

PART 5

Introduction

Front-end vs Back-end

Developer Teams

Technical Methodologies

Quick revision

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- Communicate changes in state

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- Variable performance, especially on mobile

Quick revision

Besides visual appeal, what's the purpose of animation on the web?

- Communicate changes in state

What are the drawbacks of animation?

- Variable performance, especially on mobile
- Can be distracting and slow down experience

Quick revision

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What can / can't be animated?

Quick revision

What can / can't be animated?

- Position, opacity, color **can**

Quick revision

What can / can't be animated?

- Position, opacity, color **can**
- Automatic height **cannot**

Quick revision

What can / can't be animated?

- Position, opacity, color **can**
- Automatic height **cannot**
- Display block / inline **cannot**

Quick revision

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Why do we use timeline animation?

Quick revision

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- Enables complex story boarding

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- Enables complex story boarding
- Can be paused / resumed

Quick revision

Why do we use timeline animation?

- Enables complex story boarding
- Can be paused / resumed
- Can be looped

A brief history of web dev

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A brief history of web dev

- Until the commercialisation of the web in the mid-late 1990s the web was static and there were few, if any, specialist developers
- Until the late 1990s even the biggest companies only had a basic web presence
- The dot-com bubble led to a huge increase in demand for web development

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Introducing CyberDrive

Register today for a free CD-ROM.

What's Hot

Preorder Mac OS 8
Now you can [preorder Mac OS 8](#), described by Macworld as "the most comprehensive update to the Mac OS in years, sporting a bold new look, a speedier Finder, more shortcuts and integrated Internet functions."

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Learn about new Macintosh software releases the moment they become available. Check [Hot Mac Products](#) to hear about programs like Speed Demon, ReBirth RB-338 and QuickCRC.

Newton Connects
Newton, Inc., will enhance network connectivity for Newton-based devices this fall via [Newton Internet Enabler 2.0](#). Ethernet capability can connect devices to Local Area Networks.

Welcome to Mars
See alien terrain in [QuickTime VR movies from](#)

Apple, 1997

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Avalon

Welcome to Model Year 2000

Welcome
Whether you're just looking, or looking to buy, we've built a Web site that illustrates why Toyota's Cars and Trucks are ideal for your life, every day.

What's New

- The All-New **Avalon**: be good to yourself
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Other Toyota Divisions | Privacy Policy

Toyota, 2000

A brief history of web dev

The maturity of the web following the dot-com bust led to the evolution of web development practices including the specialisation of front-end and back-end developers.

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In a nutshell

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- Front-end development is concerned with everything that happens in the browser

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- Back-end development is concerned with everything that happens on the web server

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Demo time

Back-end summarised

- Server, application, database

Back-end summarised

- Server, application, database
- For each request to the server the application will access the database, retrieve any content and then this will be processed and sent to the browser

It's complicated

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- The introduction of Node.JS means we use Javascript on the server (back-end)
- This has also led to a concept called ‘universal’ web applications where front-end and back-end code is shared
- This has led to some merging of the roles

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Wtf is Agile?

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- Agile is meant to be what it sounds like;
Lightweight, fast, flexible, responsive

Wtf is Agile?

- A set of principles for modern software dev
- Agile is meant to be what it sounds like;
Lightweight, fast, flexible, responsive
- Implemented in response to the connected
and frequent nature of software delivery

Principles of agile

Twelve key principles including:

Principles of agile

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- Customer satisfaction by continuous delivery and improvement

