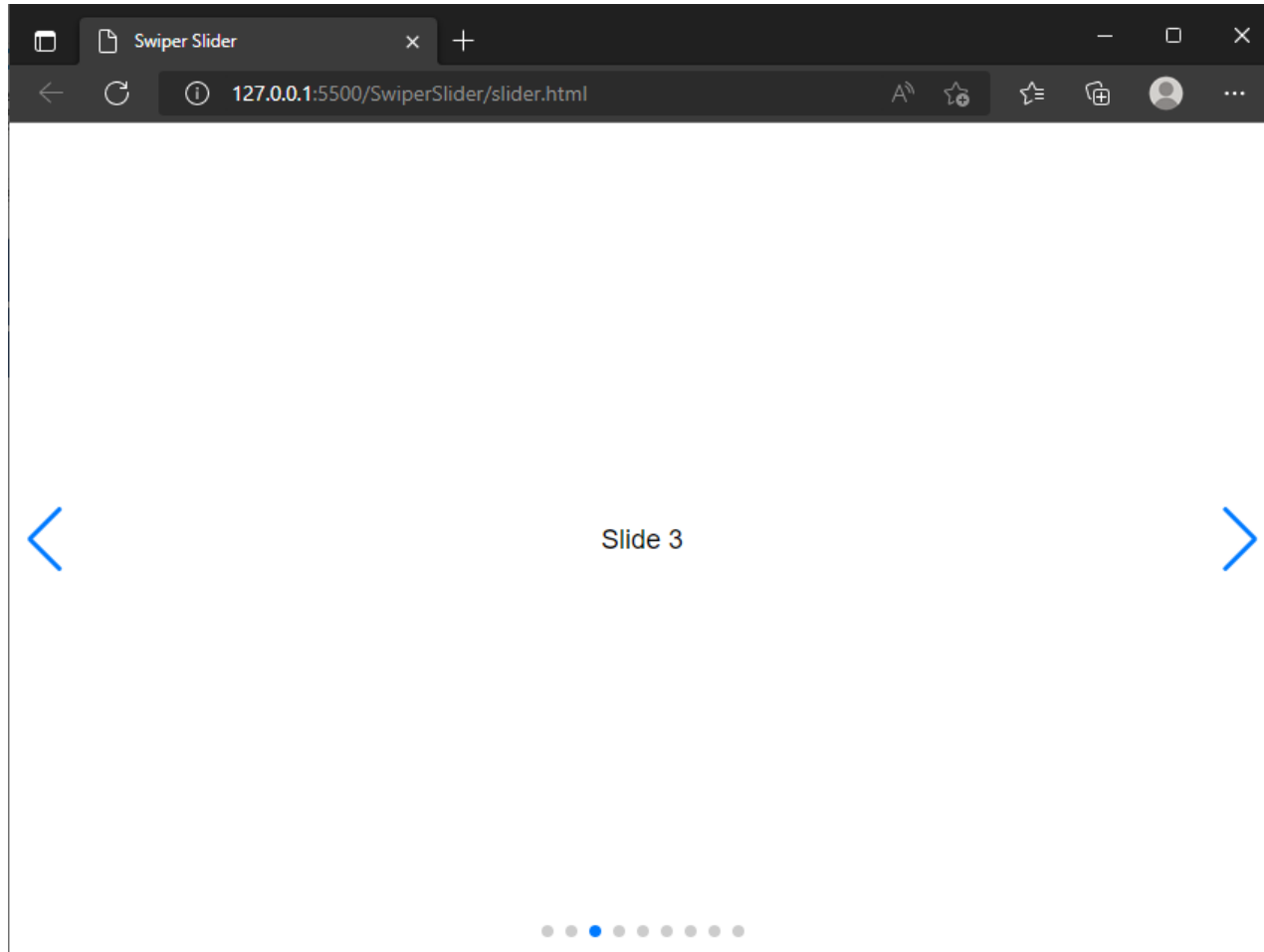
## ❖ slider.html

```
<body>
  <!-- Swiper -->
  <div class="swiper mySwiper">
    <div class="swiper-wrapper">
      <div class="swiper-slide">Slide 1</div>
      <div class="swiper-slide">Slide 2</div>
      <div class="swiper-slide">Slide 3</div>
      <div class="swiper-slide">Slide 4</div>
      <div class="swiper-slide">Slide 5</div>
      <div class="swiper-slide">Slide 6</div>
      <div class="swiper-slide">Slide 7</div>
      <div class="swiper-slide">Slide 8</div>
      <div class="swiper-slide">Slide 9</div>
    </div>
    <div class="swiper-button-next"></div>
    <div class="swiper-button-prev"></div>
    <div class="swiper-pagination"></div>
  </div>
```

```
<!-- Initialize Swiper -->
<script>
  var swiper = new Swiper(".mySwiper", {
    slidesPerView: 1,
    spaceBetween: 30,
    loop: true,
    pagination: {
      el: ".swiper-pagination",
      clickable: true,
    },
    navigation: {
      nextEl: ".swiper-button-next",
      prevEl: ".swiper-button-prev",
    },
  });
</script>
```

