

# PRE-ONBOARDING CHALLENGE

잠시만 기다려 주시기 바랍니다.



## Next.js 확실히 알고 레벨업 하기

Week 2-2

Next.js 13 실무에 적용하기



1. 과정 오리엔테이션

#### 강의 진행 미리보기

Week 1-1 Week 1-2 Week 2-1 Week 2-2

- 강의 OT
- Next.js의 특징
- 13+ 버전의 기능
- 프로젝트 세팅

- React 18 동시성
- RSC 란
- RSC 이점

- RSC의 규칙
- Streaming HTML

- RSC A to Z
- 상황에 맞게 코드 설계
- 마치며



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#### 2시간 미리보기

- 1. RSC A to Z
- 2. 상황에 맞게 코드 설계
- 3. 마치며

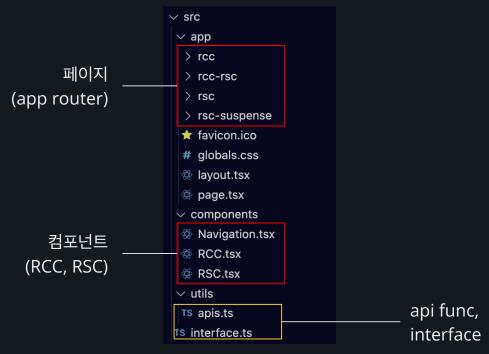


## 1. RSC A to Z





#### 프로젝트 구조

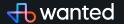


Next.js 확실히 알고 레벨업 하기



#### **Root Layout**

```
export default function RootLayout({
   children,
                                                   export function Navigation() : Element {
}: Readonly<{</pre>
   children: React.ReactNode;
                                                            <div className='flex flex-row gap-6 p-2 ■bg-slate-400'>
}>) : Element {
                                                                <Link href='/'>Home</Link>
       <html lang='en'>
                                                                <Link href='/rcc'>RCC Only</Link>
          <body className={`antialiased`}>
                                                                <Link href='/rsc'>RSC Only</Link>
              <main className='flex flex-col'>
                                                                <Link href='/rsc-suspense'>RSC + Suspense
                 <Navigation />
                 {children}
                                                                <Link href='/rcc-rsc'>RCC + RSC</Link>
                                                            </div>
```



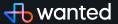
#### **RCC**

```
'use client';
      import { JsonPlaceholder } from '@/interface';
      import { fetchJson } from '@/utils/apis';
      import { useEffect, useState } from 'react'; 4.3k (gzipped: 1.9k)
      You, 28 minutes ago | 1 author (You)
     interface Props {
11 export function RCC({ num }: Props) : Element {
          const [json, setJson] = useState<JsonPlaceholder | null>(null);
          const fetchHandler = async () : Promise<void> => {
             const data = await fetchJson(num);
              set Ison(data):
         useEffect(() : void => {
              fetchHandler();
23
          if (json === null) return <div>no data</div>;
              <div className='flex flex-col gap-2 border border-solid ■border-white p-2'>
                  <span>id: {json.id}</span>
                 <span>userId: {json.userId}</span>
                 <span>completed: {json.completed}</span>
```



#### **RSC**

```
import { fetchJson } from '@/utils/apis';
You, 31 minutes ago | 1 author (You)
interface Props {
    num: number;
export async function RSC({ num }: Props) : Promise<Element> {
    const json = await fetchJson(num);
        <div className='flex flex-col border border-solid ■border-white p-2'>
            <span>id: {json.id}</span>
            <span>userId: {json.userId}</span>
            <span>title: {json.title}</span>
            <span>completed: {json.completed}</span>
        </div>
    );
```

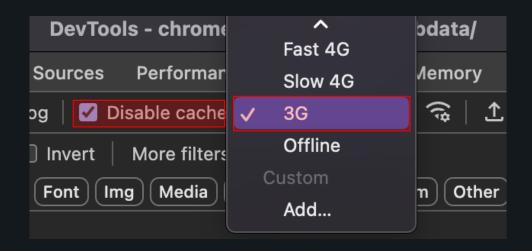


#### utils

```
export interface JsonPlaceholder {
    userId: number;
    id: number;
    title: string;
                                import { JsonPlaceholder } from '@/interface';
    completed: boolean;
                                export async function fetchJson(num: number) : Promise<JsonPlaceholder> {
                                    const response = await fetch(
                                        `https://jsonplaceholder.typicode.com/todos/${num}`,
                                        { method: 'get', cache: 'no-store' }
                                    );
                                    const data: JsonPlaceholder = await response.json();
                                    return data;
```



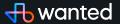
#### Chrome Developer Tools - Network



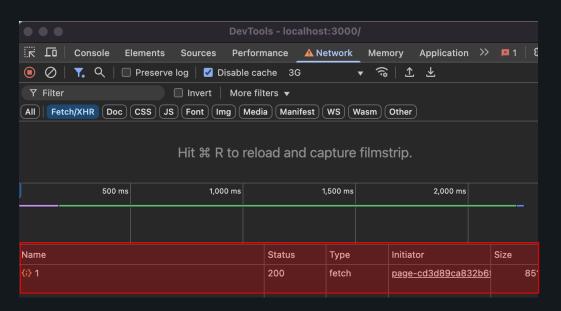


### Only RCC





#### Only RCC



API fetching 외 요청 없음



#### Only RSC

Home RCC Only RSC Only RS

id: 2

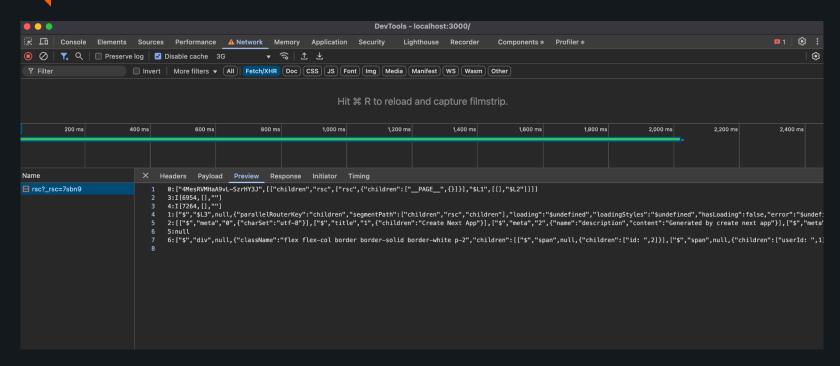
userld: 1

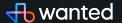
title: quis ut nam facilis et officia qui

completed:



#### Only RSC







#### Only RSC

0:["4MesRVMHaA9vL-SzrHY3J",[["children","rsc",["rsc",{"children":["\_\_PAGE\_\_",{}]}],"\$L1",[[],"\$L2"]]]]

#### RSC transaction id

0:["is5nrLXEQ9NASzJFFm0eS",[["children","rsc",["rsc",{"children":["\_\_PAGE\_\_",{}]}],"\$L1",[[],"\$L2"]]]

3:1[6954,[],

4:I[7264.[].