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Principles of agile

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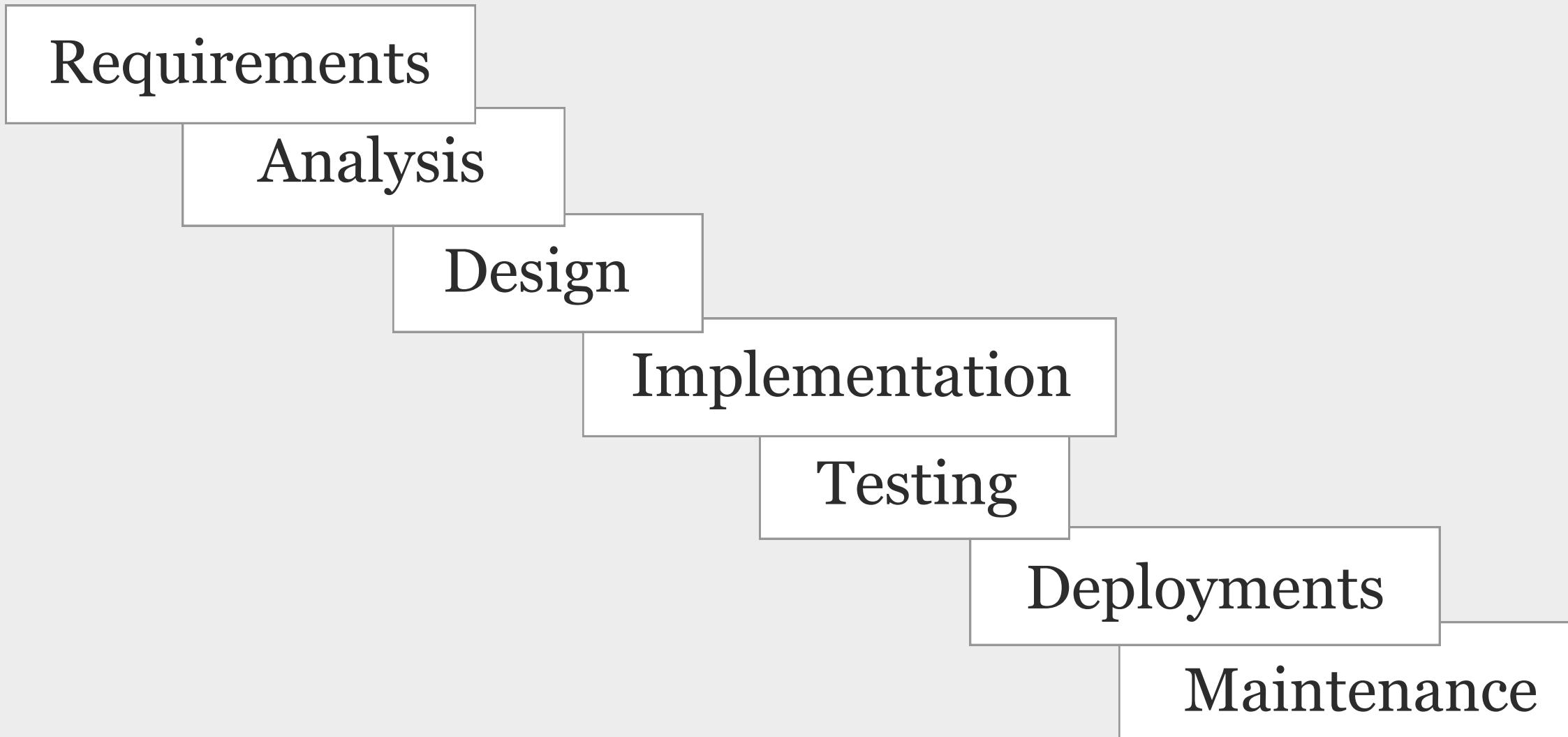
- Customer satisfaction by continuous delivery and improvement
- Close co-operation of design, dev and biz
- Changing requirements are welcome, even late in the project

Agile vs Waterfall

Agile vs Waterfall

Waterfall is an opposing approach that follows a sequential approach and doesn't allow for change or flexibility. If something changes then the process must revert to the start.

Waterfall processes



Agile rituals

Agile rituals

Supporting the principles of agile, the following practices are applied by Nine Digital

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Agile rituals

Supporting the principles of agile, the following practices are applied by Nine Digital

- Daily ‘stand-up’ to allow all team members to understand current progress
- Two-week ‘sprints’ to complete ‘stories’
- Retros at the end of ‘sprints’ to get feedback
- MVP principle

Agile planning and workflow

- Features / requirements are divided into ‘stories’ that are assigned a value to indicate the likely cost of developing that feature
- ‘Stories’ comprise two-week sprints and are assigned to a single developer to own

Which leads to...

