

unity test mock and rakefile

Rui Sun

what will happen when run a c program

1.write a c program

it has some classes

and every class has many functions or procedures

2.compile c program

computer will find the dependency among the functions and classes

3.only find the dependency computer can excuse the right sequence

(use makefile to find the right sequence , like our goal use rakefile)



why we use unity test

1. a C program has some classes and functions or procedures, if i want to test a function, have i to run the whole program. (it cost too much time memory and cpu)



why we use unity test

program 1(source)

```
#include p1
```

```
#include p2
```

```
function1()
```

```
{  
}
```

```
function2()
```

```
{
```

```
call function4()
```

```
{
```

```
function3()
```

```
{  
}
```

program 2(source)

```
#include p2
```

```
function4()
```

```
{  
}
```

```
function5()
```

```
{
```

```
{
```

```
function6()
```

```
{  
}
```



why we use unity test

1. I only want to test function 2

so we can write a unity test `:test(function2)`

and function2 has a dependency about function4

find the dependency and compile both fun2 and fun4 and run fun2 and run fun4 is rakefile's work.(like 2 slide: the procedure of c compile .more detail about rakefile will introduced in the next slide)

2.so unity test is a good way to save our time and it is convenient.



why we use mock

1. embedded system has some sensors
2. if we want to test a program
3. we have to use parameter from sensor
4. but we have to test so many times and the sensors have to run so many times
5. so it will cause damage to sensors.