# [실습] Swiper slider

## ❖ 실행 결과





# [실습] Swiper slider - 이미지 추가

## ❖ slider.html

```
<body>
  <div class="container">
    <div class="swiper mySwiper">
      <div class="swiper-wrapper">
        <div class="swiper-slide">
          
        </div>
        <div class="swiper-slide">
          
        </div>
        <div class="swiper-slide">
          
        </div>
      </div>
      <div class="swiper-button-next"></div>
      <div class="swiper-button-prev"></div>
      <div class="swiper-pagination"></div>
    </div>
  </div>
</body>
```

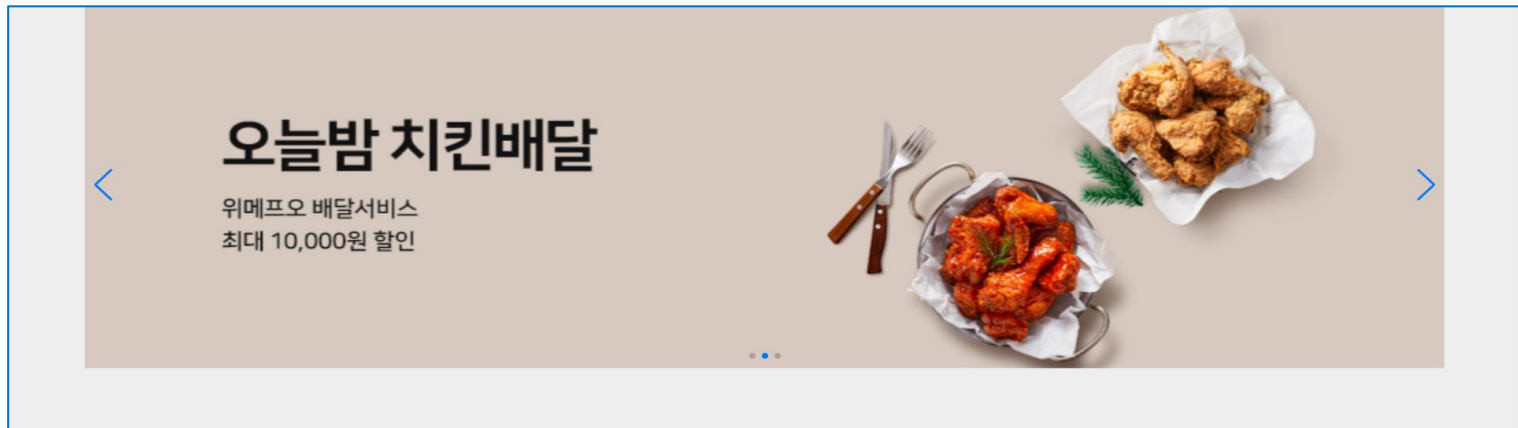
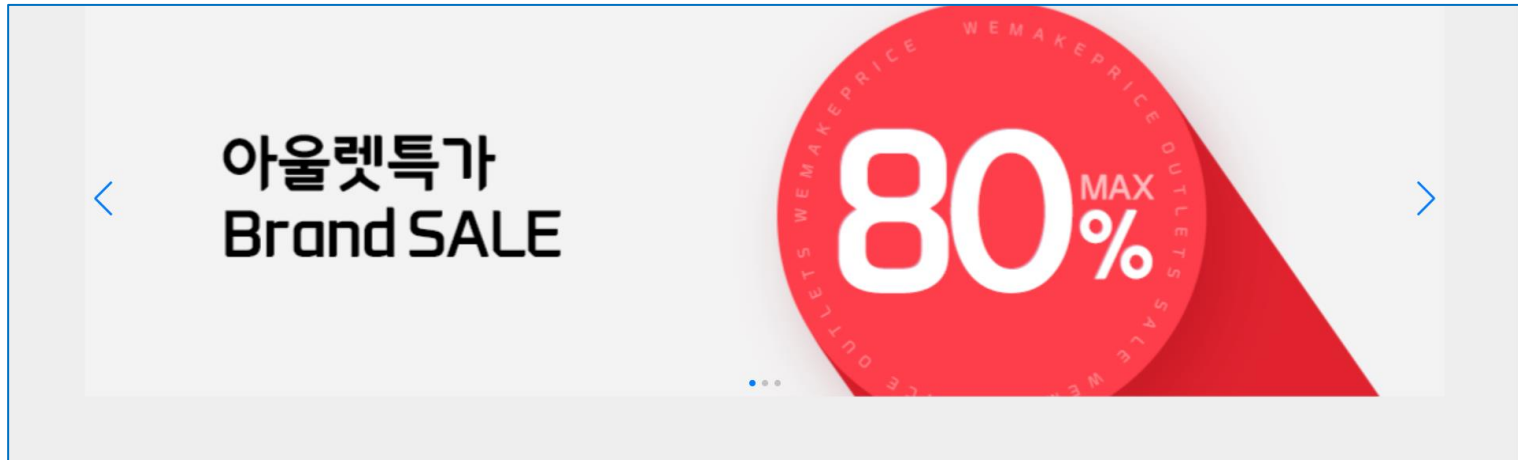
# [실습] Swiper slider - 이미지 추가

