What is a
Block in JS?

`let & const are Block Scoped`

```js
{
    //Compound Statment


}

```

Namaste 🙏 JavaScript

```js
{
    //Compound Statment
    var a = 10;
    console.log(a);
}
if(true)
```

```javascript
if (true) {
    //Compound Statment
    var a = 10;
    console.log(a);
}
```

```
10                    index.js:4
>
```

127.0.0.1:5500

Inspiring   Knwlg   open   LendingKart   Angular4   Hackathon   Talk

Namaste 🙏 JavaScript

Paused in debugger

Elements   Console   Sources   »

index.js ✕

```
1 {
2   var a = 10;
3   let b = 20;
4   const c = 30;
5 }
```

Line 2, Column 11   Coverage: n/a

Scope   Watch

ⓘ Paused on breakpoint

▼ Call Stack

➤ (anonymous)   index.js:2

▼ Breakpoints

☑ index.js:2
    var a = 10;

▶ XHR/fetch Breakpoints

▶ DOM Breakpoints

▶ Global Listeners

▶ Event Listener Breakpoints

▼ Block
    b: undefined
    c: undefined
▼ Global   Window
    PERSISTENT: 1
    TEMPORARY: 0
    a: undefined
    ▶ addEventListener: ƒ addEventListe...
    ▶ alert: ƒ alert()
    ▶ atob: ƒ atob()
    ▶ blur: ƒ blur()
    ▶ btoa: ƒ btoa()
    ▶ caches: CacheStorage {}

Console   What's New

top   Filter   Custom levels ▼

JS index.js   ✕   JS scope.js   <> index.html

js > JS index.js

```js
1  {
2    var a = 10;
3    let b = 20;
4    const c = 30;
5  }
6
```

Namaste 🙏 JavaScript

Elements | **Console** | Sources | » | ⊗ 1 | ⚙ | ⋮ | ✕

top ▼ | 👁 | Filter | Custom levels ▼ | ⚙

```
10                                    index.js:5
20                                    index.js:6
30                                    index.js:7
10                                    index.js:9
⊗ ▶ Uncaught ReferenceError: b is not defined   index.js:10
      at index.js:10
>
```

JS **index.js** ✕ | JS scope.js | <> index.html

js > JS index.js

```javascript
1   {
2       var a = 10;
3       let b = 20;
4       const c = 30;
5       console.log(a);
6       console.log(b);
7       console.log(c);
8   }
9   console.log(a);
10  console.log(b);
11  console.log(c);
12
```

Browser

127.0.0.1:5500

Inspiring   Knwlg   open   LendingKart   Angular4   Hackathon   Talk

Namaste 🙏 JavaScript

Elements | Console | Sources | »

top ▼ | 👁 | Filter | Custom levels ▼

```
10                                    index.js:6
20                                    index.js:7
30                                    index.js:8
10                                    index.js:10
>
```

Editor

JS index.js ✕   JS scope.js   <> index.html

js > JS index.js

```javascript
1    var a = 100;
2    {
3        var a = 10;          variable is shadowed by inner block variable
4        let b = 20;
5        const c = 30;
6        console.log(a);
7        console.log(b);
8        console.log(c);
9    }
10   console.log(a);
11
```

Namaste 🙏 JavaScript

| Elements | Console | Sources | » |

top | Filter | Custom levels ▼

```
10                          index.js:6
20                          index.js:7
30                          index.js:8
100                         index.js:10
>
```

js > JS index.js

```js
1   let b = 100;
2   {
3     var a = 10;
4     let b = 20;
5     const c = 30;
6     console.log(a);
7     console.log(b);
8     console.log(c);
9   }
10  console.log(b);
11
```

Namaste 🙏 JavaScript

```js
let b = 100;
{
  var a = 10;
  let b = 20;
  const c = 30;
  console.log(a);
  console.log(b);
  console.log(c);
}
console.log(b)
```

index.js

```
4   let b = 20;
5   const c = 30;
6   ▶console.log(a);
7   console.log(b);
```

Line 6, Column 3   Coverage: n/a

Scope Watch

Paused on breakpoint

▼ Call Stack
▶ (anonymous)   index.js:6

▼ Breakpoints
☑ index.js:6
   console.log(a);

▶ XHR/fetch Breakpoints
▶ DOM Breakpoints
▶ Global Listeners
▶ Event Listener Breakpoints

▼ Block
   b: 20
   c: 30
▼ Script
   b: 100
▼ Global   Window
   PERSISTENT: 1
   TEMPORARY: 0
   a: 10
   ▶ addEventListener: f addEventListe…
   ▶ alert: f alert()
   ▶ atob: f atob()
   ▶ blur: f blur()