1:["\$","\$L3",null,("parallelRouterKey":"children","rsegmentPath":["children","rse,"children","segmentPath":["\$","\$L4",null,(}],"templateStyles":

\$undefined","hasLoading":false,"error":"\$undefined","errorStyles":"\$undefined","template":["\$","\$L4",null,(}],"templateStyles":

\$undefined","notFound":"\$undefined","notFoundStyles":"\$undefined","children","children","children";"\$L5","\$L6",null,(},"segment":"\_PAGE\_\_"),"styles":[]}

2:[["\$", "meta", "0", ("charSet":"utf-8")],["\$", "title", "1", ("children":"Oreate Next App")],["\$", "meta", "2", ("name":"description", "content":"Generated by create next app")],["\$", "meta", "3", ("name":"viewport", "content":"width=device-width, initial scale=1"),["\$", "link", "4", ("rei":"icon", "hrei":"/favicon.ico", "type":"image/x-icon", "sizes":"16x16")]]

Shall

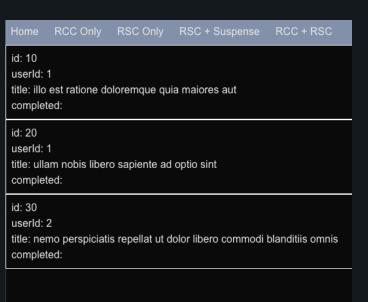


```
export async function sleep(ms: number) : Promise<void> {
    const promise = new Promise<void>((resolve) : void => {
        setTimeout(() : void => {
            resolve();
        }, ms);
    });
    return promise;
}
```

```
import { fetchJson } from '@/utils/apis';
import { sleep } from '@/utils/sleep';
interface Props {
   sleepMs?: number;
export async function RSC({ num, sleepMs }: Props) : Promise<Element> {
   const json = await fetchJson(num);
    if (sleepMs) await sleep(sleepMs);
        <div className='flex flex-col border border-solid ■border-white p-2'>
            <span>userId: {json.userId}</span>
```

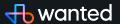


Home RCC Only RSC Only RSC + Suspense	Home RCC Only RSC Only RSC + Suspense
id: 10 userld: 1 title: illo est ratione doloremque quia maiores aut completed: loading 20loading 30	id: 10 userld: 1 title: illo est ratione doloremque quia maiores aut completed:
	id: 20 userId: 1 title: ullam nobis libero sapiente ad optio sint completed:
	loading 30





```
0:["zec8NnNzyvPQ4rHrvbZLu",[["children","rsc-suspense",["rsc-suspense",{"children":["__PAGE__",{}}}],"
    3:1[6954,[],""]
    4: [7264, [],""]
    6:"$Sreact.suspense"
   1:["$","$L3",null,{"parallelRouterKey":"children","segmentPath":["children","rsc-suspense","children"]
   2:[["$","meta","0",{"charSet":"utf-8"}],["$","title","1",{"children":"Create Next App"}],["$","meta","
7 5:null
8 7: ["$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[["$","
    0:["zec8NnNzyvPQ4rHrvbZLu",[["children","rsc-suspense",["rsc-suspense",{"children":["__PAGE__",{}}}],"
    3:1[6954,[],""]
    4: [7264, [],""]
    6:"$Sreact.suspense"
    1:["$","$L3",null,{"parallelRouterKey":"children","segmentPath":["children","rsc-suspense","children"]
    2:[["$","meta","0",{"charSet":"utf-8"}],["$","title","1",{"children":"Create Next App"}],["$","meta","
    5:null
    7: ["$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[["$","
    8:["$"."div".null,{"className":"flex flex-col border border-solid border-white p-2"."children":[["$"."
   0:["zec8NnNzyvPQ4rHrvbZLu",[["children","rsc-suspense",["rsc-suspense",{"children":["__PAGE__",{}]}],"
    3:1[6954,[],""]
   4:I[7264,[],""]
    6:"$Sreact.suspense"
    1:["$","$L3",null,{"parallelRouterKey":"children","segmentPath":["children","rsc-suspense","children"]
    2:[["$","meta","0",{"charSet":"utf-8"}],["$","title","1",{"children":"Create Next App"}],["$","meta","
7 5:null
8 7:["$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[["$","
    8:["$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[["$","
    9:["$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[["$","
```





#### **RSC+Suspense**

0:["zec8NnNzyvPQ4rHrvbZLu",[["children","rsc-suspense",["rsc-suspense",{"children":[" PAGE ",{}}}],"\$L1",[[],"\$L2"]]]]

```
3:1[6954,[],""]
4:[7264,[],""]
6:"$Sreact.suspense"
1:["$","$L3",null,{"parallelRouterKey":"children","segmentPath":["children","rsc-
suspense","children"],"loading":"$undefined","loadingStyles":"$undefined","hasLoading":false,"error":"$undefined","errorStyles":"$undefined","template":["$","$L4",null,{
}],"templateStyles":"$undefined","notFound":"$undefined","notFoundStyles":"$undefined","childProp";{"current":["$L5",["$","div",null,{"children":[["$","$6",null,{"fallback"
:["$","span",null,{"children":"loading 10"}],"children":"$L7"}],["$","$6",null,{"fallback":["$","span",null,{"children":"loading
20"}],"children":"$L8"}],["$","$6",null,{"fallback":["$","span",null,{"children":"loading 30"}],"children":"$L9"}]]}],null],"segment":"_PAGE__"},"styles":[]}]
2:[["$","meta","0",{"charSet":"utf-8"}],["$","title","1",{"children":"Create Next App"}],["$","meta","2",{"name":"description","content":"Generated by create next
app"}],["$","meta","3",{"name":"viewport","content":"width=device-width, initial-scale=1"}],["$","link","4",{"rel":"icon","href":"/favicon.ico","type":"image/x-
icon","sizes":"16x16"}]]
5:null
7:["$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[""$","span",null,{"children":["id: ",10]}],["$","span",null,{"children":["userId:
",1]}],["$","span",null,{"children":["title: ","illo est ratione doloremque quia maiores aut"]}],["$","span",null,{"children":["completed: ",true]}]]}]
8:["$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[["$","span",null,{"children":["id: ",20]}],["$","span",null,{"children":["userId:
,["[","]],["$","span",null,{"children":["title: ","ullam nobis libero sapiente ad optio sint"]}],""$","span",null,{"children":["completed: ",true],"]
9:["$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[["$","span",null,{"children":["id: ",30]}],["$","span",null,{"children":["userId:
",2]}],["$","span",null,{"children":["title: ","nemo perspiciatis repellat ut dolor libero commodi blanditiis omnis"]}],["$","span",null,{"children":["completed: ",true]}]]}]
```

