

JS Test Echosystem

编写可测试的代码

Thinking

- 为什么在过去几年很少提前端的单元测试，前端单元测试的难点在哪些方面
- 面向组件化开发以后前端单元测试的现状如何
- 前端测试是否也应该进行分层设计和划分
- 目前开源社区的面向JS的单元测试工具和框架

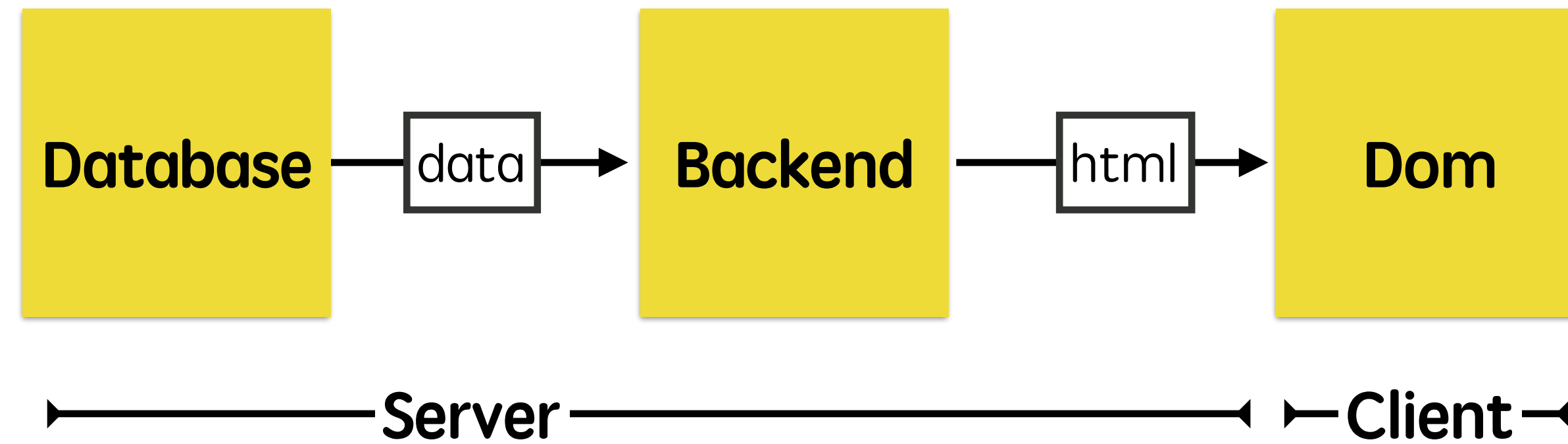


Part 1

