

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**

The background is dark gray with several diagonal lines. Two white lines are in the upper left, and two pink lines are in the lower right, all extending from the top-left towards the bottom-right.

**Kitties-006**

# **Refactoring Our Code**

<https://substrate.dev/substrate-collectables-workshop/#/2/refactoring-our-code>



## 公共接口和私有函数

```
impl<T: Trait> Module<T> {  
    // Your functions here  
}
```

- 逻辑上功能代码复用
- 创建小猫
- 繁殖小猫
-



例子：

```
decl_module! {
    pub struct Module<T: Trait> for enum Call where origin: T::Origin {
        fn adder_to_storage(origin, num1: u32, num2: u32) -> Result {
            let _sender = ensure_signed(origin)?;
            let result = Self::_adder(num1, num2);

            Self::_store_value(result)?;

            Ok(())
        }
    }
}

impl<T: Trait> Module<T> {
    fn _adder(num1: u32, num2: u32) -> u32 {
        let final_answer = num1.checked_add(num2).ok_or("Overflow when adding")?;
    }

    fn _store_value(value: u32) -> Result {
        <myStorage<T>>::put(value);

        Ok(())
    }
}
```



You turn

```
fn mint(to: T::AccountId, kitty_id: T::Hash, new_kitty: Kitty<T::Hash, T::Balance>) -> Result {  
    // ACTION: Refactored code goes here  
    // NOTE: Some variables have been renamed to generalize the function  
    //     In the end, you should remember add the following call to `create_kitty()`:  
    //     `Self::mint(sender, random_hash, new_kitty)?`  
    // HINT: This `mint()` function has checks which could fail AND will write to storage, so place it carefully  
  
    Ok()  
}
```



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**