## ❖ slider.css

```
body {  
  /* 가운데 정렬 */  
  margin: 0 auto;  
}  
  
.container{  
  /* slider 영역 높이 지정 */  
  height: 500px;  
}
```

# [실습] Swiper slider - 이미지 추가

## ❖ 실행 결과



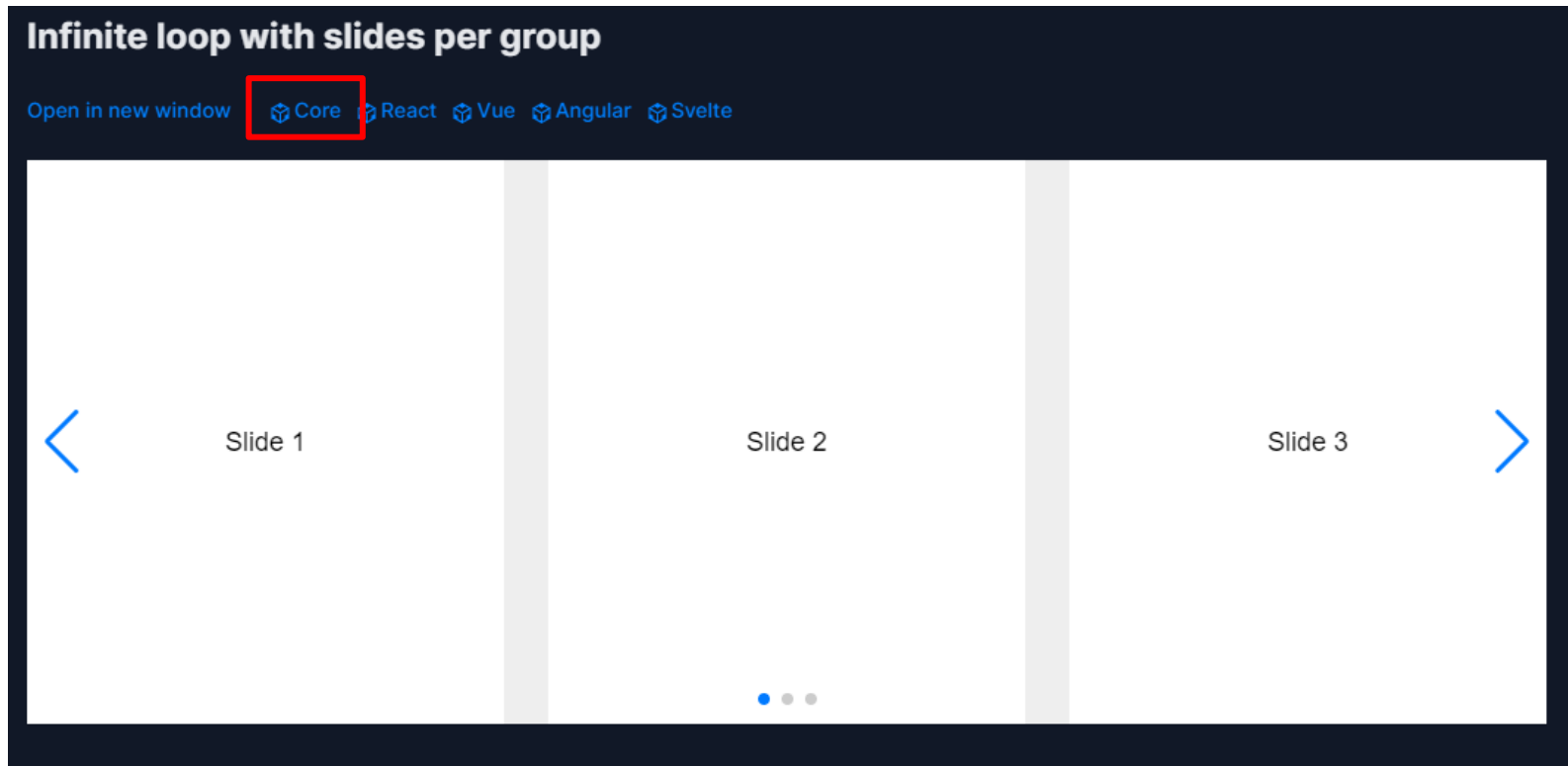
# [실습] Swiper slider - 자동 재생

## ❖ 자동 재생 기능 추가

```
<script>
  var swiper = new Swiper(".mySwiper", {
    slidesPerView: 1,           // 한번에 보여지는 페이지 수
    spaceBetween: 30,          // 페이지와 페이지 사이 간격
    loop: true,                // 반복 여부, true(반복), false(반복 불가)
    pagination: {
      el: ".swiper-pagination", // 페이지 태그 클래스 설정
      clickable: true,          // 클릭 가능 여부
    },
    navigation: {
      nextEl: ".swiper-button-next", // 네비게이션 태그 클래스 설정
      prevEl: ".swiper-button-prev",
    },
    autoplay: {
      delay: 2000,              // 자동 재생
      // 2초
      disableOnInteraction: true, // 스와이프 후 자동 재생 여부
      // true : 자동 재생 X, false : 자동 재생 O
    }
  });
</script>
```