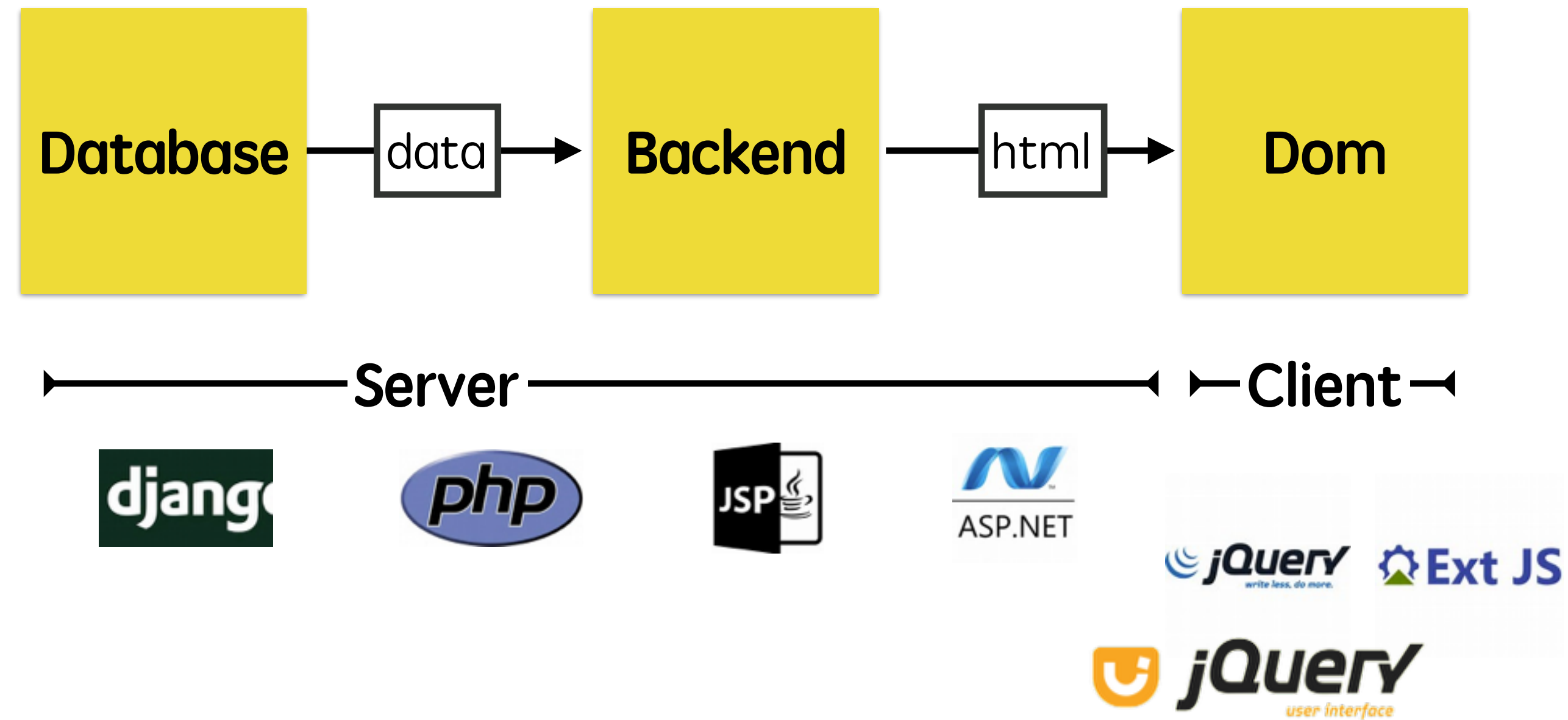
History Of JavaScript

Js测试发展回顾

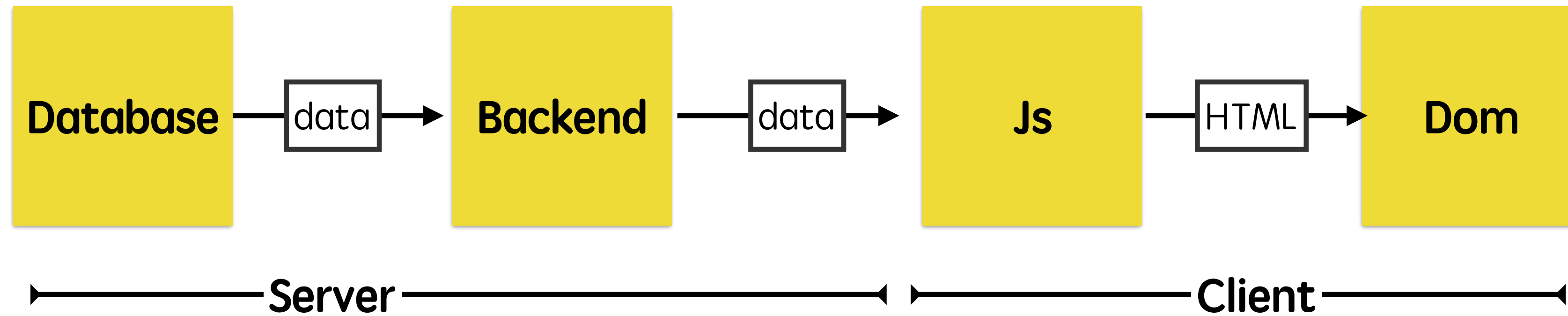
Web 1.0



