

An abstract composition on a dark gray background. It features several diagonal lines: a white line in the upper left, a light gray line in the lower left, and a bright pink line in the lower right. The word 'Substrate' is written in a bold, orange, sans-serif font, positioned between the white and light gray lines. The word 'River' is written in the same font and color, positioned between the light gray and pink lines.

Substrate

River

Kitty Auction-002

Creating an Auction

<https://substrate.dev/substrate-collectables-workshop/#/Extras/Auction/creating-an-auction>



Creating an Auction

Auction struct

- kitty_id: Hash kittyId
- kitty_owner: AccountId kitty的拥有者账户
- expiry: BlockNumber 竞拍结束区块
- min_bid: Balance 最小竞拍价格
- high_bid: Balance 最高竞拍价格
- high_bidder: AccountId 竞拍获得者



Notice

可能有许多小猫参与一个开放拍卖，并且在同一块高度结束拍卖。

因此，需要存储一个map: expiry=>actions

有效期限应以**区块数**类型而非以分钟或小时计算，以便我们的拍卖系统可用于其他区块时间不同的链。



Block Number

在实现中，可以读取当前块编号(即块高度)并在块编号类型中设置一个新值。

我们不希望无限长的拍卖，所以我们应该添加一个可变的auctionlimit来限制拍卖的到期期限。您可以将此限制变量设置为BlockNumber。

例如，假设在链中每5秒生成一个块，并且希望24小时作为限制，
可以将其设置为 $(24\text{小时/天} * 60\text{分钟/小时} * 60\text{秒/分钟}) / 5\text{秒/块} = 17280\text{块/天}$ 。

```
let a_future_block_number = T::BlockNumber::sa(17280);
```

稍后，我们将把这个限制与SRML系统模块的当前块高度进行比较：

```
let current_block_number = <system::Module<T>>::block_number();
```



Auction creation

`create_auction()`

- 1- 检查发送方签名
- 2- 检查kitty所有权
- 3- 检查新拍卖的持续时间是否在我们配置的限制之内

初始化Auction

- 1- `high_bid`设置与`min_bid`相同的初始值
- 2- `high_bidder`设置与`kitty_owner`相同的初始值。所以，如果这些默认值没有更新，那就意味着没有人投标。
- 3- 在结束拍卖时，我们将检查出价最高者 \neq `kitty_owner`

The background is dark gray with several diagonal lines. A white line starts from the left and goes up-right. A shorter white line is parallel to it, also up-right. A long, thin gray line starts from the bottom left and goes up-right. A bright pink line starts from the bottom center and goes up-right, crossing the gray line.

Substrate

River

Thanks