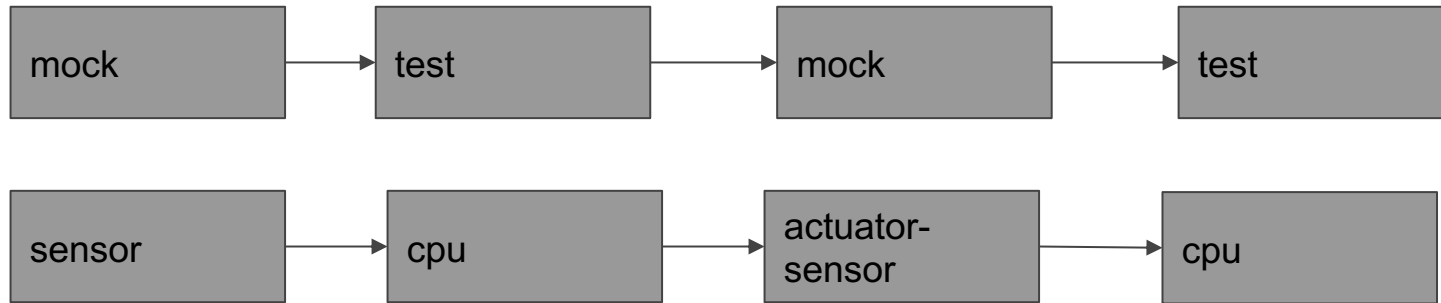
why we use mock

so we use mock to substitute the real sensors

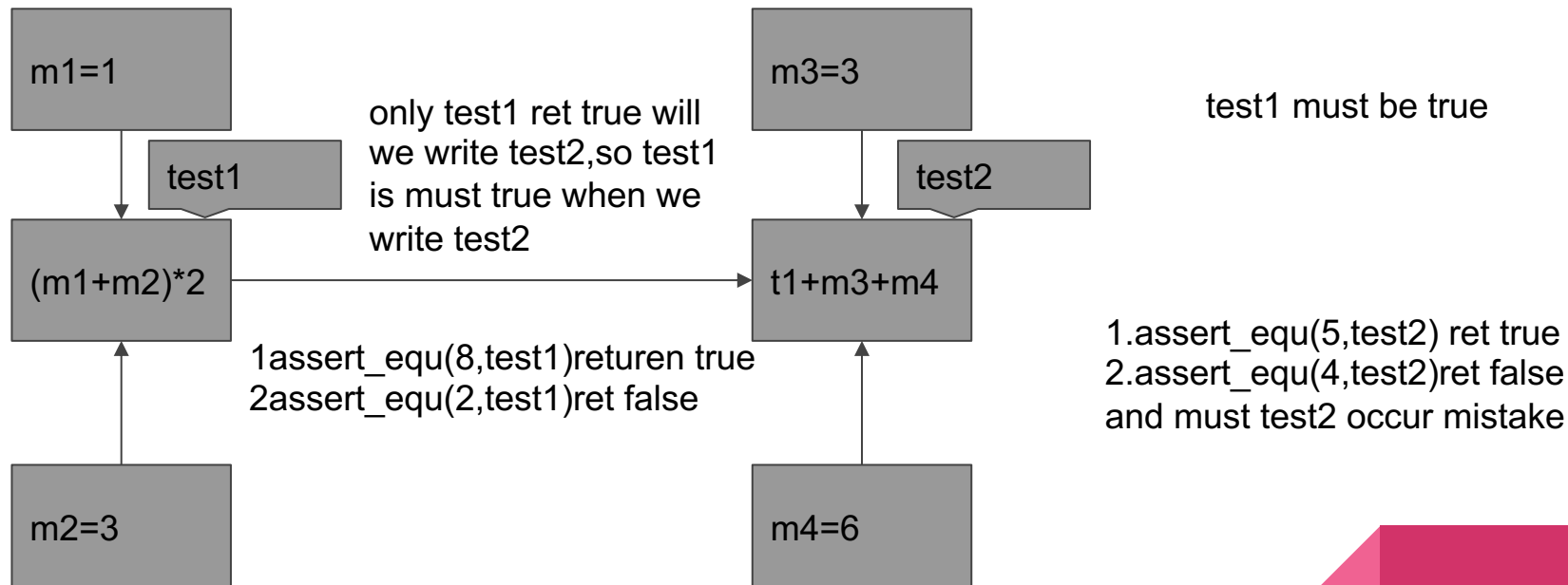
in embedded system in some ways we can consider mocks is sensors



why we use mock



why we use unity test with mock



we can also consider the the value of m is the parameter from a real sensor

why we use rakefile (linker)

there are two situations to use rakefile (linker)