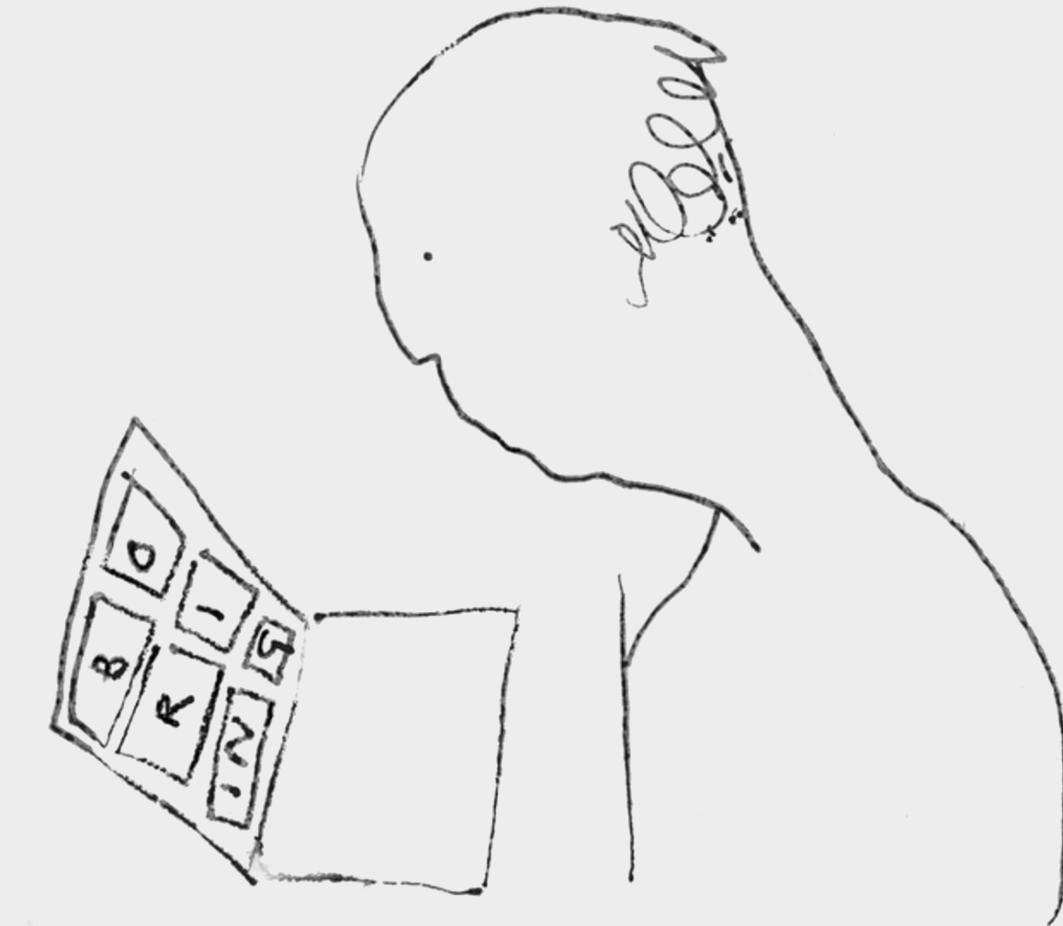
JIRA...

JIRA...

