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JavaScript Assignment 18



1. What is the difference between a generator and a function?

Generator function is new type of function introduced in ES6 features.

In standard function, once it is called the control remains in the called function until it returns something.

Whereas in Generator function, we can be able to stop or pause the generator function in the middle or many times in the middle. We can also be able to resume it later.

In Generator function the control lies in caller function. Caller function controls the execution of called function.

2. What is the syntax of a generator?

//Generator function syntax

```
function * functionName(parameters) {  
    //body;  
}
```

3. Are function generators iterable in JavaScript?

Yes. Generator function have a yield keyword. Calling a Generator function creates an iterable in javascript.

4. Create a generator for multiplying?

```
> 2 * 2 = ?  
> 4  
> 3 + 3 = ?  
> 6  
> true
```

//generator function

```
function* operation(){  
    console.log("2*2=?");  
    yield 2*2;  
    console.log("3+3=?");  
    yield 3+3;  
}
```

//driver code

```
let control = operation();  
console.log(control.next().value);  
console.log(control.next().value);  
console.log(control.next().done);
```

5. Print an infinite series of natural numbers using a generator.

//Generator function to print infinite series of natural numbers

```
function* series(){  
    let count =1;  
    while(true){  
        console.log(count++) ;  
        yield "stop"  
    }  
}
```

//driver code

```
let control = series();
control.next();
control.next();
control.next();
control.next();
control.next();
control.next();
```

6. Create a generator that can throw an exception.

//generator function that can throw an exception

```
function* gen() {
  while (true) {
    try {
      yield 42;
    } catch (e) {
      console.log('Error caught!');
    }
  }
}
```

//driver code

```
let control = gen();
console.log(control.next());
control.throw(new Error('Something went wrong'));
```