

JavaScript Foundations

Important Fundamental
Concepts



All code in
Javascript is
executed inside an
Execution context

The Global

Environment & the Global Object

Global execution context

Variable Environment

this



script4.js — untitled folder

index.html script4.js

script4.js 1

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> window
< Window {0: Window, window: Window, self: Window, document: document, location: Location, customElements: CustomElementRegistry, ...}
> this
< Window {0: Window, window: Window, self: Window, document: document, location: Location, customElements: CustomElementRegistry, ...}
> |

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Execution context

- 1 Whenever a code runs in JavaScript, it runs inside an Execution context.
- 2 The execution context is a wrapper to help manage the code that is running.
- 3 An execution context can contain things beyond what you have written in your code like a **global** object, the **this** variable, and a reference to the outer (lexical) variables environment.

script5.js — untitled folder

tml JS script4.js JS script5.js X JS script6.js JS script3.js ⏪ ⏴ ...

JS script5.js > ...

```
1 var firstName = 'Vivek';
2 var lastName = 'Agarwal';
3
4 function getFullName() {
5
6 }
7
8 var getFirstName = function() {
9 }
10
11 var getLastNames = function() {
12 }
13
14 }
```

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Default levels ▾ 2 Issues: 2 | 1 hidden

> window.firstName
↳ 'Vivek'
> window.lastName
↳ 'Agarwal'
> window.getFullName
↳ f getFullName() {
}
> window.getFirstName
↳ f () {
}
> window.getLastNames
↳ f () {
}
>

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Execution context

- 1 Any code outside a function is in the Global Scope
- 2 Variables and Functions written in the Global Scope, sits on the global object.

The Execution context has two phases

- 1 **CREATION PHASE:** The code is parsed line by line. Grammar of your code is validated, Scopes are setup & Variables and function declarations are initialized in the memory as a key-value pair
- 2 **EXECUTION PHASE:** The real assignment and execution happens at this phase.

A simple example

PHASE - 1

The creation phase of the Global execution context

```
→ function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```

Global execution context

Variable Environment

sayName: function(){ ... }

this



PHASE - 1

The creation phase of the Global execution context

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```



Global execution context

Variable Environment

sayName: function(){ ... }
myVar: undefined

this



PHASE - 2

The execution phase of the Global execution context

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```



Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 'Vivek'

this



Line by line code execution

PHASE - 2

The execution phase of the Global execution context

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```



Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 'Vivek'

this



PHASE - 1

The creation phase of the sayName()'s execution context

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```

sayName()'s execution context

Variable Environment

sayAge: function(){ ... }

this



Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 'Vivek'

this



PHASE - 2

The execution phase of the sayName()'s execution context

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```

sayName()'s execution context

Variable Environment

sayAge: function(){ ... }

this



Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 'Vivek'

this



PHASE - 2

The execution phase of the sayName()'s execution context

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```



```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```



sayAge()'s execution context

Variable Environment

Variable Environment

sayAge: function(){ ... }

this



sayName()'s execution context

Variable Environment

sayAge: function(){ ... }

this



Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 'Vivek'

this



PHASE - 1

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```

The creation phase of the sayAge()'s execution context

sayAge()'s execution context

Variable Environment

this  

sayName()'s execution context

Variable Environment

sayAge: function(){ ... }

this  

Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 36



this  

PHASE - 2

The execution phase of the sayAge()'s execution context

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```

sayAge()'s execution context

Variable Environment

this  

sayName()'s execution context

Variable Environment

sayAge: function(){ ... }

this  

Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 36

this  

PHASE - 2

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```

The execution phase of the sayAge()'s execution context

sayAge()'s execution context

Variable Environment

this  

sayName()'s execution context

Variable Environment

sayAge: function(){ ... }

this  

Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 36

this  

PHASE - 2

The execution phase of the sayName()'s execution context

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```

sayName()'s execution context

Variable Environment

sayAge: function(){ ... }

this



Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 36

this



PHASE - 2

The execution phase of the global execution context

```
function sayName() {  
  console.log('Name: ', myVar);  
  
  function sayAge() {  
    myVar = 36;  
    console.log('Age: ', myVar);  
  }  
  
  sayAge();  
}  
  
var myVar = 'Vivek';  
sayName();
```



Global execution context

Variable Environment

sayName: function(){ ... }
myVar: 36

this



Execution context

- 1 `return` from a function, returns the control of the program to the place where the function was invoked.
- 2 The scope chain is formed based on the lexical scope, meaning the place where the variable .

