

Session #1

Introduction to Laravel

A weekly Laravel Sharing Session by Kometsoft team

Introduction to Laravel Sharing Session

- A regular session (weekly) for our existing & potential customers
- To share about Laravel & Application Development
- A session that covers:
 - Laravel Framework
 - Laravel Ecosystem
 - Application Development Tools & Practices
 - Questions & Answers slot

Agenda

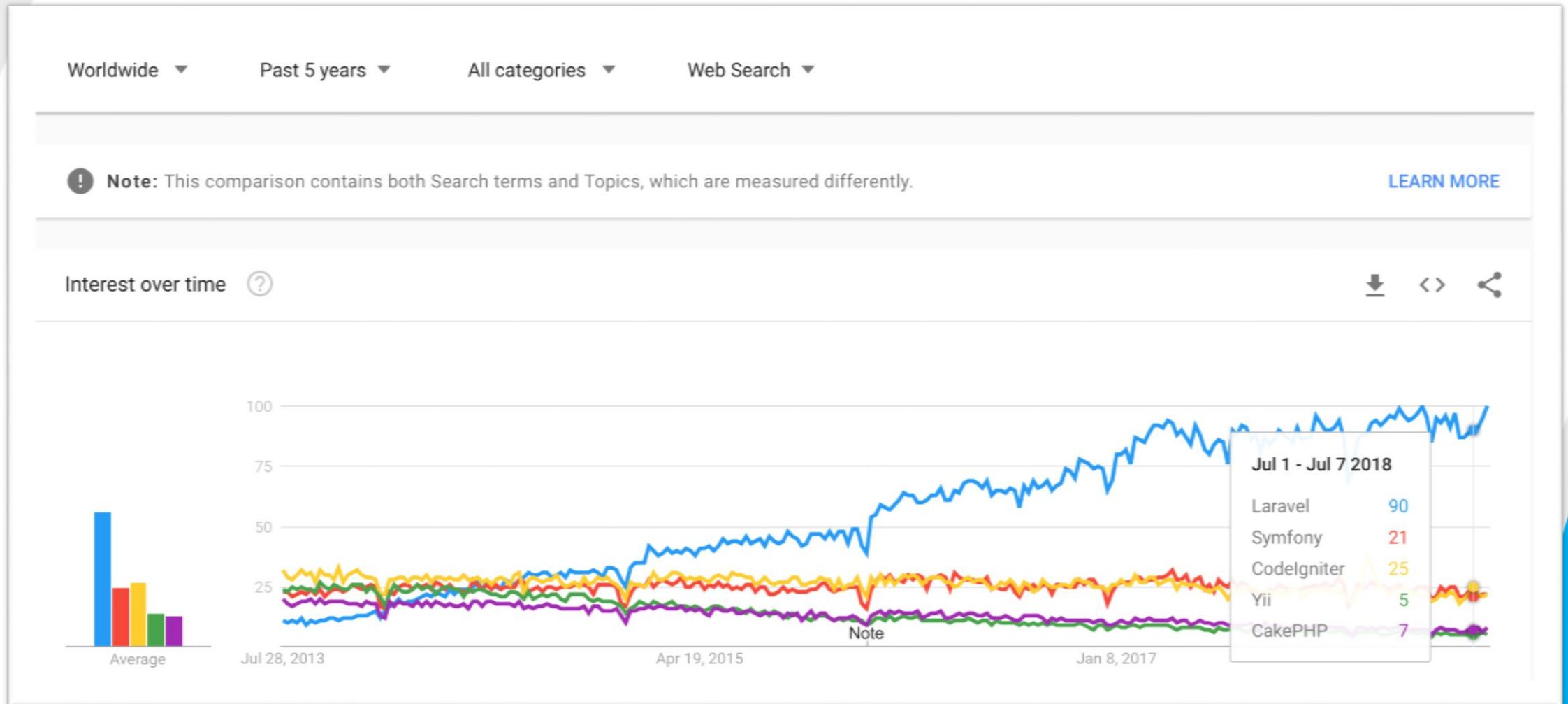
- 2:30 – Introduction to Laravel
- 3:00 – Using Laragon
- 4:00 – Questions and Answers
- 4:30 – Ends

1. What is Laravel?


- PHP Framework
- Open source
- Fully Object Oriented Programming (OOP)
- Created by Taylor Otwell in 2011
- Opiniated framework
 - Selected features / plugin supported out-of-the box

44k Github
stars

2. Most Popular PHP Framework



3. Extensible

- Reusable approach
 - Easier to develop faster, quality code
- Laravel Package
 - Easy to install and update
- Composer 
 - Dependency manager for PHP
 - <http://composer.org>