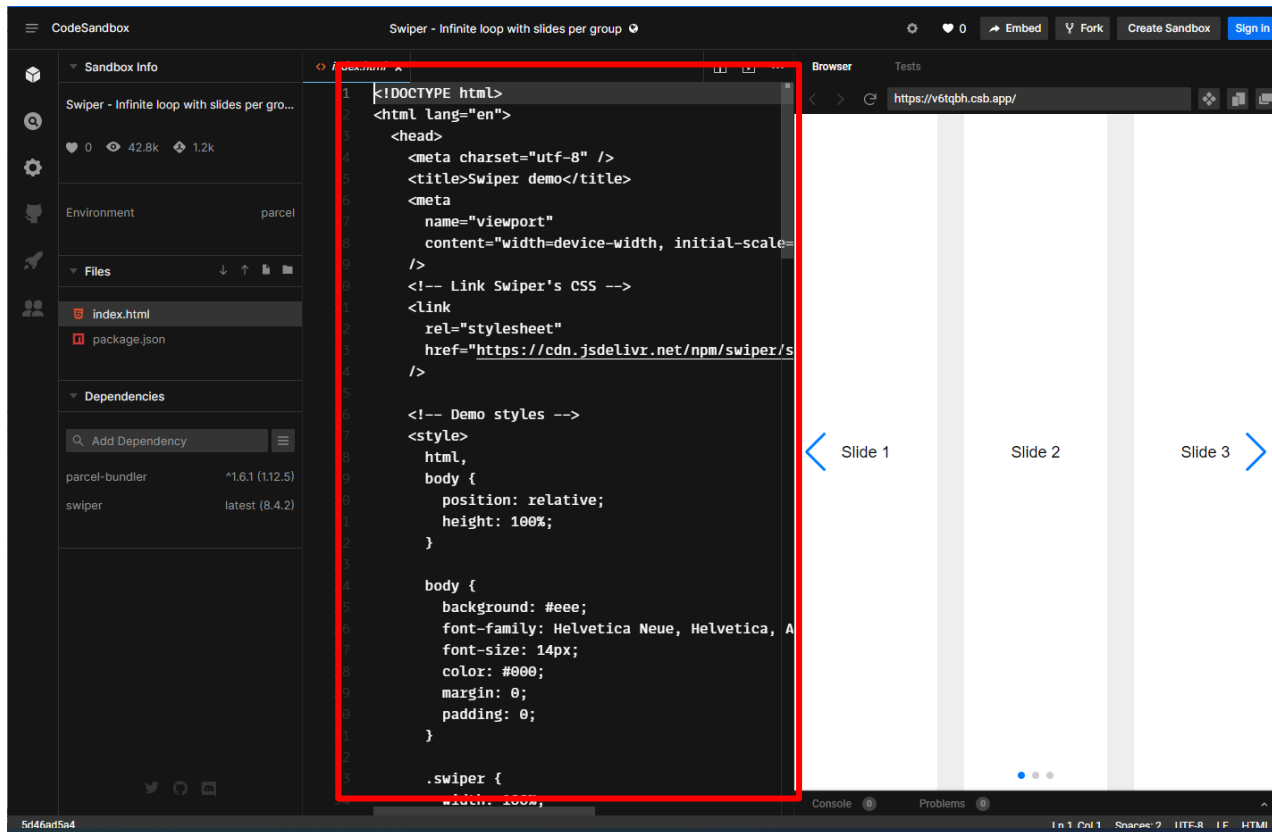
# [실습] Swiper slider - 반응형

## ❖ Infinite loop with slides per group 선택



# [실습] Swiper slider - 반응형

## ❖ Infinite loop with slides per group 코드 복사



```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8" />
5     <title>Swiper demo</title>
6     <meta
7       name="viewport"
8       content="width=device-width, initial-scale=1"
9     />
10    <!-- Link Swiper's CSS -->
11    <link
12      rel="stylesheet"
13      href="https://cdn.jsdelivr.net/npm/swiper/swiper-bundle.min.css"
14    />
15
16    <!-- Demo styles -->
17    <style>
18      html,
19      body {
20        position: relative;
21        height: 100%;
22      }
23
24      body {
25        background: #eee;
26        font-family: Helvetica Neue, Helvetica, Arial;
27        font-size: 14px;
28        color: #000;
29        margin: 0;
30        padding: 0;
31      }
32
33      .swiper {
34        width: 100%;
35        height: 100%;
36      }
37
38      .swiper-slide {
39        text-align: center;
40        font-size: 18px;
41        background: #fff;
42        display: flex;
43        align-items: center;
44        justify-content: center;
45      }
46
47      .swiper-slide:nth-child(1) {
48        background: #f9f9f9;
49      }
50
51      .swiper-slide:nth-child(2) {
52        background: #f9f9f9;
53      }
54
55      .swiper-slide:nth-child(3) {
56        background: #f9f9f9;
57      }
58
59      .swiper-pagination {
60        position: absolute;
61        bottom: 10px;
62        left: 50%;
63        transform: translateX(-50%);
64      }
65
66      .swiper-pagination-bullet {
67        width: 10px;
68        height: 10px;
69        background-color: #000;
70        border-radius: 50%;
71      }
72
73      .swiper-pagination-bullet-active {
74        background-color: #fff;
75        border: 1px solid #000;
76      }
77
78      .swiper-button-prev,
79      .swiper-button-next {
80        position: absolute;
81        top: 50%;
82        transform: translateY(-50%);
83      }
84
85      .swiper-button-prev {
86        left: 10px;
87      }
88
89      .swiper-button-next {
90        right: 10px;
91      }
92
93      .swiper-button-prev:after,
94      .swiper-button-next:after {
95        font-size: 24px;
96      }
97
98      .swiper-button-prev:after {
99        content: '←';
100     }
101
102     .swiper-button-next:after {
103       content: '→';
104     }
105   </style>
106 </head>
107 <body>
108   <div class="swiper">
109     <div class="swiper-wrapper">
110       <div class="swiper-slide">Slide 1</div>
111       <div class="swiper-slide">Slide 2</div>
112       <div class="swiper-slide">Slide 3</div>
113     </div>
114     <div class="swiper-pagination"></div>
115     <div class="swiper-button-prev"></div>
116     <div class="swiper-button-next"></div>
117   </div>
118 </body>
119 </html>
```