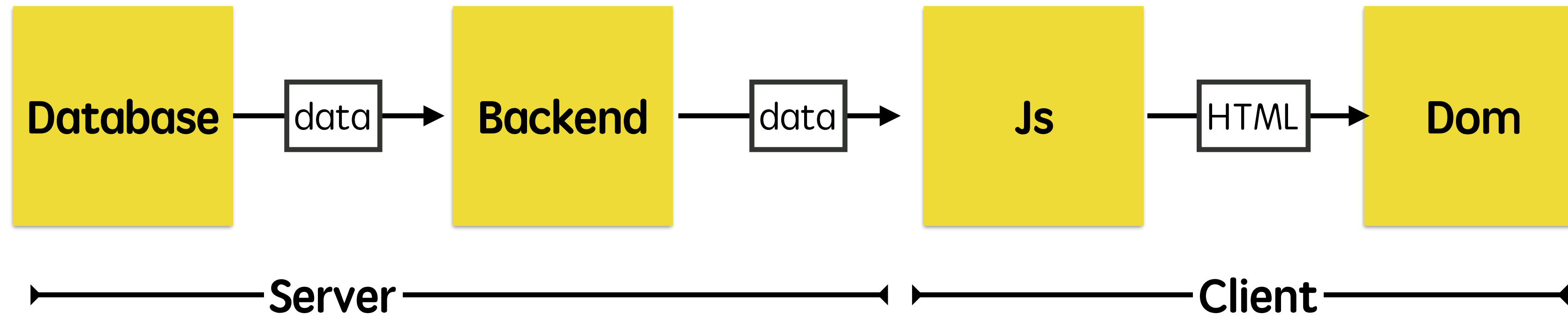
Web 1.0



Web 2.0



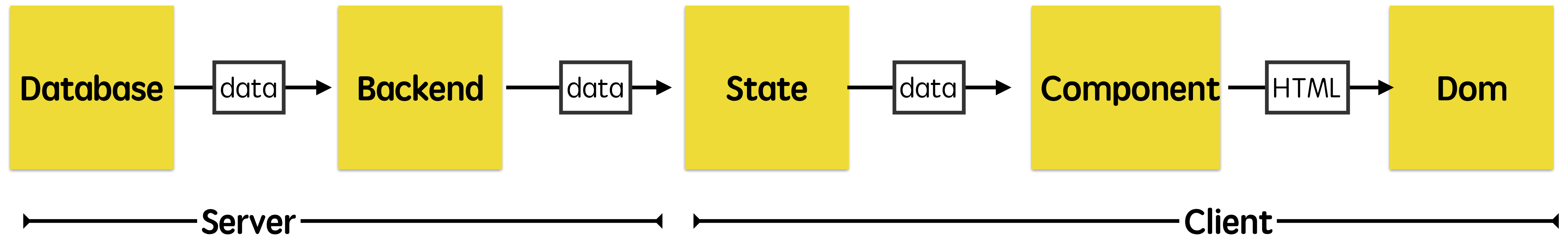
Web 2.0