4. Migration File to create Database tables

Create database tables with version control

- Easy to synchronize structure
- Easy to rollback

```
Schema::create('users', function
(Blueprint $table) {

    $table->increments('id');
    $table->string('name')->index();
    $table->string('email')->unique();

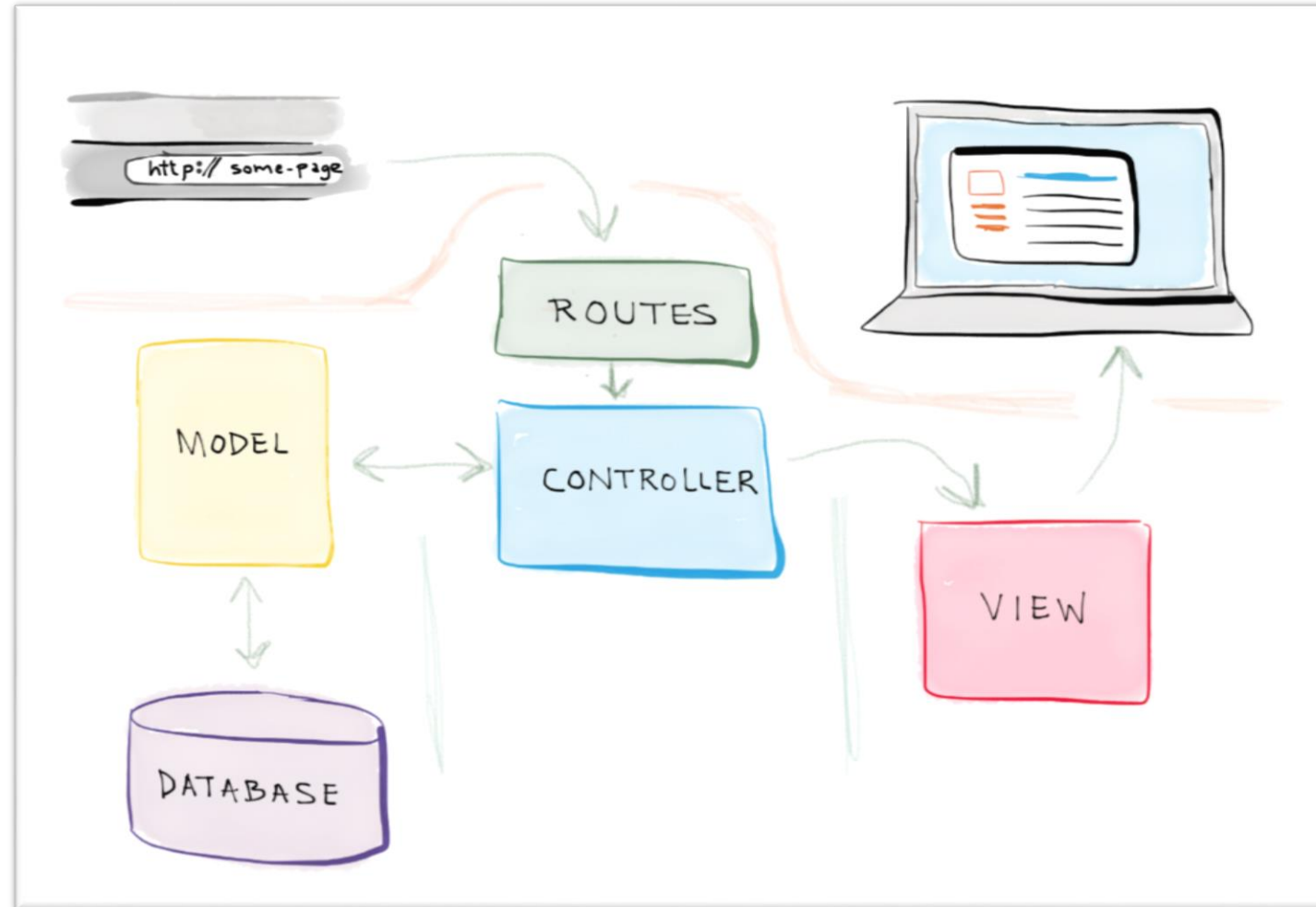
    $table->float('price', 10, 2);
    $table->dateTime('date_approved');

    $table->rememberToken();
    $table->timestamps();

}
```

5. MVC: Model, View, Control

- Model – Eloquent
- View – Blade template
- Control – Controller



5. Eloquent Object Relational Mapping (ORM)

Model to represent an object (or SQL table)

```
php artisan make:model  
User
```