- Extremely boring software

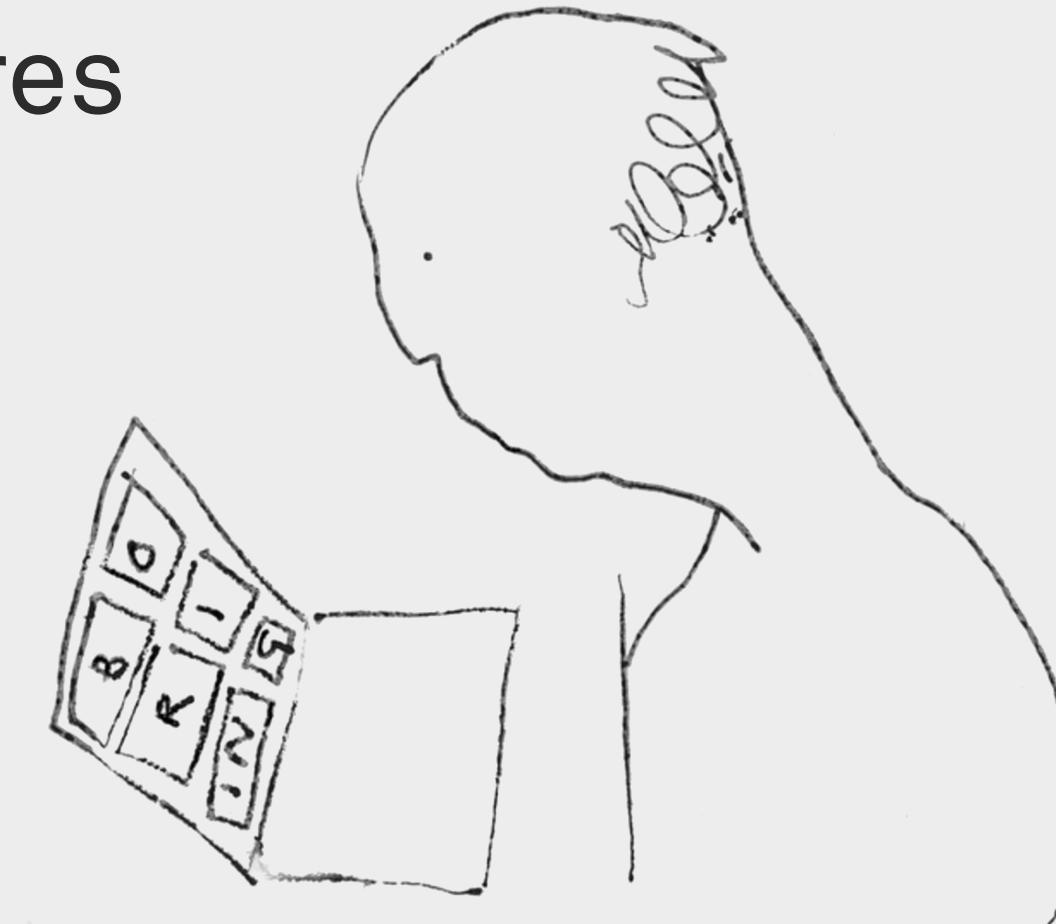
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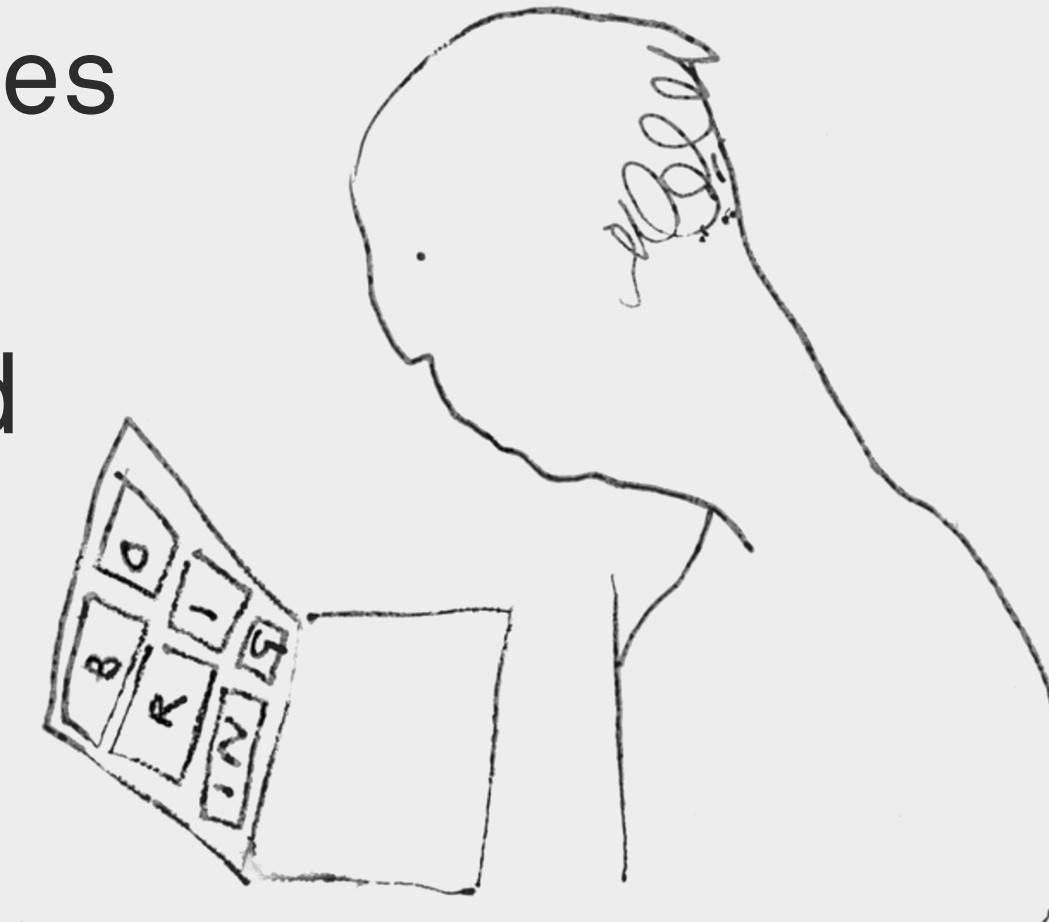
JIRA...