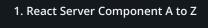




#### RSC+Suspense

·Suspense를 사용한다 6:"\$Sreact.suspense"

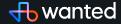




#### **RSC+Suspense**

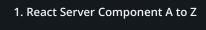
0:["zec8NnNzyvPQ4rHrvbZLu",[["children","rsc-suspense",["rsc-suspense",{"children":[" PAGE ",{}}}],"\$L1",[[],"\$L2"]]]]

```
1:["$","$L3",null,{"parallelRouterKey":"children","segmentPath":["children","rsc-
suspense", "children"], "loading": "$undefined", "loadingStyles": "$undefined", "hasLoading": false, "error": "$undefined", "errorStyles": "$u
ndefined", "template": ["$", "$L4", null, {}], "templateStyles": "$undefined", "notFound": "$undefined", "notFoundStyles": "$undefined", "chil
dProp":{"current":["$L5",["$","div",null,{"children":[["$","$6",null,{"fallback":["$","span",null,{"children":"loading
10"}],"children":"$L7"}],["$","$6",null,{"fallback":["$","span",null,{"children":"loading
20"}],"children":"$L8"}],["$","$6",null,{"fallback":["$","span",null,{"children":"loading
30"}],"children":"$L9"}]]}],null],"segment":"__PAGE__"},"styles":[]}]
",1]}],["$","span",null,{"children":["title: ","illo est ratione doloremque quia maiores aut"]}],["$","span",null,{"children":["completed: ",true]}]]}]
",1]}],["$","span",null,{"children":["title: ","ullam nobis libero sapiente ad optio sint"]}],["$","span",null,{"children":["completed: ",true]}]]}]
himprover
9:["$","aiv",null,{"className":"flex flex-col border border-solid border-white p-2", children":["$","span",null,{"children":["id: ",30]}],["$","span",null,{"children":["userId:
```



childProp: { 1. React Server Component A to Z current: **RSC+Suspense** children: [ \$L7 fallback : <span>loading 10</span> "\$", "\$6", \$L8 fallback: <span>loading 20</span> \$L9 fallback: <span>loading 30</span>





#### RSC+Suspense

```
0:["zec8NnNzyvPQ4rHrvbZLu",[["children","rsc-suspense",["rsc-suspense",("children":["_PAGE_",{}]}], "$L1",[[],"$L2"]]]]
3:l[6954,[],""]
4:l[7264,[],""]
6:"$Sreact.suspense"
1:["$","$L3",null,{"parallelRouterKey":"children","segmentPath":["children","rsc-suspense","children"],"loading":"$undefined","loadingStyles":"$undefined","hasLoading":false,"error":"$undefined","errorStyles":"$undefined","template":["$","$L4",null,}",templateStyles":"$undefined","notFoundStyles":"$undefined","children":["$L5",["$","div",null,{"children":["$","$6",null,{"fallback":["$","span",null,{"children":"loading 10"}],"children":"$L7"}],["$","$6",null,{"fallback":["$","span",null,{"children":"loading 20"}],"children":"$L8"}],["$","$6",null,{"fallback":["$","span",null,{"children":"PAGE_"},"styles":[]]
2:[["$","meta","0",{"charSet":"utf-8"},["$","title","1",{"children":"Create Next App"}],["$","meta","2",{"name":"description","content":"Generated by create next app")],["$","meta","3",{"name":"viewport","content":"width=device-width, initial-scale=1"}],["$","link","4",{"rel":"icon","href":"favicon.ico","type":"image/x-icon","sizes":"16x16"}]]
5:pull
```

7:["\$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[["\$","span",null,{"children":["id: ",10]}],["\$","span",null,{"children":["userId: ",1]}],["\$","span",null,{"children":["title: ","illo est ratione doloremque quia maiores aut"]}],["\$","span",null,{"children":["completed: ",true]}]]}



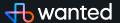
```
$L7 fallback : <span>loading 10</span>
$L8 fallback : <span>loading 20</span>
$L9 fallback : <span>loading 30</span>
```

```
"div",
 className: "flex flex-col border border-solid border-white p-2",
 children:
   ["$", "span", null, { children: ["id: ", 10] }],
   ["$", "span", null, { children: ["userId: ", 1] }],
     "$",
     "span",
     null,
       children: ["title: ", "illo est ratione doloremque quia maiores aut"]
   ["$", "span", null, { children: ["completed: ", true] }],
```



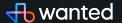
```
$L7 fallback : <span>loading 10</span>
$L8 fallback : <span>loading 20</span>
$L9 fallback : <span>loading 30</span>
```

```
"div",
 className: "flex flex-col border border-solid border-white p-2",
 children:
   ["$", "span", null, { children: ["id: ", 10] }],
   ["$", "span", null, { children: ["userId: ", 1] }],
     "$",
     "span",
     null,
       children: ["title: ", "illo est ratione doloremque quia maiores aut"]
   ["$", "span", null, { children: ["completed: ", true] }],
```



#### **RSC Payload**

```
<div>
    <!--$?-->
    <template id="8:0"></template>
    <span>loading 10</span>
    <!--/$-->
    <!--$?-->
    <template id="8:1"></template>
    <span>loading 20</span>
    <!--/$-->
    <!--$?-->
    <template id="8:2"></template>
    <span>loading 30</span>
    <!--/$-->
    </div>
```