{ REST }



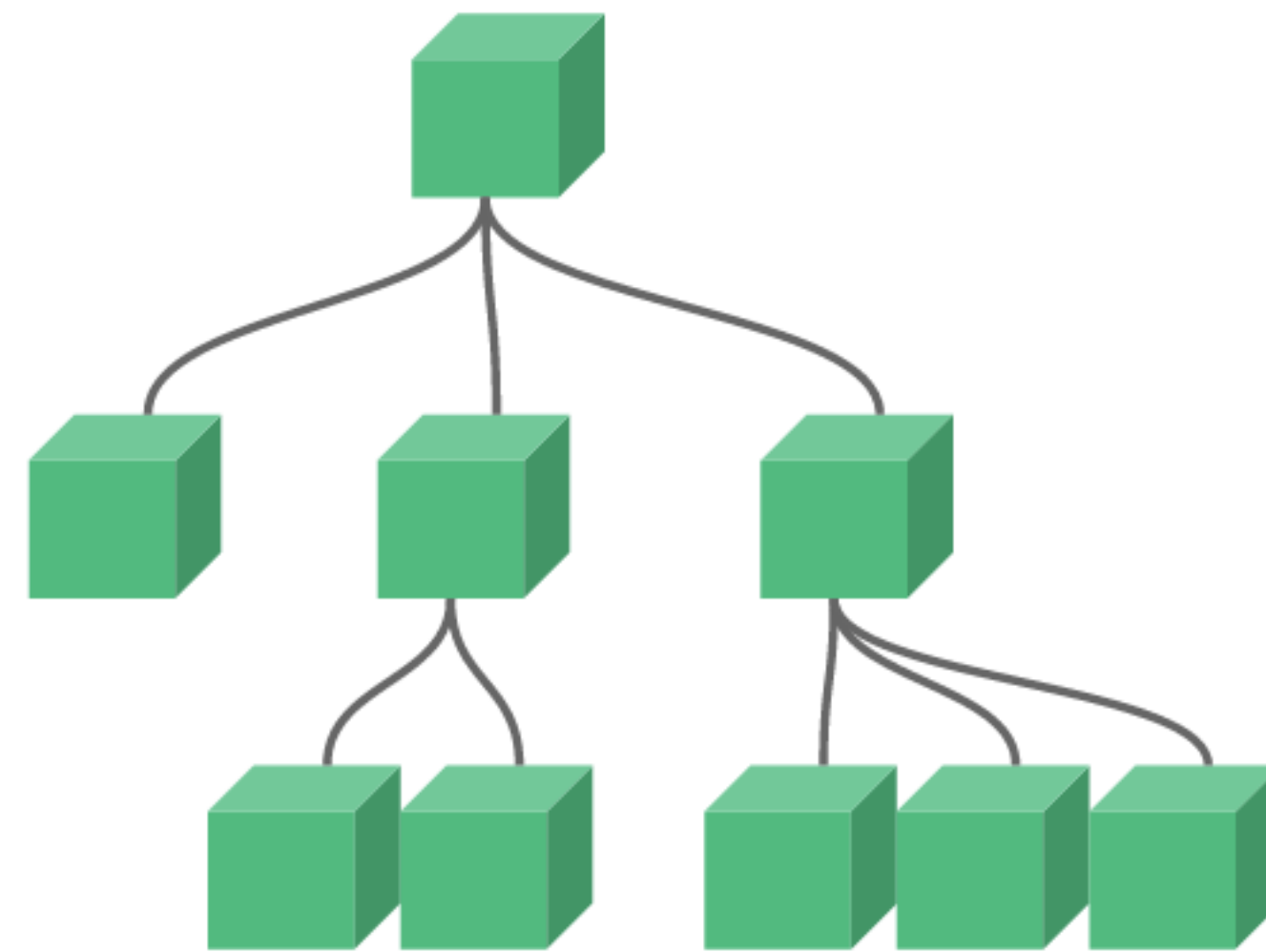
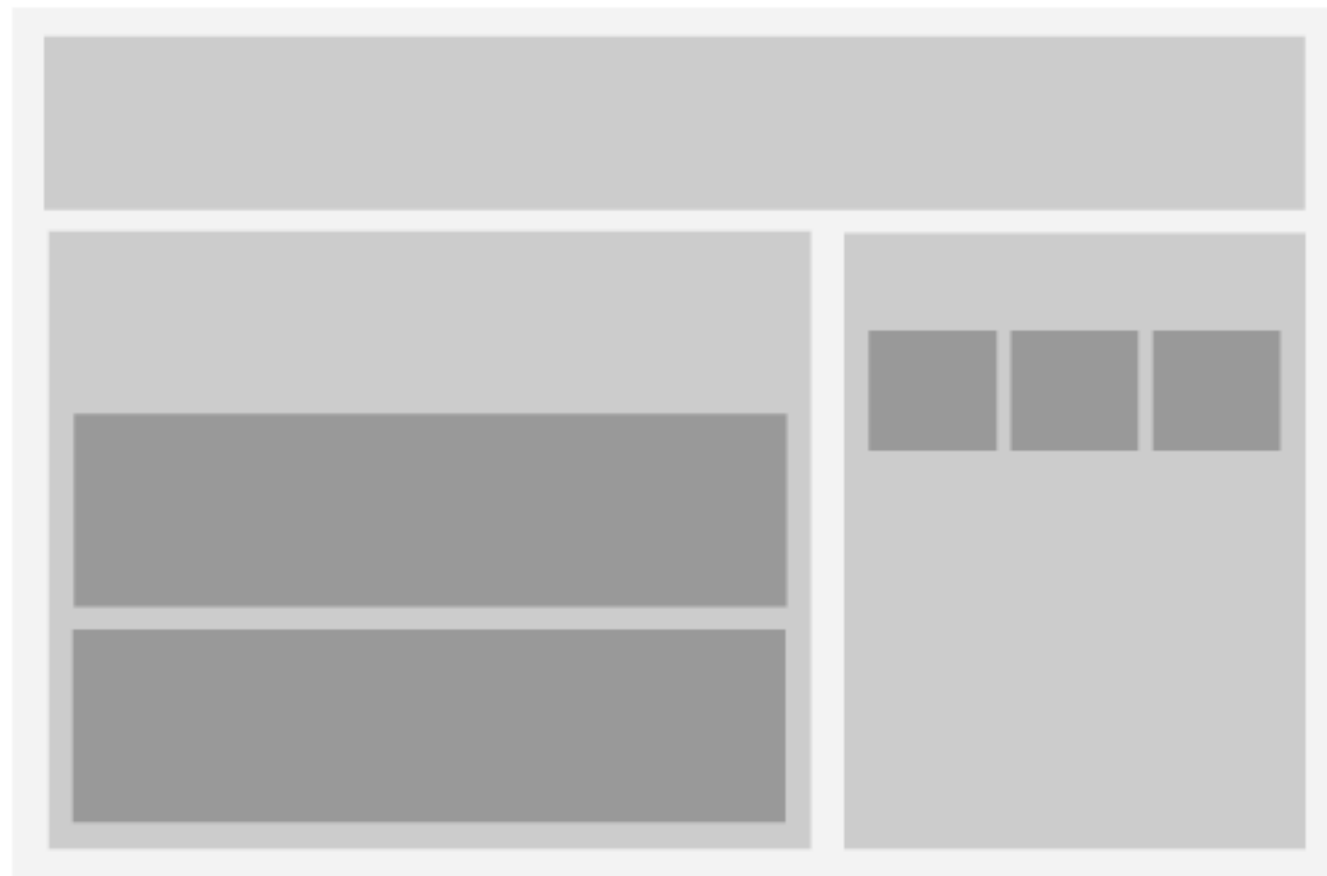
Web 2.x