- Extremely boring software
- Tracks all issues / features and assigns developers



JIRA...

- Extremely boring software
- Tracks all issues / features and assigns developers
- All features are assigned using an agile-ish user centred approach



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What is Git?

What is Git?

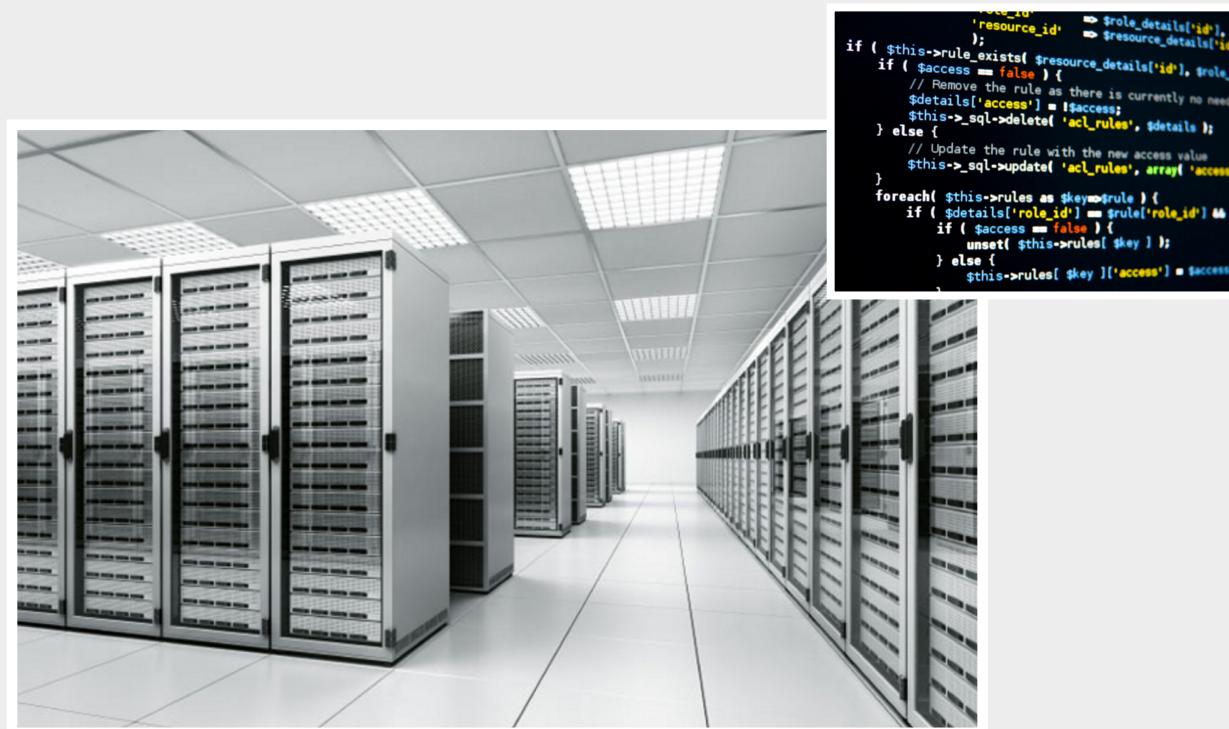
- Git is our version control system

What is Git?

- Git is our version control system
- Version control is like....