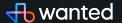


#### **RSC Payload**

```
$RC = function(b, c, e) {
    c = document.getElementById(c);
    c.parentNode.removeChild(c);
    var a = document.getElementById(b);
    if (a) {
        b = a.previousSibling;
        if (e)
            b.data = "$!",
            a.setAttribute("data-dgst", e);
        else {
            e = b.parentNode;
            a = b.nextSibling;
            var f = 0;
            do {
                if (a && 8 === a.nodeType) {
                    var d = a.data;
                    if ("/$" === d)
                        if (0 === f)
                            f--;
                        "$" !== d && "$?" !== d && "$!" !== d || f++
                d = a.nextSibling;
                e.removeChild(a);
                a = d
            } while (a);
            for (; c.firstChild; )
                e.insertBefore(c.firstChild, a);
            b.data = "$"
        b._reactRetry && b._reactRetry()
```

```
<div>
    <!--$?-->
    <template id="B:0"></template>
    <span>loading 10</span>
    <!--/$-->
    <!--$?-->
    <template id="B:1"></template>
    <span>loading 20</span>
    <!--/$-->
    <!--$?-->
    <template id="B:2"></template>
    <span>loading 30</span>
    <!--$?-->
    <template id="B:2"></template>
    <span>loading 30</span>
    <!--/$-->
</div>
```

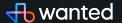
\$RC("B:0", "S:0")



#### **RSC Payload**

```
$RC = function(b, c, e) {
    c = document.getElementById(c);
    c.parentNode.removeChild(c);
    var a = document.getElementById(b);
    if (a) {
        b = a.previousSibling;
        if (e)
            b.data = "$!",
            a.setAttribute("data-dgst", e);
        else {
            e = b.parentNode;
            a = b.nextSibling;
            var f = 0;
            do {
                if (a && 8 === a.nodeType) {
                    var d = a.data;
                    if ("/\$" === d)
                        if (0 === f)
                            f--;
                        "$" !== d && "$?" !== d && "$!" !== d || f++
                d = a.nextSibling;
                e.removeChild(a);
                a = d
            } while (a);
            for (; c.firstChild; )
                e.insertBefore(c.firstChild, a);
            b.data = "$"
        b._reactRetry && b._reactRetry()
```

```
교체 할 대상
|
$RC("B:0", "S:0")
|
교체 될 대상
```



#### **RSC Payload**

```
$RC = function(b, c, e) {
    c = document.getElementById(c);
    c.parentNode.removeChild(c);
    var a = document.getElementById(b);
    if (a) {
        b = a.previousSibling;
        if (e)
            b.data = "$!",
            a.setAttribute("data-dgst", e);
        else {
           e = b.parentNode;
           a = b.nextSibling;
            var f = 0;
            do {
                if (a && 8 === a.nodeType) {
                    var d = a.data;
                    if ("/\$" === d)
                        if (0 === f)
                            f--;
                        "$" !== d && "$?" !== d && "$!" !== d || f++
                d = a.nextSibling;
                e.removeChild(a);
                a = d
            } while (a);
            for (; c.firstChild; )
                e.insertBefore(c.firstChild, a);
            b.data = "$"
        b._reactRetry && b._reactRetry()
```

```
교체 할 대상
.
$RC("B:0", "S:0")
교체 될 대상
```

```
<div>
    <!--$?-->
    <template id="B:0"></template>
    <span>loading 10</span>
    <!--/$-->
    <!--$?-->
    <template id="B:1"></template>
    <span>loading 20</span>
    <!--/$-->
    <!--$?-->
    <template id="B:2"></template>
    <span>loading 30</span>
    <!--/$-->
    <template id="B:2"></template>
    <span>loading 30</span>
    <!--/$-->
</div>
```

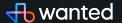


#### **RSC Payload**

```
$RC = function(b, c, e) {
   c = document.getElementById(c);
                                                                                                         <div>
   c.parentNode.removeChild(c);
                                                                                                            <!--$?-->
   var a = document.getElementById(b);
                                                                                                            <template id="B:0"></template>
   if (a) {
                                                                                                            <span>loading 10</span>
       b = a.previousSibling;
       if (e)
           b.data = "$!",
                                                                                                            <template id="B:1"></template>
           a.setAttribute("data-dgst", e);
                                                                                                            <span>loading 20</span>
       else {
          e = b.parentNode;
                                                                                                            <!--$?-->
          a = b.nextSibling;
                                                                                                            <template id="B:2"></template>
                                                                           그웨하다나
           var f = 0;
                                                                                                            ---->loading 30</span>
           do {
                                                                                                                 $-->
              if (a && 8 === a.nodeType) {
                                                  Node.COMMENT_NODE (8)
                  var d = a.data;
                  if ("/\$" === d)
                                                                                                                 'S:0">
                      if (0 === f)
                                                     A Comment node, such as <!-- ... -->.
                                                                                                                'flex flex-col border border-solid border-white p-2">
                          f--;
                                                                     교세 걸 내잉
                                                                                                         10</span>
                      "$" !== d && "$?" !== d && "$!" !== d || f++
                                                                                                         <span>userId:
              d = a.nextSibling;
              e.removeChild(a);
                                                                                                         1</span>
              a = d
                                                                                                         <span>title:
           } while (a);
           for (; c.firstChild; )
                                                                                                         illo est ratione doloremque quia maiores aut</span>
              e.insertBefore(c.firstChild, a);
                                                                                                         <span>completed: </span>
           b.data = "$"
                                                                                                    </div>
       b._reactRetry && b._reactRetry()
                                                                                                </div>
```

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Next.is 확실히 알고 레벨업 하기

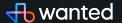


#### **RSC Payload**

```
$RC = function(b, c, e) {
    c = document.getElementById(c);
                                                                                                              <div>
    c.parentNode.removeChild(c);
    var a = document.getElementById(b);
                                                                                                                  <template id="B:0"></template>
    if (a) {
                                                                                                                 <span>loading 10</span>
       b = a.previousSibling;
       if (e)
                                                                                                                  <!--$?-->
           b.data = "$!",
                                                                                                                  <template id="B:1"></template>
           a.setAttribute("data-dgst", e);
                                                                                                                  <span>loading 20</span>
       else {
           e = b.parentNode;
           a = b.nextSibling;
                                                                                                                  <template id="B:2"></template>
           var f = 0;
                                                                                                                  <span>loading 30</span>
           do {
               if (a && 8 === a.nodeType)
                                                                                                              </div>
                   var d = a.data;
                   if ("/\$" === d)
                                                                        $RC("B:0", "S:0")
                                                                                                     <div hidden id="S:0">
                       if (0 === f)
                                                                                                          <div class="flex flex-col border border-solid border-white p-2">
                                                                                                              <span>id:
                           f--;
                                                                                                              10</span>
                       "$" !== d && "$?" !== d && "$!" !== d || f++
                                                                                                              <span>userId:
               d = a.nextSibling;
               e.removeChild(a);
                                                                                                              1</span>
               a = d
                                                                                                              <span>title:
            } while (a);
           for (; c.firstChild; )
                                                                                                              illo est ratione doloremque quia maiores aut</span>
               e.insertBefore(c.firstChild, a);
                                                                                                              <span>completed: </span>
           b.data = "$"
                                                                                                          </div>
       b._reactRetry && b._reactRetry()
                                                                                                     </div>
```