Example: To query all users:

```
<?php  
//in controller  
  
use App\User;  
...  
$users= User::all();  
  
foreach ($users as $user) {  
    echo $user->name;  
}
```

5.1 Eloquent Finding Data

```
use App\User;
```

```
...
```

```
//find user where ID is 3
```

```
User::find(3);
```

```
//find users who are young
```

```
User::where('age', '<', 40);
```

```
//find users who are young, sort by name ASC
```

```
User::where('age', '<', 40)  
    ->orderBy('name', 'ASC');
```

5.1 Updating Data

```
//update user email
User::find(3)->update(
    ['email' => 'ali@gmail.com']
);
```

```
//update the user with siti@gmail.com,
//if not found, create a new user
```

```
User::updateOrCreate(
    ['email' => 'siti@gmail.com'],
    ['lastlogin' => \Carbon::now()]
);
```

5.1 Eloquent Relationship

- Define models' relationship
 - Able to retrieve data together
- Various types
 - One to one
 - One to many
 - Many to many
 - Has many through
 - etc

5.1 Eloquent Relationship

e.g: a School belongs to a State

```
//in Model, define the relationship
class School extends Model{
    public function state() {
        return $this->belongsTo('\App\Models\State');
    }
}
```

```
//retrieve the State using 'with'
$data = School::with('state')->get();
```

5.2 View (using Laravel Blade template)

- Blade is the simple, yet powerful templating engine provided with Laravel

```
//in index.blade.php
```

```
Hello, {{ $name }}.
```

- Still can use `<?php .. ?>` tags

```
The current UNIX timestamp is {{ time() }}.
```

```
@if (count($users) >= 1)
```

```
    At least one user found.
```

```
@else
```

```
    No users found.
```

```
@endif
```

5.2 Blade is extensible

Master layout

in `layouts/app.blade.php`

```
<html>
<body>
... <nav> ... </nav>

<div class="container">
    @yield('content')
</div>

.. <footer> ..</footer>
</body>
</html>
```

//in `login.blade.php`

```
@extends('layouts.app')

@section('content')

<p>This is login form.</p>
<form ....> </form>

@endsection
```


5.3 Controller

- Business Logic (PHP methods only)
- Similar to other frameworks
- Resource Controller (standard methods with URLs)

Actions Handled By Resource Controller

Verb	URI	Action	Route Name
GET	/photos	index	photos.index
GET	/photos/create	create	photos.create
POST	/photos	store	photos.store
GET	/photos/{photo}	show	photos.show
GET	/photos/{photo}/edit	edit	photos.edit
PUT/PATCH	/photos/{photo}	update	photos.update
DELETE	/photos/{photo}	destroy	photos.destroy

6. Local Development Environment

- Virtualization
 - Close to production environment
- Laravel Homestead (pre-packaged Vagrant)
- Vagrant
 - To setup multiple virtual machines
- Laragon 
 - Easy to use Windows (similar to XAMPP)

7. URL Routing

- Laravel has a very powerful URL routing

```
Route::get('foo', function () {  
    return 'Hello World';  
});
```

```
Route::get('/users', 'UserController@index');
```

```
Route::get('/user/{id}', 'UserController@show')  
    ->where('id', '[0-9]+');
```

8. Security

- Laravel has many built-in security features

- Authentication
- Route protection

- Example: Only logged in users can access /users URL

```
Route::get('/users', '..')->middleware('auth');
```

- Guard
- Gates and Policies
- Validation, Cross Site Scripting, CSRF protection

8.1 CSRF (Cross Site Request Forgery)

Built-in CSRF protection:

```
<form method="POST" action="/profile">
```

```
    {{ csrf_field() }}
```

```
</form>
```

```
<meta name="csrf-token" content="{{ csrf_token() }}">
```

9. Authentication

Authentication out-of-the-box

```
php artisan make:auth
```

In view (Blade) file

```
@auth
```

```
// The user is authenticated...
```

```
@endauth
```

```
@guest
```

```
// The user is not authenticated...
```

```
@endguest
```

10. Access Control List (ACL)

- **Laratrust** package that provides the following:
 - Role
 - Permission
 - Guard
 - Gate

11. Front end Scaffolding

- Bootstrap CSS Framework
 - Mobile web / Responsive
- CSS
 - SASS and Less
 - Laravel Mix (to compile into CSS)
- JavaScript
 - Vue JS (vuejs.org)

12. Command Line Generator

- `php artisan <command>`

To make a controller:

```
php artisan make:controller PhotoController
```

To run migration files

```
php artisan migrate  
php artisan migrate:rollback
```