A more evolved
Example

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 1

The creation phase of the Global execution context

Global execution context

Variable Environment

firstName: undefined



```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 1

The creation phase of the Global execution context

Global execution context

Variable Environment

firstName: undefined
lastName: undefined

this



```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
    var firstName = 'Akash';
    var lastName = 'Sharma';
    var fname = getFirstName();
    var lname = getLastName();
    var fullName = fname + ' ' + lname;
    return fullName;
}

var getFirstName = function() {
    return firstName;
}

var getLastName = function() {
    return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 1

The creation phase of the Global execution context

Global execution context

Variable Environment

firstName: undefined
lastName: undefined
function getFullName() { ... }

this



```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 1

The creation phase of the Global execution context

Global execution context

Variable Environment

firstName: undefined
lastName: undefined
function getFullName() { ... }
getFirstName: undefined

this



```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
    var firstName = 'Akash';
    var lastName = 'Sharma';
    var fname = getFirstName();
    var lname = getLastName();
    var fullName = fname + ' ' + lname;
    return fullName;
}

var getFirstName = function() {
    return firstName;
}

var getLastName = function() {
    return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 1

The creation phase of the Global execution context

Global execution context

Variable Environment

firstName: undefined
lastName: undefined
function getFullName() { ... }
getFirstName: undefined
getLastName: undefined

this



```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
    var firstName = 'Akash';
    var lastName = 'Sharma';
    var fname = getFirstName();
    var lname = getLastName();
    var fullName = fname + ' ' + lname;
    return fullName;
}

var getFirstName = function() {
    return firstName;
}

var getLastName = function() {
    return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 1

The creation phase of the Global execution context

Global execution context



Variable Environment

```
firstName: undefined
lastName: undefined
function getFullName() { ... }
getFirstName: undefined
getLastName: undefined
fullName: undefined
```

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
    var firstName = 'Akash';
    var lastName = 'Sharma';
    var fname = getFirstName();
    var lname = getLastName();
    var fullName = fname + ' ' + lname;
    return fullName;
}

var getFirstName = function() {
    return firstName;
}

var getLastName = function() {
    return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 2

The Execution phase of the Global execution context

Global execution context

Variable Environment

firstName: 'Vivek'
lastName: undefined
function getFullName() { ... }
getFirstName: undefined
getLastName: undefined
fullName: undefined

this



Executes your code line by line

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
    var firstName = 'Akash';
    var lastName = 'Sharma';
    var fname = getFirstName();
    var lname = getLastName();
    var fullName = fname + ' ' + lname;
    return fullName;
}

var getFirstName = function() {
    return firstName;
}

var getLastName = function() {
    return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 2

The Execution phase of the Global execution context

Global execution context

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
function getFullName() { ... }
getFirstName: undefined
getLastName: undefined
fullName: undefined

this



Executes your code line by line

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 2

The Execution phase of the Global execution context

Global execution context

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
function getFullName() { ... }
getFirstName: undefined
getLastName: undefined
fullName: undefined

this



Executes your code line by line