{ REST }



Web 2.x



Part2

Js Test Echosystem

Js测试生态系统

软件测试四象限

支持开发过程的

评判项目的

业务导向的

技术导向的

自动的

手工的

功能验收测试

演示
易用性测试
探索性测试

单元测试
集成测试
系统测试

非功能验收测试：
容量测试
安全性测试等

自动的

自动/手工的

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自动的

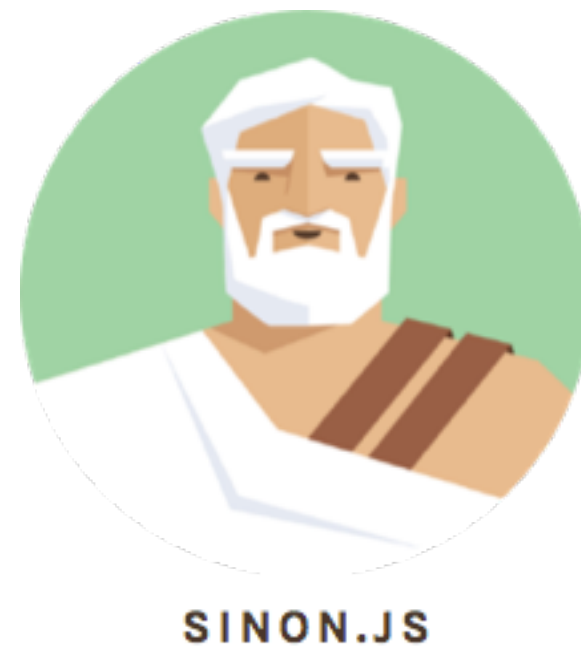
自动/手工的

技术导向的

Js Test Echo System



Should.js

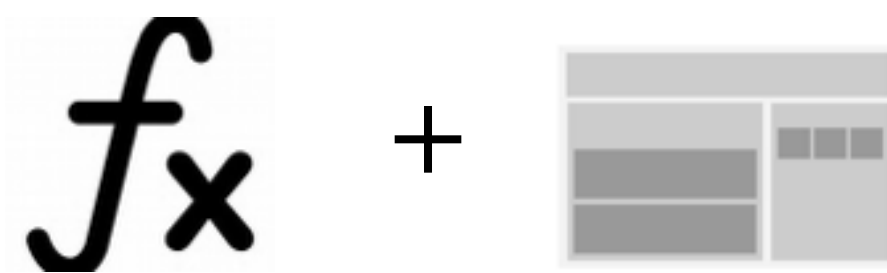


Expect.js

Js Test Echosystem

Unit Test

支持开发过程的

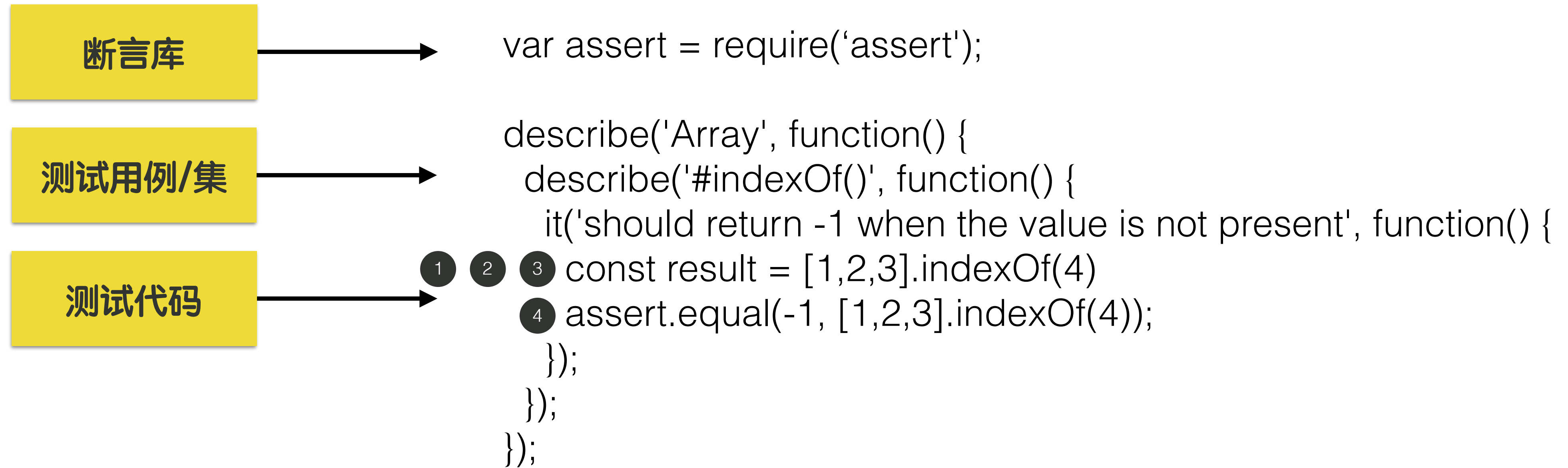


End2End Test

评判系统的



Js Test Echosystem



GIVEN

- 1 test data
- 2 mock/stub

WHEN

- 3 test logic

THEN

- 4 assert

Js Test Echosystem

Runner

0 environment provision



karma-runner

A simple tool that allows you to execute JavaScript code in multiple real browsers

GIVEN

- 1 test data
- 2 mock/stub

{REST}



SINON.JS

Standalone test spies, stubs and mocks for JavaScript.
Works with any unit testing framework

WHEN

3 test logic



mochas

Mocha is a feature-rich JavaScript test framework running on Node.js and in the browser

THEN

4 assert



Chai is a BDD / TDD assertion library for node and the browser that can be delightfully paired with any javascript testing framework.

Js Test Echosystem

Runner

0 environment provision



KARMA

karma-runner

A simple tool that allows you to execute JavaScript code in multiple real browsers

GIVEN

- 1 test data
- 2 mock/stub

{REST}|

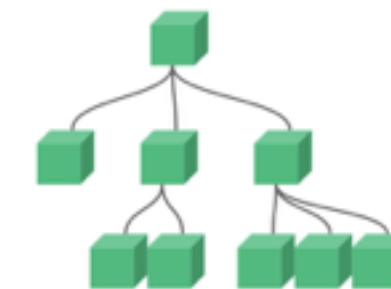