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Next.js 확실히 알고 레벨업 하기



#### **RSC Payload**

```
$RC = function(b, c, e) {
   c = document.getElementById(c);
                                                                                                           <div>
   c.parentNode.removeChild(c);
   var a = document.getElementById(b);
                                                                                                               <template id="B:0"></template>
   if (a) {
                                                                                                               <span>loading 10</span>
       b = a.previousSibling;
       if (e)
                                                                                                               <!--$?-->
                                       종료태그 (/$)가 나올 때 까지 반복
           b.data = "$!",
                                                                                                               <template id="B:1"></template>
           a.setAttribute("data-dgst", e);
                                                                                                               <span>loading 20</span>
       else {
           e = b.parentNode;
           a = b.nextSibling;
                                                                                                               <template id="B:2"></template>
           var f = 0:
                                                                                                               <span>loading 30</span>
           do {
               if (a && 8 === a.nodeType)
                                                                                                           </div>
                   var d = a.data;
                   if ("/\$" === d)
                                                                      $RC("B:0", "S:0")
                                                                                                  <div hidden id="S:0">
                       if (0 === f)
                                                                                                       <div class="flex flex-col border border-solid border-white p-2">
                                                                                                           <span>id:
                          f--;
                                                                                                           10</span>
                      "$" !== d && "$?" !== d && "$!" !== d || f++
                                                                                                           <span>userId:
               d = a.nextSibling;
               e.removeChild(a);
                                                                                                           1</span>
               a = d
                                                                                                           <span>title:
           } while (a);
           for (; c.firstChild; )
                                                                                                           illo est ratione doloremque quia maiores aut</span>
               e.insertBefore(c.firstChild, a);
                                                                                                           <span>completed: </span>
           b.data = "$"
                                                                                                       </div>
       b._reactRetry && b._reactRetry()
                                                                                                  </div>
```

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#### **RSC** Payload

```
$RC = function(b, c, e) {
    c = document.getElementById(c);
                                                                                                            <div>
    c.parentNode.removeChild(c);
    var a = document.getElementById(b);
                                                                                                                <template id="B:0"></template>
    if (a) {
                                                                                                                <span>loading 10</span>
       b = a.previousSibling;
       if (e)
                                                                                                                <!--$?-->
           b.data = "$!",
                                                                                                                <template id="B:1"></template>
           a.setAttribute("data-dgst", e);
                                                                                                                <span>loading 20</span>
       else {
           e = b.parentNode;
           a = b.nextSibling;
                                                                                                                <template id="B:2"></template>
           var f = 0;
                                                                                                                <span>loading 30</span>
           do {
               if (a && 8 === a.nodeType)
                                                                                                            </div>
                   var d = a.data;
                   if ("/\$" === d)
                                                                       $RC("B:0", "S:0")
                                                                                                   <div hidden id="S:0">
                       if (0 === f)
                                                                                                        <div class="flex flex-col border border-solid border-white p-2">
                                                                                                            <span>id:
                          f--;
                                                                                                            10</span>
                       "$" !== d && "$?" !== d && "$!" !== d || f++
                                                                                                            <span>userId:
               d = a.nextSibling;
                                  노드를 하나씩 지움
               e.removeChild(a);
                                                                                                            1</span>
               a = d
                                                                                                            <span>title:
           } while (a);
           for (; c.firstChild; )
                                                                                                            illo est ratione doloremque quia maiores aut</span>
               e.insertBefore(c.firstChild, a);
                                                                                                            <span>completed: </span>
           b.data = "$"
                                                                                                        </div>
       b._reactRetry && b._reactRetry()
                                                                                                   </div>
```

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#### **RSC Payload**

```
$RC = function(b, c, e) {
    c = document.getElementById(c);
    c.parentNode.removeChild(c);
    var a = document.getElementById(b);
    if (a) {
        b = a.previousSibling;
        if (e)
            b.data = "$!",
            a.setAttribute("data-dgst", e);
        else {
            e = b.parentNode;
            a = b.nextSibling;
           var f = 0:
            do {
                if (a && 8 === a.nodeType) {
                    var d = a.data;
                    if ("/$" === d)
                        if (0 === f)
                        "$" !== d && "$?" !== d && "$!" !== d || f++
                d = a.nextSibling;
                e.removeChild(a);
                a = d
            } while (a);
            for (; c.firstChild; )
                e.insertBefore(c.firstChild, a);
            b.data = "$"
        b._reactRetry && b._reactRetry()
```

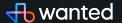
```
<div>
            <template id="B:0"></template>
            <span>loading 10</span>
            <template id="B:1"></template>
            <span>loading 20</span>
            <template id="B:2"></template>
            <span>loading 30</span>
        </div>
<div hidden id="S:0">
    <div class="flex flex-col border border-solid border-white p-2">
        <span>id:
        10</span>
        <span>userId:
        1</span>
        <span>title:
        illo est ratione doloremque quia maiores aut</span>
```

<span>completed: </span>

</div>

</div>

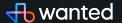
\$RC("B:0", "S:0")



#### **RSC Payload**

```
$RC = function(b, c, e) {
    c = document.getElementById(c);
    c.parentNode.removeChild(c);
    var a = document.getElementById(b);
    if (a) {
       b = a.previousSibling;
       if (e)
           b.data = "$!",
           a.setAttribute("data-dgst", e);
       else {
           e = b.parentNode;
           a = b.nextSibling;
           var f = 0;
           do {
               if (a && 8 === a.nodeType) {
                   var d = a.data;
                   if ("/\$" === d)
                                                                        $RC("B:0", "S:0")
                       if (0 === f)
                           f--;
                       "$" !== d && "$?" !== d && "$!" !== d || f++
               d = a.nextSibling;
               e.removeChild(a);
               a = d
           } while (a);
           for (; c.firstChild; )
                                               받아온 DOM을 추가하는 작업
               e.insertBefore(c.firstChild, a);
           b.data = "$"
       b._reactRetry && b._reactRetry()
```

```
<div>
<!--$?-->
    <template id="8:0"></template>
    <span>loading 10</span>
    <!--/$-->
    <!--$?-->
    <template id="8:1"></template>
         <span>loading 20</span>
         <!--/$-->
         <template id="8:2"></template>
               <span>loading 20</span>
               <!--/$-->
               <template id="8:2"></template>
               <span>loading 30</span>
               <!--/$-->
               </div>
```



