

Memory Leaks in web applications

What are memory leaks?

In essence, memory leaks can be defined as memory that is not required by an application anymore that for some reason is not returned to the operating system or the pool of free memory.

Garbage collection

In computer science, **garbage collection (GC)** is a form of automatic **memory management**. The *garbage collector*, or just *collector*, attempts to reclaim *garbage*, or memory occupied by **objects** that are no longer in use by the **program**.

Leaks in JS

Cyclic references

```
var objA = { prop: "foo", next: null };
```

```
var objB = { prop: "foo", prev: null };
```

```
  objA.next = objB;
```

```
objB.prev = objA;
```

```
var element = document.getElementById('button');
```

```
function onClick(event) {  
  element.innerHTML = 'text';  
}
```

```
element.addEventListener('click', onClick);
```

Accidental global variables

```
function foo(arg) {
```

```
    bar = "this is a hidden global variable";
```

```
}
```