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EXPERIENCE DIGITAL FREEDOM

My First IDE

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About

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This Session

- IDE basics for Drupal

- Using an IDE with other tools (such as Git, Composer, etc.)

- Setting up and using a Debugger

- Standardizing your project team's approach to development

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Overview

Ways to Write Code

1. Terminal
2. Text Editor
3. IDE

What is an IDE?

An integrated development environment (IDE) is a software application that provides comprehensive facilities to computer programmers for software development. An IDE normally consists of at least a source code editor, build automation tools and a debugger. Some IDEs, such as NetBeans and Eclipse, contain the necessary compiler, interpreter, or both; others, such as SharpDevelop and Lazarus, do not.

https://en.wikipedia.org/wiki/Integrated_development_environment

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What is an IDE?

Warning: Not all IDEs are optimized for PHP / Drupal development!

Recommended IDEs:
- PHPStorm
- Visual Studio
- Netbeans
- Aptana
- Eclipse (w/ PHP)

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But Mike...

"

Can't I just use Sublime text?

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Yes and No

Sublime Text (and other text editors) are lacking:

- Debugging
- Object Oriented Support
- (lots of other stuff)

Note: there "are" Sublime plugins that can add some / all of this functionality.

In the Drupal World

- Debugging
  - was largely done w/ Devel in D7
  - should be done with XDebug in D8/D9

- Code Completion / Scanning
  - was "just" autocomplete in D7
  - should be based in object oriented PHP in D8/D9

Example: Deprecated Code

Sublime

```
52    /**
53     * {@inheritdoc}
54     */
55    public function access(AccountInterface $account) {
56      $webformStorage = $this->entityManager->getStorage("webform_submission");
57      return $this->determineAccess($account, $webformStorage);
58    }
59
```

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Example: Deprecated Code

PHPStorm

```php
    * {@inheritdoc}
    */
   public function access(AccountInterface $account) {
     $webformStorage = $this->entityManager->getStorage( entity_type_id: "webform_submission");
     return $this->determineAccess($account, $webformStorage);
   }
```

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Take Away 1

A text editor is the wrong tool for the job with object oriented development.

Take Away 2

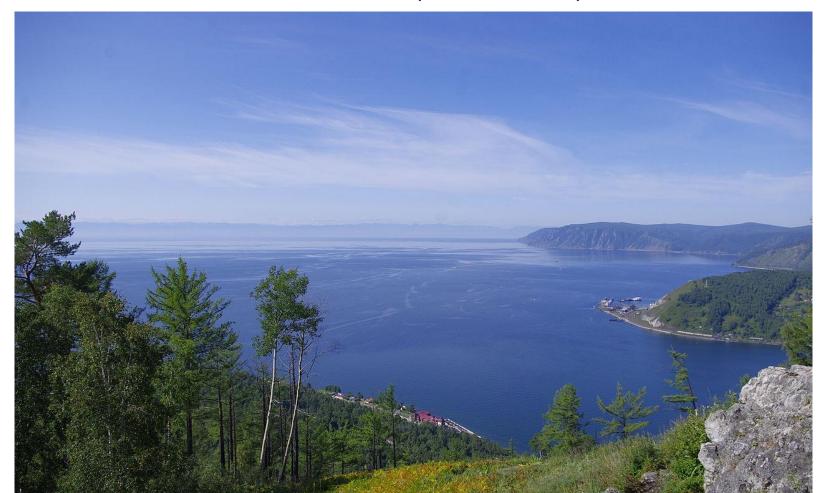I can look at Drupal 8/9 Code and tell if it was written in a properly configured IDE.

In Depth Look at PHPStorm

A bit of Trivia:

What and where is the deepest lake in the world?

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Answer: Lake Baikal in Siberia, Russia @ 5,387 ft

Why are we talking about deep lakes?

— IDEs are incredibly complex but you don't have to know EVERYTHING about them to be successful. (I don't know half of what you can do with PHPStorm).

— "Go as deep as you need to go."

Topics

1. User Interface
2. Files
3. Code Editing
4. Code Completion
5. Deprecation
6. Code Standards

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Recommendations

1. Standardize as a Team
2. Share configuration
   a. Debugging
   b. Editors
3. Classify IDE as part of "Development Environment"
   a. Virtual Machine + IDE

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Other Stuff I Use + IDE

— Git GUI (Source Tree)

— Sublime Text (simple text editing)

— Mac OS Terminal

— Docker Desktop / Vagrant
    — Lando / DDev / Docksal
    — DrupalVM

— SSH Agent / Keys

— Homebrew

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Debugging

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What is a Debugger?

The main use of a debugger is to run the target program under controlled conditions that permit the programmer to track its operations in progress and monitor changes in computer resources (most often memory areas used by the target program or the computer's operating system) that may indicate malfunctioning code. Typical debugging facilities include the ability to run or halt the target program at specific points, display the contents of memory, CPU registers or storage devices (such as disk drives), and modify memory or register contents in order to enter selected test data that might be a cause of faulty program execution.

https://en.wikipedia.org/wiki/Debugger

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Why do you need a debugger?

In D7 you could "usually" dpm the "right thing" on the first or second try.

- Array / Object / Variable
- Obvious from Hook Definition
- Relatively "simple" data model

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Why do you need a debugger?

In D8/D9 you "can" use Devel (with Kint) for this… but you won't get very far.

- – Symfony data model is much more complex
- – Significant "under the hood" stuff that you'll never know about
- – More formal software development methodology

How does a Debugger Work?

1. Provide a link between XDebug / IDE / Browser Session
2. Define a breakpoint in IDE
3. If that code gets executed by PHP, trips and holds
4. Gives you a chance to review the state at that breakpoint
5. Decision:
   a. drill down into code
   b. allow to run (may repeat)
   c. stop processing (kill app)

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Debugging Demo

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Acquia Cloud IDE

- Cloud VM
- IDE
- Associated / Account
- Secure
- Doesn't Require Local Admin

https://www.acquia.com/blog/getting-started-acquia-cloud-ide-code-editor-service

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Automated Accessibility Testing: Using Pa11y and Continuous Integration

Presenter(s): mikemadison

Location: Debug Academy

Primary Video Link: Debug Academy Zoom Room ⧉

Alternate Video Link: Debug YouTube Live - Thursday ⧉

Accessibility is a critical component of any modern website (and double so for government sites).

— Remove from my schedule

Session Track: Design, UX, and Accessibility   **Technical Level:** Beginner

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Stay in Touch!

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Questions

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