```

var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);

```

PHASE - 2

The Execution phase of the Global execution context

Global execution context

Variable Environment

firstName: 'Vivek'
 lastName: 'Agarwal'
 function getFullName() { ... }
 getFirstName: function() { ... }
 getLastName: undefined
 fullName: undefined



Executes your code line by line

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
    var firstName = 'Akash';
    var lastName = 'Sharma';
    var fname = getFirstName();
    var lname = getLastName();
    var fullName = fname + ' ' + lname;
    return fullName;
}

var getFirstName = function() {
    return firstName;
}

var getLastName = function() {
    return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 2

The Execution phase of the Global execution context

Global execution context



Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
function getFullName() { ... }
getFirstName: function() { ... }
getLastName: function() { ... }
fullName: undefined

Executes your code line by line

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
    var firstName = 'Akash';
    var lastName = 'Sharma';
    var fname = getFirstName();
    var lname = getLastName();
    var fullName = fname + ' ' + lname;
    return fullName;
}

var getFirstName = function() {
    return firstName;
}

var getLastName = function() {
    return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

PHASE - 2

The Execution phase of the Global execution context

Global execution context

this  

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
function getFullName() { ... }
getFirstName: function() { ... }
getLastName: function() { ... }
fullName: return value of getFullName()

Executes your code line by line

PHASE - 1

The Creation phase of the getFullName()'s execution context

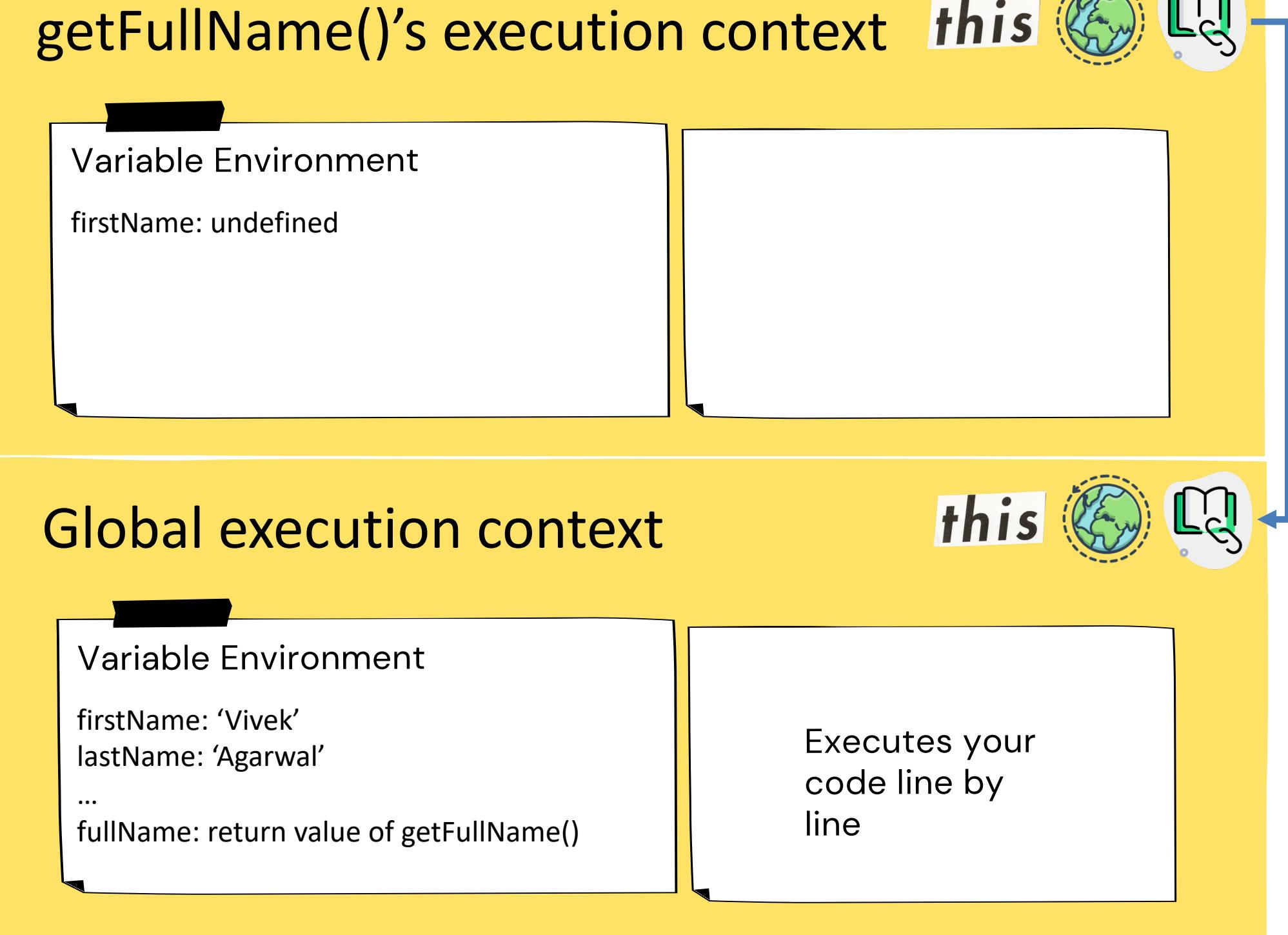
```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```



