

数据结构

```
struct kitty
    dna: u128 //DNA
    id: u128 //猫 id
    owner: Address //猫的主人
    selling: bool //是否正在出售
    price: u256 //出售的价格，只在出售时有效
    parent: Address[] //小猫的父母，是个数组
```

存储

1. kitties: kittens[] //小猫的数组
2. ownership: address => kittens[] //地址对所拥有的小猫的数组的mapping

可调用的函数：

1. create(owner: Address)
2. breed(parentA: Kitty, parentB: Kitty, owner: Address)
3. transfer(kitty: Kitty, from: Address, to: Address)
4. sell(kitty: Kitty, price: u256)
5. buy(kitty: Kitty, buyer: Address)
6. getKittiesByOwner(owner: Address)
7. getAllKitties()

DNA随机生成算法

sha3(blockhash + parentDNA + timestamp)