# [실습] Swiper slider - 반응형

## ❖ cardSlider.html

```
<body>
  <div class="container">
    <div class="swiper mySwiper">
      <div class="swiper-wrapper">
        <div class="swiper-slide">Slide 1</div>
        <div class="swiper-slide">Slide 2</div>
        <div class="swiper-slide">Slide 3</div>
        <div class="swiper-slide">Slide 4</div>
        <div class="swiper-slide">Slide 5</div>
        <div class="swiper-slide">Slide 6</div>
        <div class="swiper-slide">Slide 7</div>
        <div class="swiper-slide">Slide 8</div>
        <div class="swiper-slide">Slide 9</div>
      </div>
      <div class="swiper-button-next"></div>
      <div class="swiper-button-prev"></div>
      <div class="swiper-pagination"></div>
    </div>
  </div>
</body>
```

# [실습] Swiper slider - 반응형

## ❖ cardSlider.html

```
var swiper = new Swiper(".mySwiper",  
{  
  loop: true,  
  initialSlide : 0,  
  loopFillGroupWithBlank: true,  
  
  pagination: {  
    el: ".swiper-pagination",  
    clickable: true,  
  },  
  navigation: {  
    nextEl: ".swiper-button-next",  
    prevEl: ".swiper-button-prev",  
  },  
});
```

```
// 반응형 조건 속성  
breakpoints: {  
  320: {  
    slidesPerView: 1, // 320 이상일 경우 레이아웃 1개  
    spaceBetween: 30,  
  },  
  768: {  
    slidesPerView: 3,  
    spaceBetween: 30,  
  },  
  1024: {  
    slidesPerView: 5,  
    spaceBetween: 30,  
  },  
}  
});
```