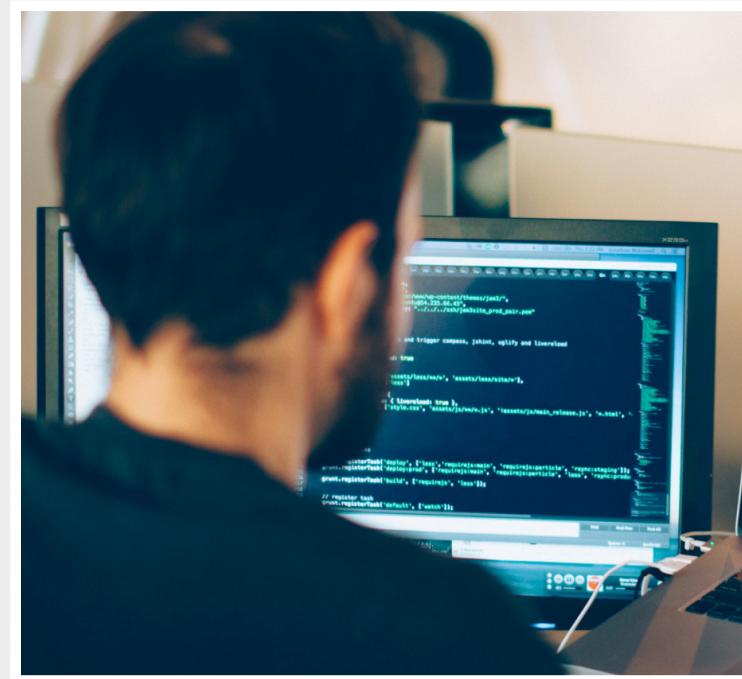
Starting with an application's code...

```
        'role_id'      => $role_details['id'],
        'resource_id'  => $resource_details['id'],
    );
if ( $this->rule_exists( $resource_details['id'], $role_details['id'] ) ) {
    if ( $access == false ) {
        // Remove the rule as there is currently no need for it
        $details['access'] = !$access;
        $this->_sql->delete( 'acl_rules', $details );
    } else {
        // Update the rule with the new access value
        $this->_sql->update( 'acl_rules', array( 'access' => $access ), array( 'role_id' => $role_details['id'], 'resource_id' => $resource_details['id'] ) );
    }
}
foreach( $this->rules as $key=>$rule ) {
    if ( $details['role_id'] == $rule['role_id'] && $details['resource_id'] == $rule['resource_id'] ) {
        if ( $access == false ) {
            unset( $this->rules[ $key ] );
        } else {
            $this->rules[ $key ]['access'] = $access;
        }
    }
}
```

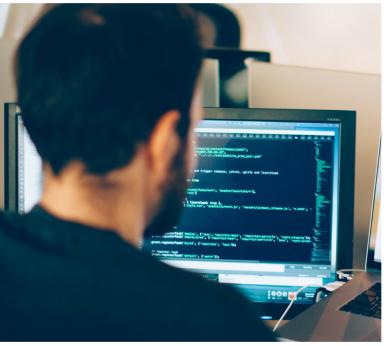


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                    }
                }
            }
        );
    }
}
```

The application code is stored
in a Git repository



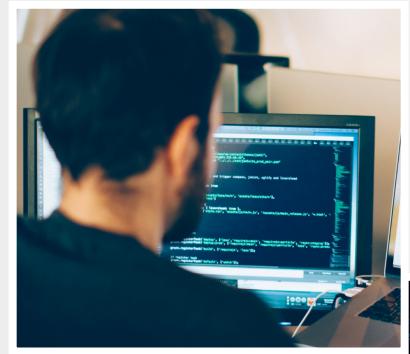
Then consider a developer who
is contributing to a project



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    }
}
```