13. Caching Support

- Improved application performance
- Easy to use / switch Cache Backend
 - File system
 - Redis
 - Memcached
 - Database
 - APC

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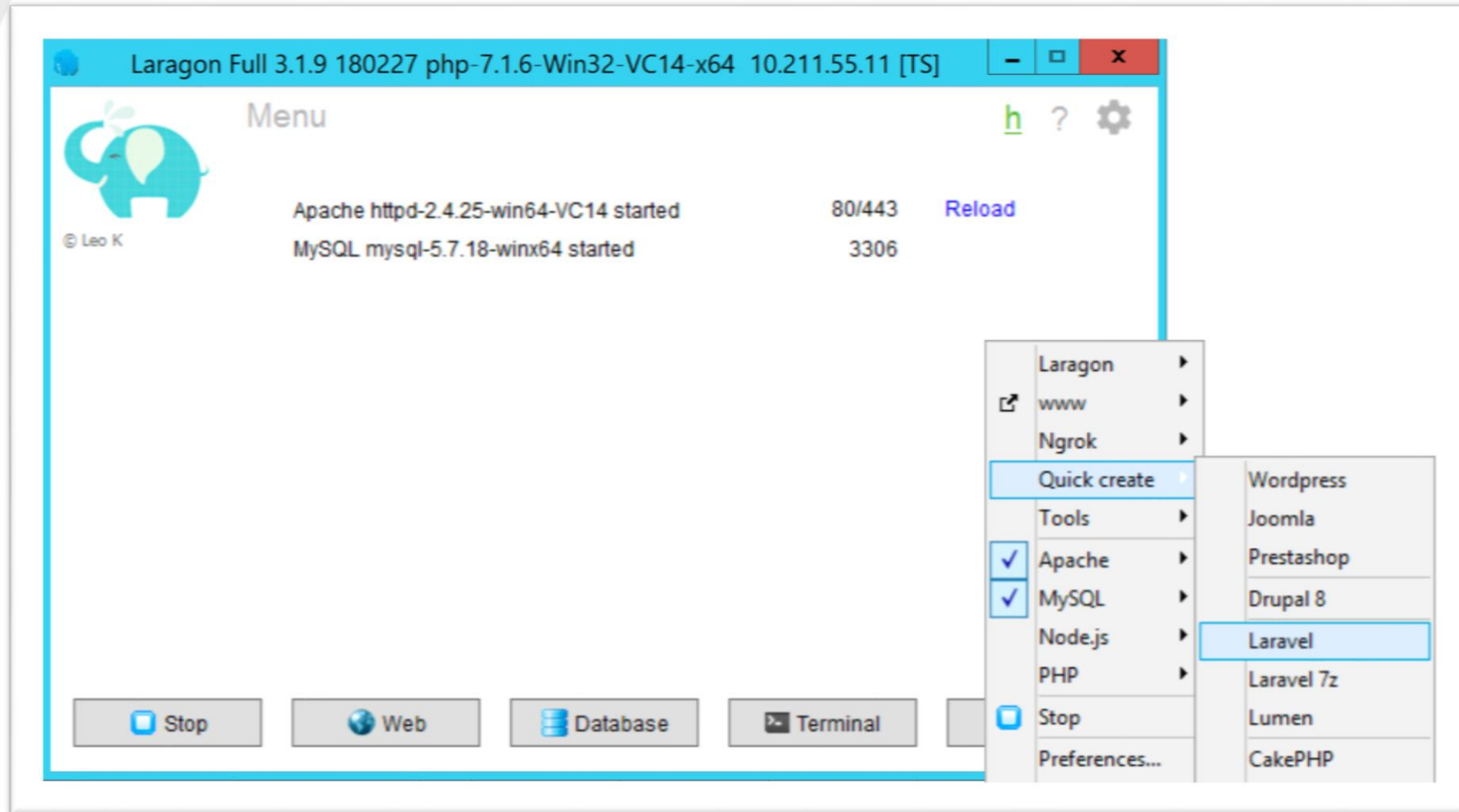
What is Laragon

- A software that allows you to create a development environment on Windows **easily**
- Bundles with:
 - PHP, MySQL, Node.js, Nginx, Redis, Memcache, etc
- Features
 - Pretty URL, eg: <http://mywebsite.local>
 - Quickly create Laravel, Lumen, Wordpress etc
 - Isolated from your existing software

Getting Laragon

- Visit
- <https://laragon.org/download/>
- Choose
 - Laragon WAMP

Creating a Laravel Project



What's next?

- Download this slides from
<https://github.com/kometsoft/laravel-sharing-1>
- Contact us for your Laravel projects
info@kometsoft.com.my

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