#### **RSC Payload**

```
$RC = function(b, c, e) {
    c = document.getElementById(c);
    c.parentNode.removeChild(c);
    var a = document.getElementById(b);
    if (a) {
        b = a.previousSibling;
        if (e)
            b.data = "$!",
            a.setAttribute("data-dgst", e);
        else {
            e = b.parentNode;
            a = b.nextSibling;
            var f = 0;
            do {
                if (a && 8 === a.nodeType) {
                    var d = a.data;
                    if ("/\$" === d)
                        if (0 === f)
                            f--;
                        "$" !== d && "$?" !== d && "$!" !== d || f++
                d = a.nextSibling;
                e.removeChild(a);
                a = d
            } while (a);
            for (; c.firstChild; )
                e.insertBefore(c.firstChild, a);
            b.data = "$"
        b._reactRetry && b._reactRetry()
```

\$RC("B:0", "S:0")

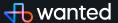


#### **RSC Payload**

```
$RC = function(b, c, e) {
    c = document.getElementById(c);
    c.parentNode.removeChild(c);
    var a = document.getElementById(b);
    if (a) {
       b = a.previousSibling;
        if (e)
           b.data = "$!",
           a.setAttribute("data-dgst", e);
        else {
           e = b.parentNode;
           a = b.nextSibling;
           var f = 0;
           do {
               if (a && 8 === a.nodeType) {
                   var d = a.data;
                   if ("/\$" === d)
                       if (0 === f)
                           f--;
                       "$" !== d && "$?" !== d && "$!" !== d || f++
               d = a.nextSibling;
               e.removeChild(a);
               a = d
            } while (a);
           for (; c.firstChild; )
               e.insertBefore(c.firstChild, a);
           b.data = "$"
       b._reactRetry ♨ b._reactRetry() 혹시 실패 했으면 재시도
```

```
<div>
<!--$?-->
    <template id="B:0"></template>
        <span>loading 10</span>
        <!--/$-->
        <!--$?-->
        <template id="B:1"></template>
            <span>loading 20</span>
        <!--/$-->
        <!--$?-->
        <template id="B:2"></template>
            <span>loading 20</span>
        <!--$?-->
        <template id="B:2"></template>
            <span>loading 30</span>
        <!--/$-->
        </div>
```

\$RC("B:0", "S:0")



# **RSC Payload**

```
<div>
                                                   <!--$-->
   <template id="B:0"></template>
                                                 ▼ <div class="flex flex-col border border-solid border-white p-2"> flex
   <span>loading 10</span>
                                                   ▶ <span> · · · </span>
                                                   ▶ <span> · · · </pan>
   <template id="B:1"></template>
   <span>loading 20</span>
                                                   ▶ <span> · · · </span>
                                                     <span>completed: </span>
                                                   </div>
   <template id="B:2"></template>
   <span>loading 30</span>
                                                   <!--/$-->
</div>
```



#### **RSC Payload**

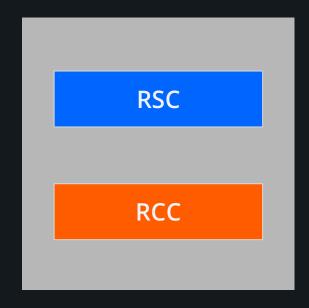
같은 방식으로 모든 fallback 변경



```
import { RCC } from '@/components/RCC';
     import { RSC } from '@/components/RSC';
     export default function Page() : Element {
             <div>
                 <section id='rsc'>
                      <RSC num={3} />
                 </section>
                 <section id='rcc'>
                      <RCC num={4} />
11
                 </section>
12
13
             </div>
          );
15
```



```
import { RCC } from '@/components/RCC';
     import { RSC } from '@/components/RSC';
     export default function Page() : Element {
             <div>
                 <section id='rsc'>
                     <RSC num={3} />
                 </section>
                 <section id='rcc'>
                     <RCC num={4} />
11
12
                 </section>
             </div>
13
         );
14
15
```



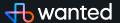


```
import { RCC } from '@/components/RCC';
     import { RSC } from '@/components/RSC';
     export default function Page() : Element {
             <div>
                 <section id='rsc'>
                     <RSC num={3} />
                 </section>
                 <section id='rcc'>
                     <RCC num={4} />
11
                 </section>
12
13
             </div>
14
         );
15
```





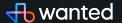
Home	RCC Only	RSC Only	RSC + Suspense	RCC + RSC		Home	RCC Only	RSC Only	RSC + Suspense	RCC + RSC
id: 3 userld: 1 title: fugiat veniam minus completed:						id: 3 userld: 1 title: fugiat veniam minus completed:				
no data						id: 4				
						userld: 1				
						title: et porro tempora				
						complet	ed:			

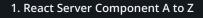




0:["H32FooTvgR3-C9|QlcrRi",[["children","rcc-rsc",["rcc-rsc",{"children":[" PAGE ",{}]}],"\$L1",[[],"\$L2"]]]]

```
3:I[6954,[],""]
4:I[7264,[],""]
7:I[7212,["712","static/chunks/app/rcc-rsc/page-d34c7e8b8edb75d8.js"],"RCC"]
1:["$","$L3",null,("parallelRouterKey":"children","segmentPath":["children","rcc-rsc","children"],"loading":"$undefined","loadingStyles":"$undefined","hasLoading":false,"error":"$undefined","errorStyles":"$undefined","template":["$","$L4",null,{}},"te mplateStyles":"$undefined","notFoundStyles":"$undefined","notFoundStyles":"$undefined","children":["$L5",["$","div",null,{"children":[["$","section",null,{"id":"rsc","children":["$","$L7",null,{"num":4}}}]]}],null],"segment":"_PAGE__"),"styles":[]}
2:[["$","meta","0",("charSet":"utf-8"}],["$","title","1",("children":"Create Next App")],["$","meta","2",("name":"description","content":"Generated by create next app")],["$","meta","3",("name":"viewport","content":"width=device-width, initial-scale=1"}],["$","link","4",{"rel":"icon","href":"/favicon.ico","type":"image/x-icon","sizes":"16x16"}]]
5:null
6:["$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":["$","span",null,{"children":["id: ",3]}],["$","span",null,{"children":["userld: ",1]},["$","span",null,{"children":["title: ","fugiat veniam minus"]},["$","span",null,{"children":["completed: ",false]}]]}
```





