

# What is Java Garbage Collection? 🤔

JAVA GARBAGE COLLECTION AUTOMATICALLY  
REMOVES UNUSED OBJECTS FROM MEMORY TO  
KEEP PROGRAMS EFFICIENT. BUT HOW? LET'S  
EXPLORE!



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# 1 Nulling a Reference

“GOODBYE, OBJECT!” 🙋

Once you set a reference to null, the object becomes eligible for garbage collection,



```
class A{  
  
    public static void main(String[] args){  
        A a = new A();  
        a = null;  
    }  
}
```



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## 2 Re-assigning a Reference

SWITCHING GEARS!" 🔄

The old "10" value is no longer referenced, therefore it's eligible for garbage collection.



```
class A{  
  
    public static void main(String[] args){  
        int x = 10;  
        x = 20;  
    }  
}
```

💡 Nulling a Reference also can consider as Re-assigning a Reference



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# 3 Local Objects in Methods

“SHORT-LIVED GUESTS!” 🕒

Once the method finishes execution, all the method local variables in that method will be eligible for garbage collection. In here the values 10 & user1



```
class A{  
  
    public static void main(String[] args){  
        int x = 10;  
        String name = "user1";  
    }  
}
```

💡 Nulling a Reference also can be considered as Re-assigning a Reference



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## 4 Isolated Islands

"LOST AND FORGOTTEN!" 🏝️

If group of objects are eligible to garbage collector at same time, it's known as Isolated Islands. In here Even though a and b reference each other, if no other references point to them, they are eligible for garbage collection.



```
class Man {  
    Man man;  
}
```

```
Man a = new Man();  
Man b = new Man();  
a.man = b;  
b.man = a;
```



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# 6: Why Does Garbage Collection Matter? 🚀



"Without it, memory leaks can slow down or crash programs. Java's garbage collector keeps things smooth and efficient!"



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