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PhantomJS is a headless WebKit scriptable with a JavaScript API. It has fast and native support for various web standards: DOM handling, CSS selector, JSON, Canvas, and SVG

Js Test Echosystem

Unit Test

支持开发过程的



KARMA



End2End Test

评判系统的



Part3

Examples 示例



Examples 02: QUnit

```
(function(){

    //页面刷新或者管理事件
    $(window).bind('beforeunload', function(e){
        console.log(e);
        return false;
    });

    //用户列表点击处理
    $("#chatMember").delegate(".chatListColumn","click", function(){

        $(".chatListColumn").removeClass('active');
        $(this).addClass('active');
        var target = $(this).attr("data-target");
        if(target!=undefined){

            var $target = $(".chatContainer[data-main='"+target+"']");
            var _class = $target.attr("class")
            $("."+_class).hide();//隐藏其他面板
            $target.fadeIn(500);

            //清理消息提示数
            var $info =$(this).find('.label-info');
            var num =0;
            $info.hide().html(num);

        }

    });

    //点击显示emoji表情列表
    $("body").on('click', '.btn_face', function(e){

        var xx = (e.pageX || e.clientX + document.body.scrollLeft)-290;
        var yy = (e.pageY || e.clientY + document.boyd.scrollTop)-155;
        $("#emoji_face").css("top",yy).css("left",xx).toggle();

    });

});
```