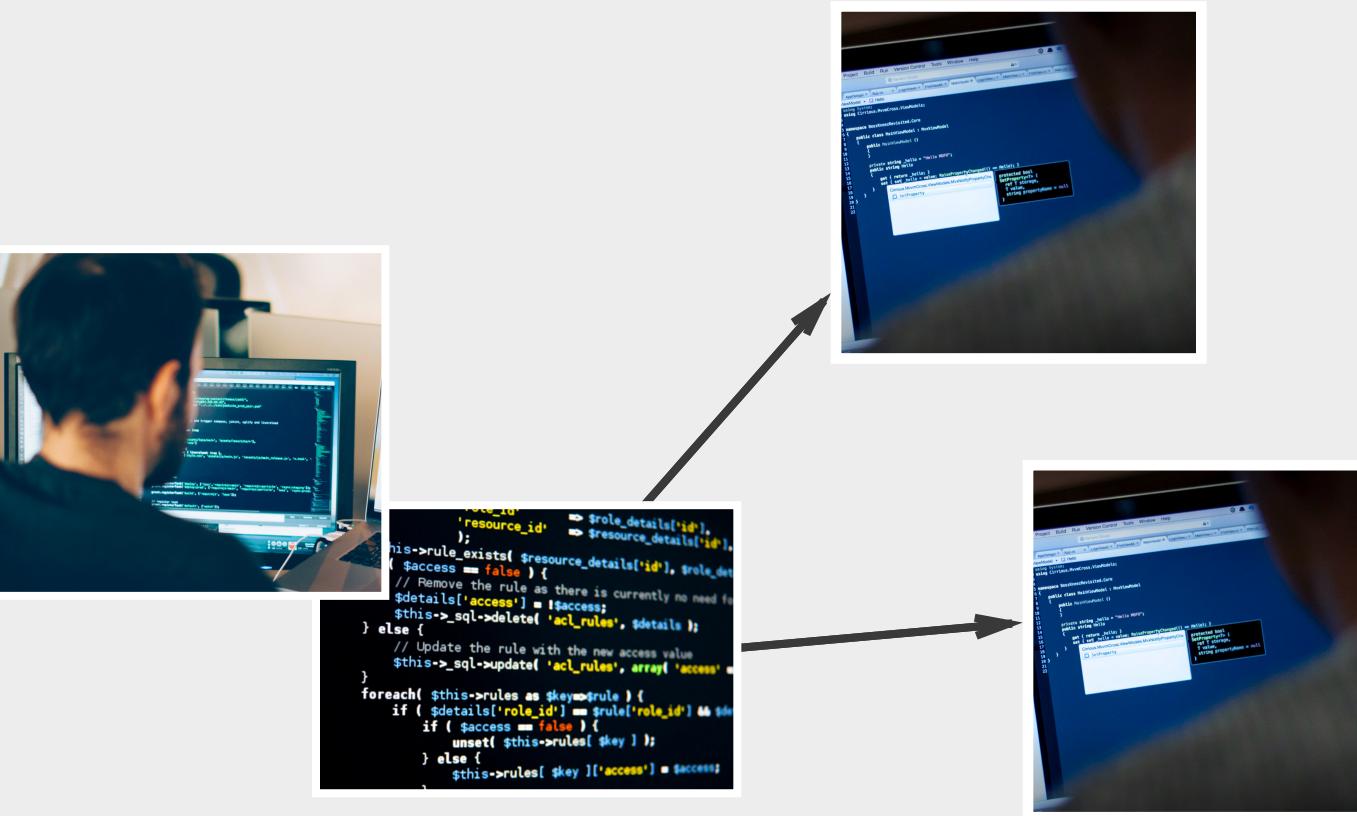
The dev ‘checks-out’ a copy of the code from the Git repository



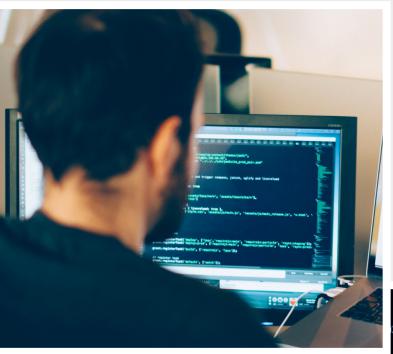
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'role_id' => $role_details['id'],
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if ($rule_exists[$resource_details['id']], $role_details['id']) {
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```

The dev creates a ‘branch’ from ‘master’ and works on this locally



Once the dev is ready they'll submit a 'pull request' to other devs.



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    }
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Once the ‘pull request’ is approved the code will be merged into the ‘master’ branch

Source control

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- Every commit (code change) by a dev is logged
- Pull-request reviews ensure the code on master branch maintains its integrity
- Any changes that cause bugs can be identified and isolated
- Any breaking changes can be wound back as the code can be reverted to any stage

Source control

Demo time



Thank you.