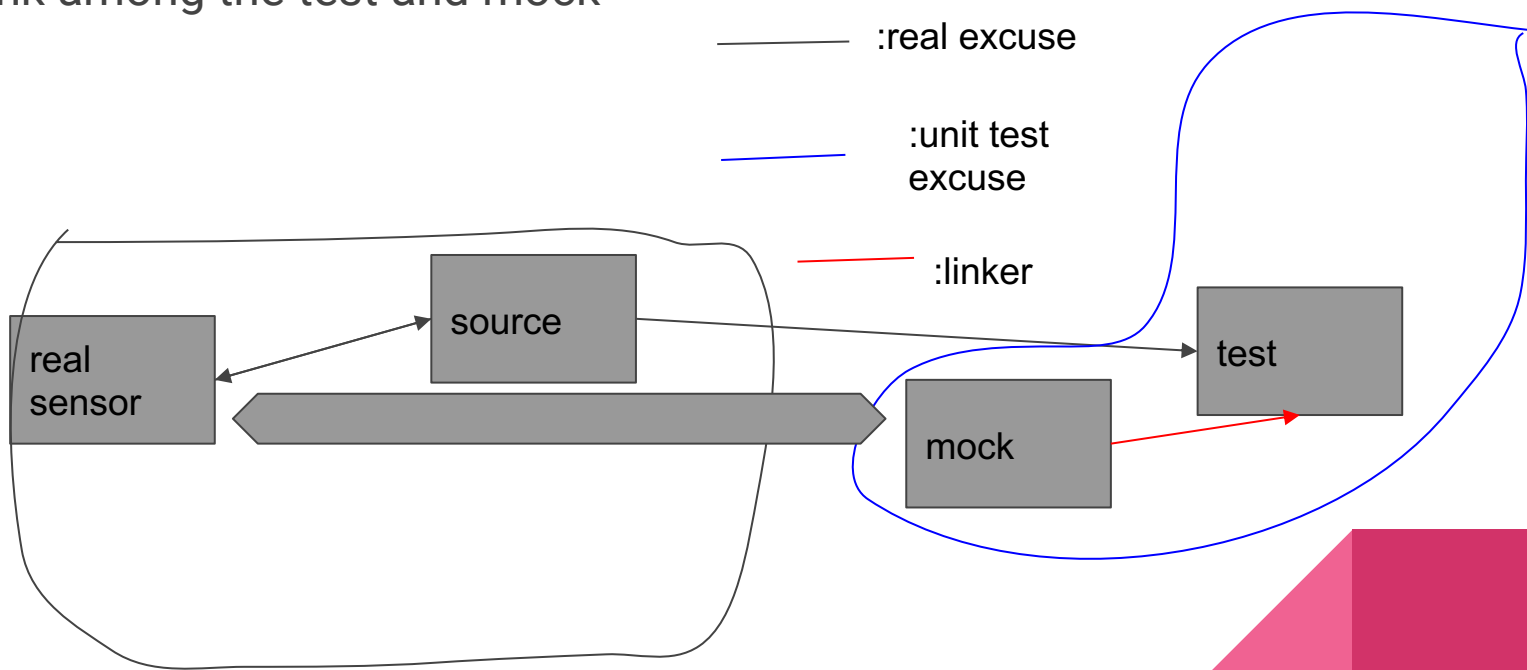
1.link among the test and mock

2.link among the test



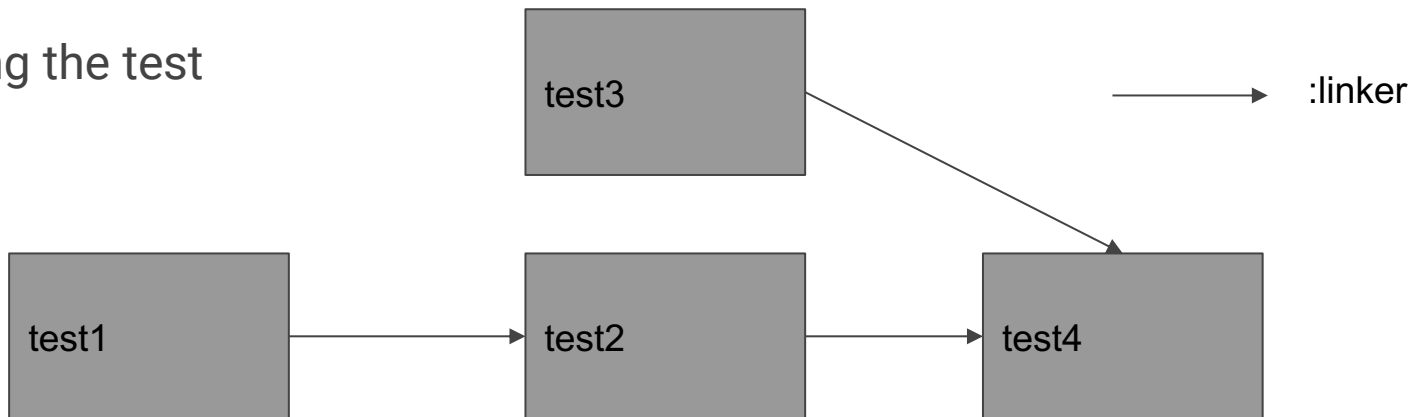
why we use rakefile (linker)

1.link among the test and mock



why we use rakefile (linker)

2.link among the test



if i want to test test2 only
need i compile test1 and
test2

if i want to test test4 need
i compile test3 test4 test
2 and test1

why we use unity test mock and rakefile