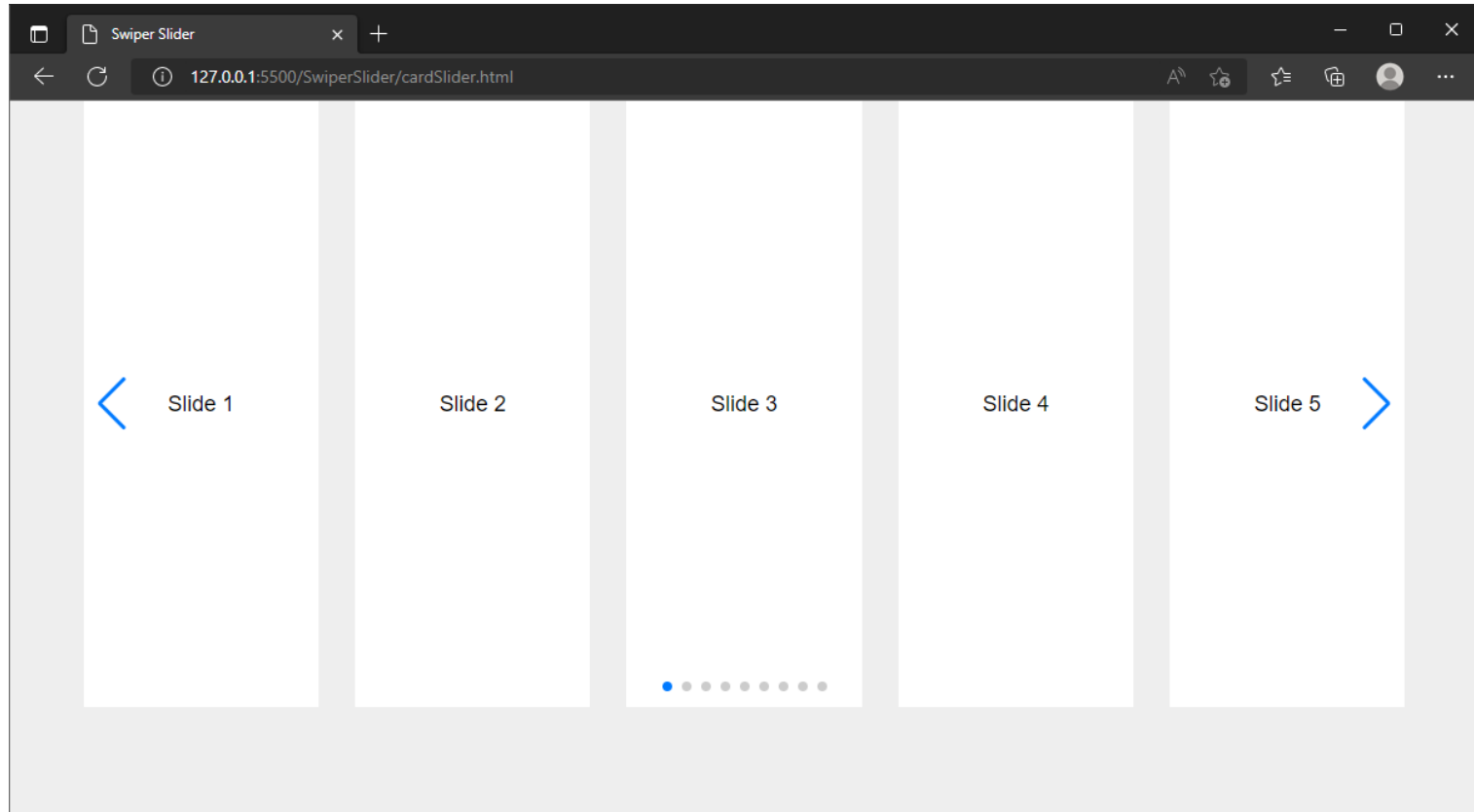
# [실습] Swiper slider - 반응형

## ❖ slider.css

```
body {  
  /* 가운데 정렬 */  
  margin: 0 auto;  
}  
  
.container{  
  /* slider 영역 높이 지정 */  
  height: 500px;  
}
```