#### RSC + RCC

```
0:["H32FooTvgR3-C9JQIcrRi",[["children","rcc-rsc",["rcc-rsc",{"children":["__PAGE__",{}]}],"$L1",[[],"$L2"]]]]
3:I[6954,[],""]
4:I[7264,[],""]
```

#### 7:I[7212,["712","static/chunks/app/rcc-rsc/page-d34c7e8b8edb75d8.js"],"RCC"]

1:["\$","\$L3",null,{"parallelRouterKey":"children","segmentPath":["children","rcc-

```
EXPLORER
                                                  JS page-cd3d89ca832b6fa0.js X
                                 .next > static > chunks > app > rcc > J5 page-cd3d89ca832b6fa0.js > 分 622 > Ø c
∨ WANTED-CHALLENGE-FE
                                                         (self.webpackChunk_N_E=self.webpackChunk_N_E||[]).push([[756,712],{3021:function(e: any,

✓ .next
                                                          * @license React
  > cache
   > server

√ static

∨ chunks

✓ app

∨ rcc

                                                          */var n : any =r(2265), o : symbol = Symbol.for("react.element"), s : (v: PropertyKey) => bool
       Js page-cd3d89ca832b6fa0.is
      > rcc-rsc
      > rsc
```





RSC + RCC

```
0:["H32FooTvgR3-C9JQlcrRi",[["children","rcc-rsc",{"children":["__PAGE__",{}]}],"$L1",[[],"$L2"]]]]
3:l[6954,[],""]
4:l[7264,[],""]
```

/:l[/212,["/12","static/cnunks/app/rcc-rsc/page-d34c/e8b8edb/5d8.js"],"RCC"]

1:["\$","\$L3",null,{"parallelRouterKey":"children","segmentPath":["children","rcc-rsc","children"],"loading":"\$undefined","loadingStyles":"\$undefined","hasLoading":false,"error":"\$undefined","er rorStyles":"\$undefined","template":["\$","\$L4",null,{}],"templateStyles":"\$undefined","notFound":"\$undefined","notFoundStyles":"\$undefined","childProp":{"current":["\$L5",["\$","div",null,{"children":["\$","section",null,{"id":"rsc","children":["\$","\$L7",null,{"num":4}]}]]}],null],"segment":"\_PAGE\_"},"styles":[]}]

```
2:[["$","meta","0",{"charSet":"utf-8"}],["$","title","1",{"children":"Create Next App"}],["$","meta","2",{"name":"description","content":"Generated by create next app"}],["$","meta","3",{"name":"viewport","content":"width=device-width, initial-scale=1"}],["$","link","4",{"rel":"icon","href":"/favicon.ico","type":"image/x-icon","sizes":"16x16"}]]
```

5·null

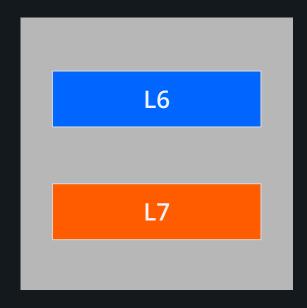
6:["\$","div",null,{"className":"flex flex-col border border-solid border-white p-2","children":[["\$","span",null,{"children":["id: ",3]}],["\$","span",null,{"children":["userId: ",1]}],["\$","span",null,{"children":["title: ","fugiat veniam minus"]}],["\$","span",null,{"children":["completed: ",false]}]]}]



```
childProp: {
 current: [
   "$L5",
      "div"
      null,
        children:
          ["$", "section", null, { id: "rsc", children: "$L6" }],
            "section",
            { id: "rcc", children: ["$", "$L7", null, { num: 4 }] },
   null,
 segment: "__PAGE__",
```

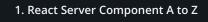
```
export default function Page() : Element {
  return (
    <div>
      <section id="rsc">
        <RSC num={3} />
      </section>
      <section id="rcc">
        <RCC num={4} />
      </section>
    </div>
```





Next.js 확실히 알고 레벨업 하기





#### RSC + RCC

0:["H32FooTvgR3-C9JQlcrRi",[["children","rcc-rsc",["rcc-rsc",{"children":["\_\_PAGE\_\_",{}]}],"\$L1",[[],"\$L2"]]]]
3:l[6954,[],""]
4:l[7264,[],""]

#### 7:I[7212,["712","static/chunks/app/rcc-rsc/page-d34c7e8b8edb75d8.js"],"RCC"]

1:["\$","\$L3",null,{"parallelRouterKey":"children","segmentPath":["children","rcc-

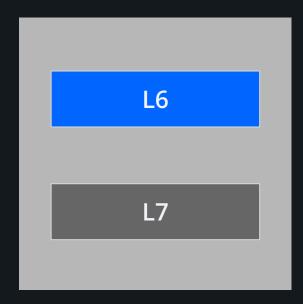
rsc","children"],"loading":"\$undefined","loadingStyles":"\$undefined","hasLoading":false,"error":"\$undefined","errorStyles":"\$undefined","template":["\$","\$L4",null,{}],"te mplateStyles":"\$undefined","notFound":"\$undefined","notFoundStyles":"\$undefined","childProp":{"current":["\$L5",["\$","div",null,{"children":[["\$","section",null,{"id":"rsc" "children":"\$L6"}],["\$","section",null,{"id":"rcc","children":["\$","\$L7",null,{"num":4}]}]]}],null],"segment":" PAGE "},"styles":[]}]

2:[["\$","meta","0",{"charSet":"utf-8"}],["\$","title","1",{"children":"Create Next App"}],["\$","meta","2",{"name":"description","content":"Generated by create next app"}],["\$","meta","3",{"name":"icon","href":"/favicon.ico","type":"image/x-icon","sizes":"16x16"}]]

5·null

6:["\$","div",null,{"className":"flex flex-col border border-solid border-white p2","children":[["\$","span",null,{"children":["id: ",3]}],["\$","span",null,{"children":["userId:
",1]}],["\$","span",null,{"children":["title: ","fugiat veniam minus"]}],["\$","span",null,{"children":["completed:
",false]}]]}]





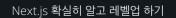
```
const data = [
   "$",
   "div",
   null,
   {
     className: "flex flex-col border border-solid border-white p-2",
     children: [
        ["$", "span", null, { children: ["id: ", 3] }],
        ["$", "span", null, { children: ["userId: ", 1] }],
        ["$", "span", null, { children: ["title: ", "fugiat veniam minus"] }],
        ["$", "span", null, { children: ["completed: ", false] }],
        ],
    },
},
```





```
const aa = [
    7212,
    ["712", "static/chunks/app/rcc-rsc/page-d34c7e8b8edb75d8.js"],
    "RCC",
];
```







# 상황에 따라 Suspense를 적극 활용하자

#### 선언형

React는 상호작용이 많은 UI를 만들 때 생기는 어려움을 줄여줍니다. 애플리케이션의 각 상태에 대한 간단한 뷰만 설계하세요. 그럼 React는 데이터가 변경됨에 따라 적절한 컴포넌트만 효율적으로 갱신하고 렌더링합니다.