Console   What's New

top   ▼   👁   Filter   Custom levels ▼

Browser tabs: Akshay Saini

Address bar: 127.0.0.1:5500

Bookmarks: Inspiring | Knwlg | open | LendingKart | Angular4 | Hackathon | Talk

DevTools: Elements | Console | Sources »

top | Filter | Custom levels ▼

Console output:
```
10                    index.js:6
20                    index.js:7
30                    index.js:8
100                   index.js:10
>
```

Editor tabs: JS index.js | JS scope.js | <> index.html

js > JS index.js

```js
const c = 100;
{
  var a = 10;
  let b = 20;
  const c = 30;
  console.log(a);
  console.log(b);
  console.log(c);
}
console.log(c);
```

Namaste 🙏 JavaScript

```js
1    const c = 100;
2    function x() {
3        const c = 30;
4        console.log(c);
5    }
6    x();
7    console.log(c);
8
```

Console output:

```
30                                    index.js:4
100                                   index.js:7
>
```

functions also works in the same way as shadowing in let and const

Browser tab: Akshay Saini — 127.0.0.1:5500

Namaste 🙏 JavaScript

Console error:

❌ Uncaught SyntaxError: Identifier 'a' has already   index.js:3
   been declared

illegal shadowing

```js
js > JS index.js
1    let a = 20;
2    {
3        var a = 20;
4    }
5
```

Tabs: JS index.js, JS scope.js, <> index.html

Namaste 🙏 JavaScript

```js
js > JS index.js
1    let a = 20;
2    {
3      [ let a = 20;
4    }
5
```

>
  valid

Browser:
- Akshay Saini
- 127.0.0.1:5500
- Inspiring | Knwlg | open | LendingKart | Angular4 | Hackathon | Talk
- Incognito

Console tab:
- Elements | Console | Sources | »
- top | Filter | Custom levels ▼
- > valid

Editor tabs: `index.js` | `scope.js` | `index.html`

js > JS index.js

```js
var a = 20;
{
    let a = 20;
    let b =
    let b
    let a
    let x
    let b = 20;
}
```

21%

127.0.0.1:5500

Namaste 🙏 JavaScript

Elements   Console   Sources   »

top

Filter   Custom levels ▼

>

var is inside its boundries and not interfeing thats why it dont give error and truely valid operation

```
JS index.js    ×        JS scope.js        <> index.html

js > JS index.js
1    let a = 20;
2    function x() {
3        var a = 20;
4    }
5
```

Akshay Saini — 127.0.0.1:5500

Inspiring | Knwlg | open | LendingKart | Angular4 | Hackathon | Talk

Namaste 🙏 JavaScript

Elements | **Console** | Sources | »

top | Filter | Custom levels ▼

>

fine

JS **index.js** | JS scope.js | <> index.html

js > JS index.js

```
1    const a = 20;
2    {
3      const a = 20;
4    }
5
```

Namaste 🙏 JavaScript

Elements | **Console** | Sources »

top ▾ | Filter | Custom levels ▾

```
200                                    index.js:6
>
```

JS **index.js** × | JS scope.js | <> index.html

js > JS index.js

```js
1    const a = 20;
2    {
3      const a = 100;
4      {
5        const a = 200;
6        console.log(a);
7      }
8    }
9
```

Browser tab: Akshay Saini

URL: 127.0.0.1:5500

Bookmarks: Inspiring | Knwlg | open | LendingKart | Angular4 | Hackathon | Talk

Paused in debugger

Namaste 🙏 JavaScript

Elements | Console | Sources | »

index.js ✕

```
4   {
5       const a = 200;          block follows lexical order
6       console.log(a);
7   }
```

Line 6, Column 5   Coverage: n/a

Scope | Watch

ⓘ Paused on breakpoint

▾ Call Stack
➡ (anonymous)   index.js:6

▾ Breakpoints
☑ index.js:6
   console.log(a);

▸ XHR/fetch Breakpoints
▸ DOM Breakpoints
▸ Global Listeners
▸ Event Listener Breakpoints

▾ Block
   a: 200
▾ Block
   a: 100
▾ Script
   a: 20
▾ Global   Window
   PERSISTENT: 1
   TEMPORARY: 0
   ▸ addEventListener: f addEventListe…
   ▸ alert: f alert()
   ▸ atob: f atob()
   ▸ blur: f blur()

Console | What's New

top ▾   Filter   Custom levels ▾

JS index.js ✕ | JS scope.js | <> index.html

js > JS index.js

```javascript
1   const a = 20;
2   {
3       const a = 100;
4       {
5           const a = 200;
6           console.log(a);
7       }
8   }
9
```

127.0.0.1:5500

Namaste 🙏 JavaScript

Elements   **Console**   Sources   »

top   ▼   Filter   Custom levels ▼

```
20                                              index.js:8
>
```

JS **index.js**   ✕   JS scope.js   <> index.html

js > JS index.js

```javascript
1    const a = 20;
2    {
3      const a = 100;
4      {
5        const a = 200;
6      }
7    }
8    console.log(a);
9
```