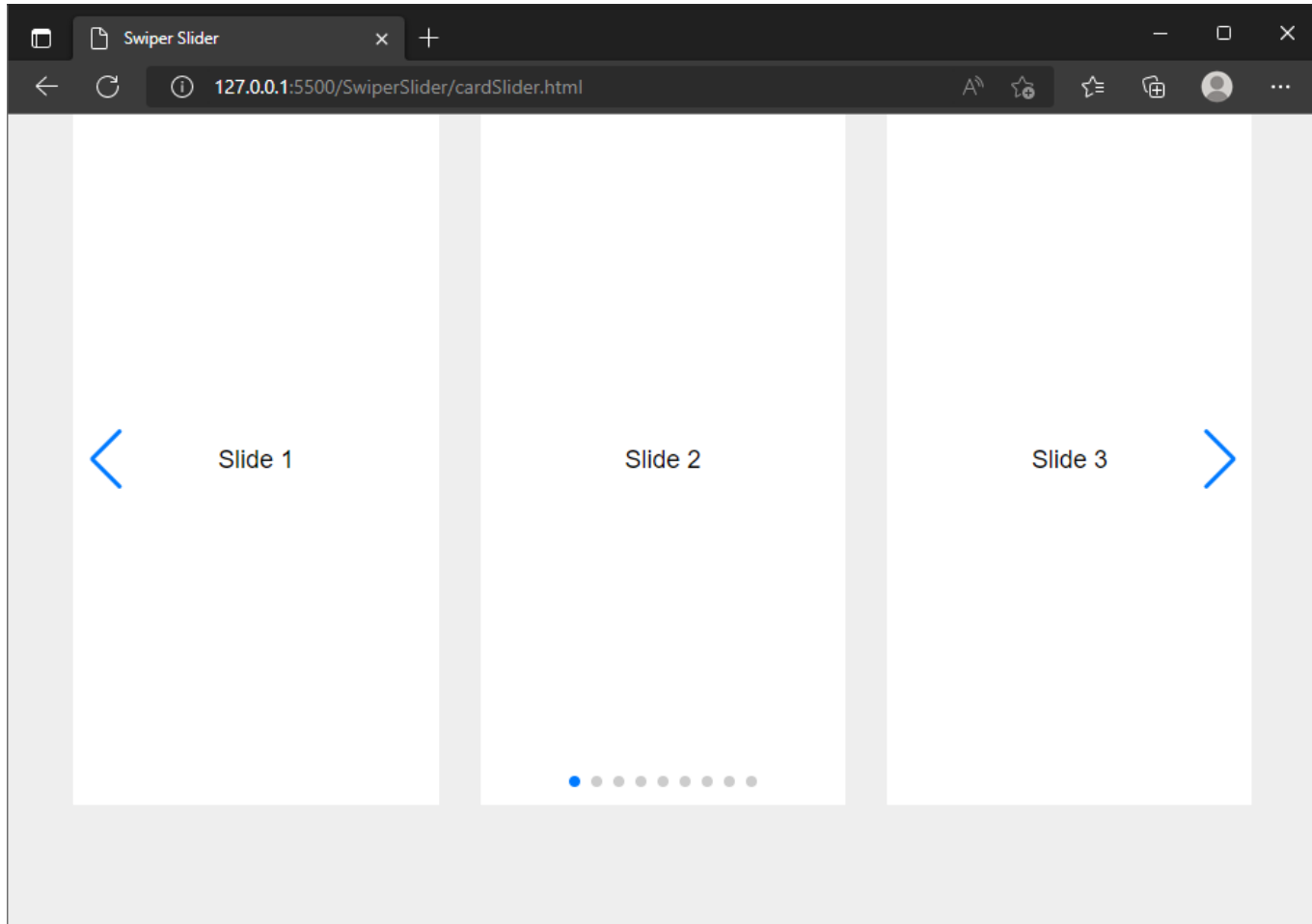
# [실습] Swiper slider - 반응형

## ❖ 실행 결과(1024px 이상)



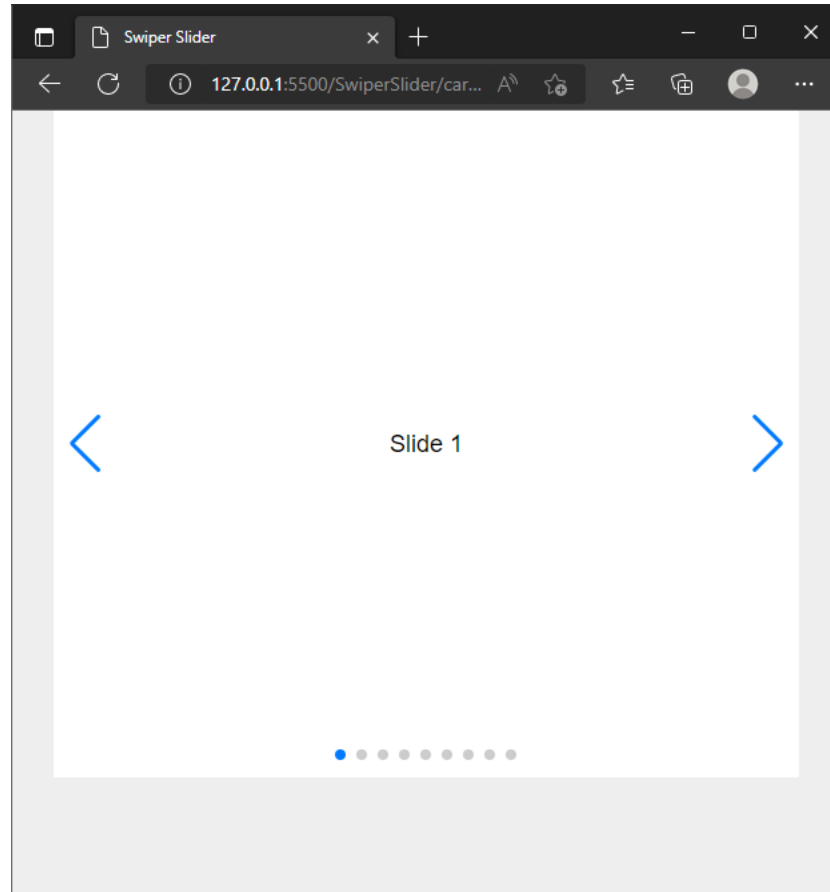
# [실습] Swiper slider - 반응형

## ❖ 실행 결과(768px 이상)



# [실습] Swiper slider - 반응형

## ❖ 실행 결과(320px 이상)



**THANK 😊 YOU**