PHASE - 1

The Creation phase of the getFullName()'s execution context

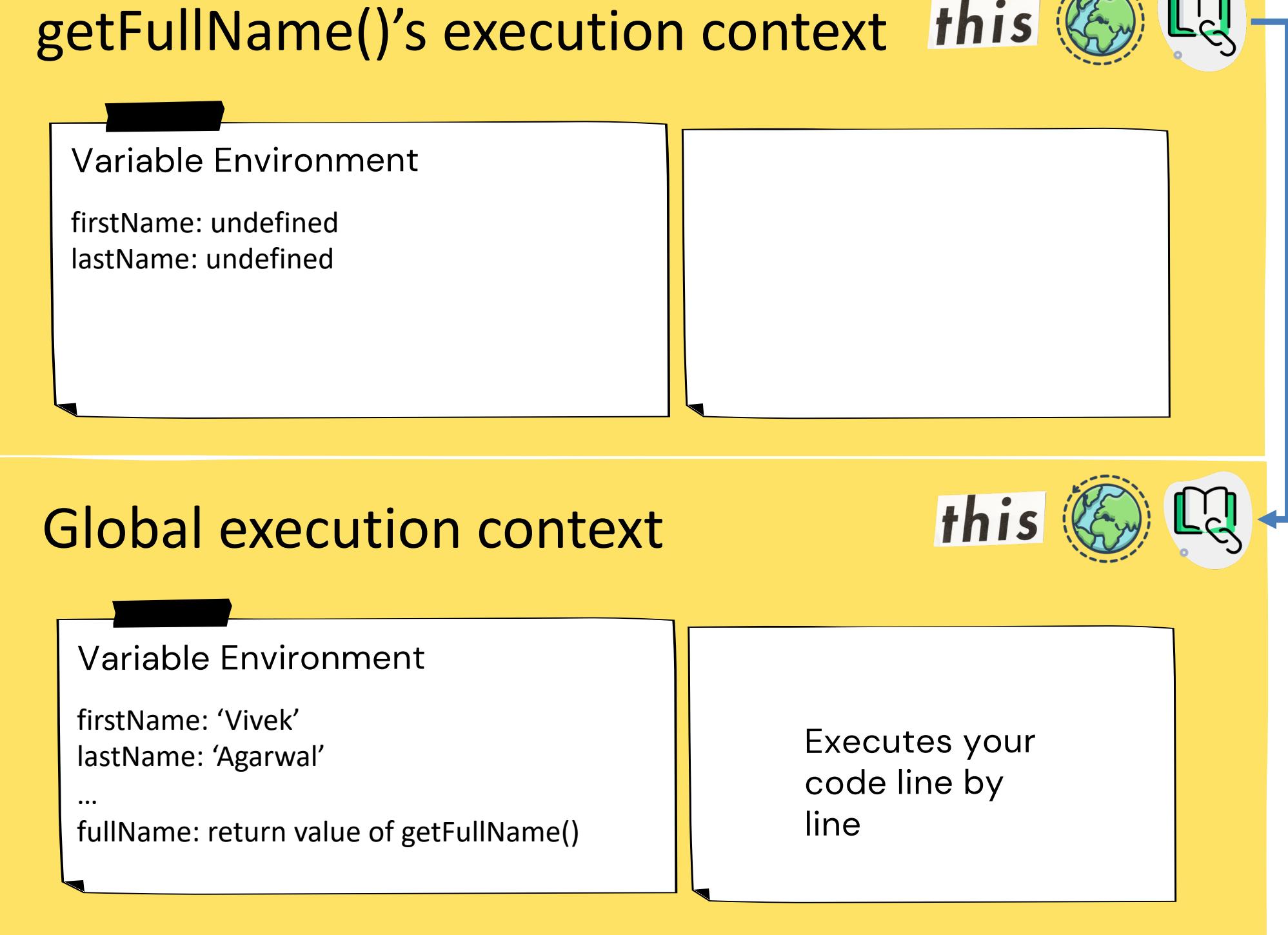
```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```



PHASE - 1

The Creation phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

Variable Environment

firstName: undefined
lastName: undefined
fname: undefined

this



Global execution context

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

this



Executes your
code line by
line

PHASE - 1

The Creation phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

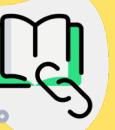
function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastname = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

this  

Variable Environment

firstName: undefined
lastName: undefined
fname: undefined
lname: undefined

Global execution context

this  

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

Executes your
code line by
line

PHASE - 1

The Creation phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

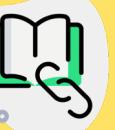
function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastname();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastname = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

this  

Variable Environment

firstName: undefined
lastName: undefined
fname: undefined
lname: undefined
fullName: undefined

Global execution context

this  

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

Executes your
code line by
line

PHASE - 1

The Creation phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastname = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

this  

Variable Environment

firstName: undefined
lastName: undefined
fname: undefined
lname: undefined
fullName: undefined

Global execution context

this  

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

Executes your
code line by
line

PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

Variable Environment

firstName: undefined
lastName: undefined
fname: undefined
lname: undefined
fullName: undefined

Executes your code line by line

Global execution context

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

Executes your code line by line

this



this



PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

Variable Environment

firstName: 'Akash'
lastName: undefined
fname: undefined
lname: undefined
fullName: undefined

Executes your
code line by
line

Global execution context

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

Executes your
code line by
line

this



this



PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: undefined
lname: undefined
fullName: undefined

Global execution context

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

this



this



PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastname = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: return value of getFirstName()
lname: undefined
fullName: undefined

Global execution context

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

this



this



PHASE - 1

The Creation phase of the getFirstName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastname();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastname = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFirstName()'s execution context **this**

Variable Environment



getFullName()'s execution context **this**

Variable Environment



firstName: 'Akash'
lastName: 'Sharma'
fname: return value of getFirstName()
lname: undefined
fullName: undefined

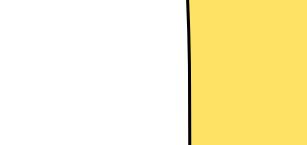
Executes your code line by line

Global execution context

this



Variable Environment



firstName: 'Vivek'
lastName: 'Agarwal'

Executes your code line by line

PHASE - 2

The Execution phase of the getFirstName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastname();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastname = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFirstName()'s execution context **this**

