

```
1 contract Victim {
2     mapping (address => uint) public balances;
3
4     function withdraw() public {
5         uint amount = balances[msg.sender];
6         //call withdraw again
7         msg.sender.call.value(amount)();
8         balances[msg.sender] = 0;
9     }
10 }
```

---

(a) The Vulnerable Program

```
1 contract Attacker {
2     ...
3     function () payable {
4         Victim v;
5         v.withdraw();
6     }
7 }
```

---

Step1: invoke the default callback  
method in the attacker

Step2: Attacker re-invokes the vulnerable  
method in the victim

(b) The Attack Program