선언형 뷰는 코드를 예측 가능하고 디버그하기 쉽게 만들어 줍니다.

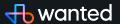
React는 개발자가 선언적으로 개발 할 수 있게끔 도와줌

Suspense를 사용하면 코드를 선언적으로 유지할 수 있음



#### 상황에 따라 Suspense를 적극 활용하자

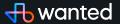
각 컴포넌트가 어떤 동작을 할 지 예측하기 어려움



# 상황에 따라 Suspense를 적극 활용하자

```
export default function Page() : Element {
     <Suspense fallback={<span>loading 10</span>}>
        <RSC num={10} />
     </Suspense>
      <Suspense fallback={<span>loading 20</span>}>
        <RSC num={20} sleepMs={2000} />
      </Suspense>
      <Suspense fallback={<span>loading 30</span>}>
        <RSC num={30} sleepMs={4000} />
      </Suspense>
   </div>
```

각 컴포넌트가 어떤 비동기 작업을 수행하며 그 동안 어떤 컴포넌트를 보여주는지 예측 가능



#### 상황에 따라 Suspense를 적극 활용하자

```
export default function Page() : Element {
     <ErrorBoundary errorComponent={() : Element => <span>loading error</span>}>
        <Suspense fallback={<span>loading 10</span>}>
         <RSC num={10} />
        </Suspense>
     </ErrorBoundary>
     <ErrorBoundary errorComponent={() : Element => <span>loading error</span>}>
        <Suspense fallback={<span>loading 20</span>}>
          <RSC num={20} sleepMs={2000} />
     </ErrorBoundary>
     <ErrorBoundary errorComponent={() : Element => <span>loading error</span>}>
        <Suspense fallback={<span>loading 30</span>}>
          <RSC num={30} sleepMs={4000} />
     </ErrorBoundary>
```

자매품 ErrorBoundary



# 상황에 따라 Suspense를 적극 활용하자

Suspense를 사용해라



스켈레톤을 사용해라



# 상황에 따라 Suspense를 적극 활용하자

# Suspense를 사용해라

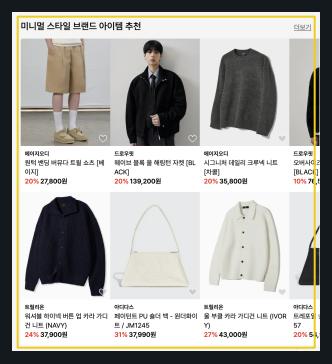


# 스켈레톤을 사용해라

Suspense 없이도 스켈레톤 사용 가능 Suspense 와 스켈레톤은 연관 없음



# 인터렉션 영역과 정보 영역을 분리하자



<BrandItemRecommend />





```
export function ItemList() : Element
const [items, setItems] = useState<Item[]>([]);
const router = useRouter();

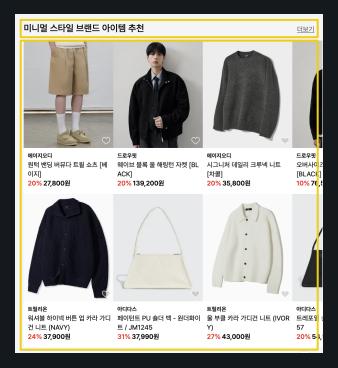
const fetchItems = async () : Promise<void> => {
   const response = await fetch("https:~~~");
   const data: Item[] = await response.json();

   setItems(data);
};

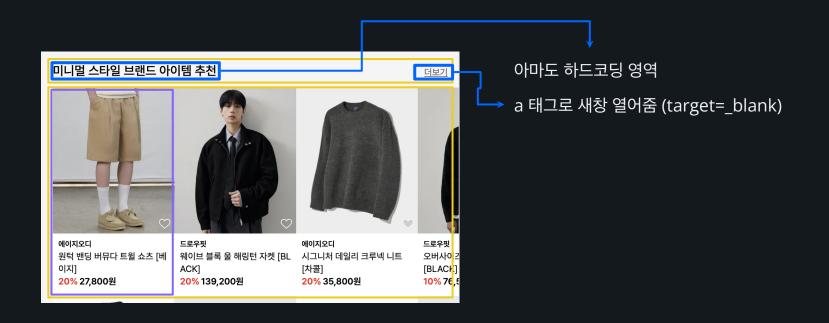
const clickHandler = (id: number) : void => {
   router.push(`https://~~~/${id}`);
};

useEffect(() : void => {
   fetchItems();
}. []):
```

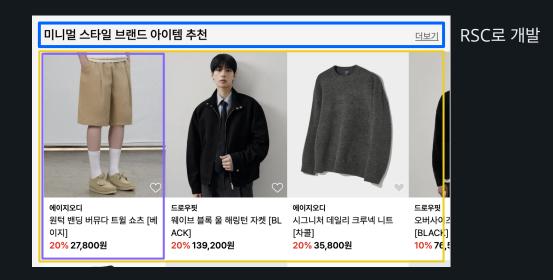












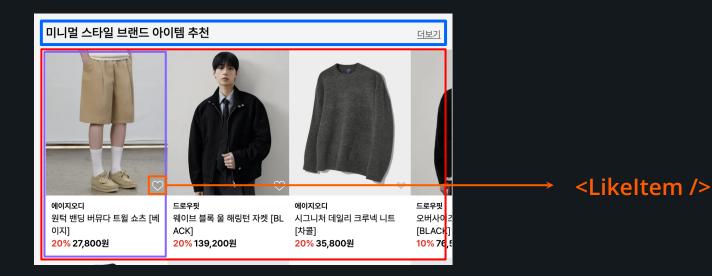














# 3. 마치며





3. 마치며

# 진짜 결론

추상화 된 도구로서**만** 접근하지 말고, 원리를 파악하자.



고생하셨습니다.