- 事件驱动
- DOM操作
- Ajax局部刷新



Examples 01: QUnit Basic Example



参考资料: <http://qunitjs.com/intro/>

Examples 02: QUnit Example



1

2

3

参考资料: <http://qunitjs.com/intro/>



Examples 02: Mocha



Examples 03: Sinon + Mocha + Chai



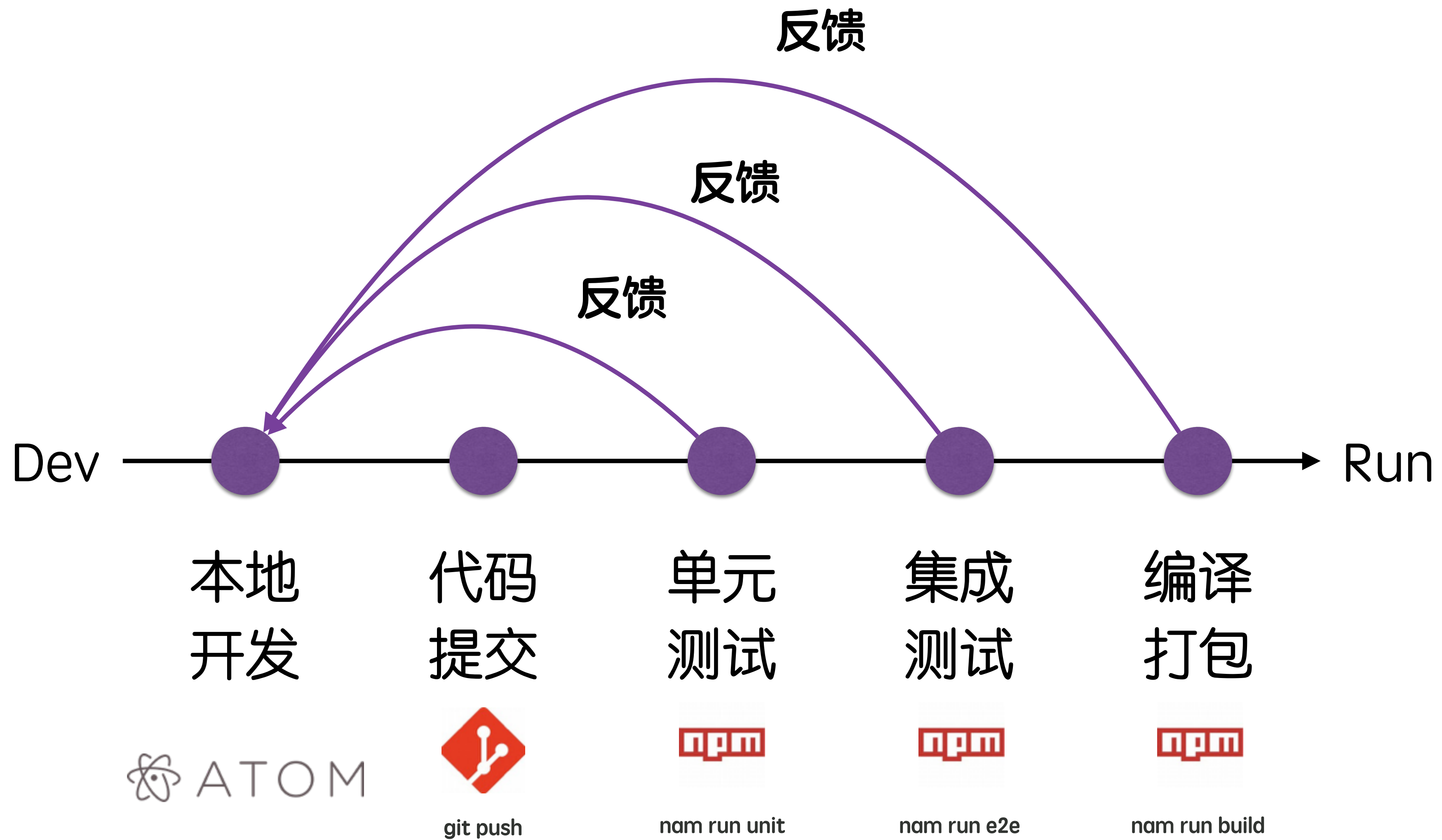
Examples 04: Nightwatch



Examples 0: Vuejs



持续集成



Part5

Discussion

讨论

Thanks

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