Variable Environment

Executes your code line by line

getFullName()'s execution context **this**

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: return value of getFirstName()
lname: undefined
fullName: undefined

Executes your code line by line

Global execution context **this**

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'

Executes your code line by line

PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: 'Vivek'
lname: return value of getLastName()
fullName: undefined

Executes your
code line by
line

Global execution context

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'

Executes your
code line by
line

this



this



PHASE - 1

The Creation phase of the getLastName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getLastName()'s execution context **this**

Variable Environment

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: 'Vivek'
lname: return value of getLastName()
fullName: undefined

Global execution context **this**

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'

Executes your
code line by
line

PHASE - 2

The Execution phase of the getLastName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getLastName()'s execution context **this**

Variable Environment

Executes your code line by line

getFullName()'s execution context **this**

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: 'Vivek'
lname: return value of getLastName()
fullName: undefined

Executes your code line by line

Global execution context **this**

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'

Executes your code line by line

PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: 'Vivek'
lname: 'Agarwal'
fullName: undefined

Executes your
code line by
line

Global execution context

Variable Environment

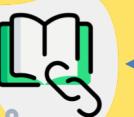
firstName: 'Vivek'
lastName: 'Agarwal'

Executes your
code line by
line

this



this



PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context **this**

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: 'Vivek'
lname: 'Agarwal'
fullName: undefined

Executes your
code line by
line

Global execution context **this**

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

Executes your
code line by
line

PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context **this**

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: 'Vivek'
lname: 'Agarwal'
fullName: 'Vivek Agarwal'

Executes your
code line by
line

Global execution context **this**

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

Executes your
code line by
line

PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context **this**

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: 'Vivek'
lname: 'Agarwal'
fullName: 'Vivek Agarwal'

Executes your
code line by
line

Global execution context **this**

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: return value of getFullName()

Executes your
code line by
line

PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

getFullName()'s execution context **this**

Variable Environment

firstName: 'Akash'
lastName: 'Sharma'
fname: 'Vivek'
lname: 'Agarwal'
fullName: 'Vivek Agarwal'

Executes your
code line by
line

Global execution context **this**

Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: 'Vivek Agarwal'

Executes your
code line by
line

PHASE - 2

The Execution phase of the getFullName()'s execution context

```
var firstName = 'Vivek';
var lastName = 'Agarwal';

function getFullName() {
  var firstName = 'Akash';
  var lastName = 'Sharma';
  var fname = getFirstName();
  var lname = getLastName();
  var fullName = fname + ' ' + lname;
  return fullName;
}

var getFirstName = function() {
  return firstName;
}

var getLastName = function() {
  return lastName;
}

var fullName = getFullName();
console.log(fullName);
```

> Vivek Agarwal

Global execution context



Variable Environment

firstName: 'Vivek'
lastName: 'Agarwal'
...
fullName: 'Vivek Agarwal'

Executes your
code line by
line