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Q. Are let & const declarations hoisted?

let and const declarations are Hoisted

Q. What is temporal dead zone?

It is the time since when the let variable is hoisted ~~hoisted~~ & till it is initialised some value.

Time b/w them is called temporal zone.

Example:-

```
console.log(b);  
let a = 10;  
var b = 100;
```

→ o/p: - undefined

```
console.log(a);  
let a = 10;  
var b = 100;
```

→ o/p: - Error

↓ i.e.

Reference error: Cannot access 'a' before initialization

```
let a = 10;  
console.log(a);  
var b = 100;
```

→ o/p: - 10



Note:- ~~When the~~ Whenever we try to access a variable in temporal zone it gives us an error.

When the variables are in temporal zone we can not access them.

& can only be accessed when some value is initialized to it.

→ In "let" we can not do "redclaration".

e.g. `let a = 10;`
`let a = 100;` } → o/p: - Syntax Error

↓
i.e. Identifier 'a' has been already declared.

→ In case of "var" —

We cannot use the "same name" to declare var variable in the "same scope".

→ In case of "const" —

It is same as "let" but more strict.

Example:-

```
let a;  
a = 10;  
console.log(a);
```

→ o/p: - 10



But in case of "Const"

`const b ;
b = 1000 ;` } → this shows Error.

↓
Syntax Error : Missing
initializer in const declaration

→ We can write it only like this : —
const b = 1000 ;

Eg. : —

```
let a = 1900;  
const b = 1000;  
b = 100;  
a = 10;  
console.log(a);
```

→ o/p : — Type Error

↓ i.e.

Assignment to constant
variable.

Q. Difference b/w "Syntax Error", "Reference Error" and "Type Error."

1) Type Error — It is a error of "Const" type
i.e. variable b is of "type const" it
should be declared & initialized together.

2) Syntax Error — Missing syntax i.e. problem with the syntax
e.g. if `const b` of code.

↓ then it should be declared
here only

`const b = 10;`



3) Reference Error — It is the error when JS engine tries to find out a specific variable inside a memory space & we cannot access it.



then it gives reference error.

e.g. `console.log(a);`

`let a = 10;`