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#Creating Responses

Strings & Arrays

All routes and controllers should return a response to be sent back to the user's browser. Laravel provides several different ways to return responses. The most basic response is returning a string from a route or controller. The framework will automatically convert the string into a full HTTP response:

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

In addition to returning strings from your routes and controllers, you may also return arrays. The framework will automatically convert the array into a JSON response:

```
Route::get('/', function () {
   return [1, 2, 3];
```



Did you know you can also return **Eloquent collections** from your routes or controllers? They will automatically be converted to JSON. Give it a shot!

Response Objects

Typically, you won't just be returning simple strings or arrays from your route actions.

Returning a full Response instance allows you to customize the response's HTTP status code and headers. A Response instance inherits from the ${\tt Symfony} \\ {\tt Component} \\ {\tt HttpFoundation} \\ {\tt Response} \ \ class, which provides \ a \ variety \ of \ methods \\ \\$ for building HTTP responses:

```
Route::get('home', function () {
   return response('Hello World', 200)
                 ->header('Content-Type', 'text/plain');
```

Attaching Headers To Responses

Keep in mind that most response methods are chainable, allowing for the fluent construction of response instances. For example, you may use the header method to add a series of headers to the response before sending it back to the user:

```
return response($content)
           ->header('Content-Type', $type)
           ->header('X-Header-One', 'Header Value')
           ->header('X-Header-Two', 'Header Value');
```

Or, you may use the withHeaders method to specify an array of headers to be added

to the response:

Cache Control Middleware

Laravel includes a cache.headers middleware, which may be used to quickly set the Cache-Control header for a group of routes. If etag is specified in the list of directives, an MD5 hash of the response content will automatically be set as the ETag identifier:

Attaching Cookies To Responses

The cookie method on response instances allows you to easily attach cookies to the response. For example, you may use the cookie method to generate a cookie and fluently attach it to the response instance like so:

The cookie method also accepts a few more arguments which are used less frequently. Generally, these arguments have the same purpose and meaning as the arguments that would be given to PHP's native setcookie method:

```
->cookie($name, $value, $minutes, $path, $domain, $secure, $httpOnly)
```

Alternatively, you can use the <code>Cookie</code> facade to "queue" cookies for attachment to the outgoing response from your application. The <code>queue</code> method accepts a <code>Cookie</code> instance or the arguments needed to create a <code>Cookie</code> instance. These cookies will be attached to the outgoing response before it is sent to the browser:

```
Cookie::queue(Cookie::make('name', 'value', $minutes));
Cookie::queue('name', 'value', $minutes);
```

Cookies & Encryption

By default, all cookies generated by Laravel are encrypted and signed so that they can't be modified or read by the client. If you would like to disable encryption for a subset of cookies generated by your application, you may use the <code>\$except</code> property of the <code>App\Http\Middleware\EncryptCookies</code> middleware, which is located in the <code>app/Http/Middleware</code> directory:

```
/**
 * The names of the cookies that should not be encrypted.
 *
 * @var array
 */
protected $except = [
   'cookie_name',
];
```

Redirects

Redirect responses are instances of the Illuminate\Http\RedirectResponse class, and contain the proper headers needed to redirect the user to another URL. There are several ways to generate a RedirectResponse instance. The simplest method is to use the global redirect helper:

```
Route::get('dashboard', function () {
    return redirect('home/dashboard');
```

});

Sometimes you may wish to redirect the user to their previous location, such as when a submitted form is invalid. You may do so by using the global back helper function. Since this feature utilizes the session, make sure the route calling the back function is using the web middleware group or has all of the session middleware applied:

```
Route::post('user/profile', function () {
    // Validate the request...

return back()->withInput();
});
```

Redirecting To Named Routes

When you call the redirect helper with no parameters, an instance of Illuminate\Routing\Redirector is returned, allowing you to call any method on the Redirector instance. For example, to generate a RedirectResponse to a named route, you may use the route method:

```
return redirect()->route('login');
```

If your route has parameters, you may pass them as the second argument to the route method:

```
// For a route with the following URI: profile/{id}
return redirect()->route('profile', ['id' => 1]);
```

Populating Parameters Via Eloquent Models

If you are redirecting to a route with an "ID" parameter that is being populated from an Eloquent model, you may pass the model itself. The ID will be extracted automatically:

```
// For a route with the following URI: profile/{id}
return redirect()->route('profile', [$user]);
```

If you would like to customize the value that is placed in the route parameter, you should override the getRouteKey method on your Eloquent model:

```
/**
  * Get the value of the model's route key.
  *
  * @return mixed
  */
public function getRouteKey()
{
    return $this->slug;
}
```

Redirecting To Controller Actions

You may also generate redirects to <u>controller actions</u>. To do so, pass the controller and action name to the <u>action</u> method. Remember, you do not need to specify the full namespace to the controller since Laravel's <u>RouteServiceProvider</u> will automatically set the base controller namespace:

```
return redirect()->action('HomeController@index');
```

If your controller route requires parameters, you may pass them as the second argument to the action method:

```
return redirect()->action(
    'UserController@profile', ['id' => 1]
);
```

Redirecting To External Domains

Sometimes you may need to redirect to a domain outside of your application. You may do so by calling the away method, which creates a RedirectResponse without any additional URL encoding, validation, or verification:

```
return redirect()->away('https://www.google.com');
```

Redirecting With Flashed Session Data

Redirecting to a new URL and <u>flashing data to the session</u> are usually done at the same time. Typically, this is done after successfully performing an action when you flash a success message to the session. For convenience, you may create a RedirectResponse instance and flash data to the session in a single, fluent method chain:

```
Route::post('user/profile', function () {
    // Update the user's profile...

return redirect('dashboard')->with('status', 'Profile updated!');
});
```

After the user is redirected, you may display the flashed message from the <u>session</u>. For example, using <u>Blade syntax</u>:

Other Response Types

The response helper may be used to generate other types of response instances. When the response helper is called without arguments, an implementation of the Illuminate\Contracts\Routing\ResponseFactory contract is returned. This contract provides several helpful methods for generating responses.

View Responses

If you need control over the response's status and headers but also need to return a <u>view</u> as the response's content, you should use the <u>view</u> method:

```
return response()
->view('hello', $data, 200)
->header('Content-Type', $type);
```

Of course, if you do not need to pass a custom HTTP status code or custom headers, you should use the global view helper function.

JSON Responses

The json method will automatically set the Content-Type header to application/json, as well as convert the given array to JSON using the json_encode PHP function:

```
return response()->json([
    'name' => 'Abigail',
    'state' => 'CA'
]);
```

If you would like to create a JSONP response, you may use the <code>json</code> method in combination with the <code>withCallback</code> method:

```
return response()
    ->json(['name' => 'Abigail', 'state' => 'CA'])
    ->withCallback($request->input('callback'));
```

File Downloads

The download method may be used to generate a response that forces the user's browser to download the file at the given path. The download method accepts a file name as the second argument to the method, which will determine the file name that is seen by the user downloading the file. Finally, you may pass an array of HTTP headers as the third argument to the method:

```
return response()->download($pathToFile);
return response()->download($pathToFile, $name, $headers);
return response()->download($pathToFile)->deleteFileAfterSend();
```

requires the file being downloaded to have an ASCII file name.

Streamed Downloads

Sometimes you may wish to turn the string response of a given operation into a downloadable response without having to write the contents of the operation to disk. You may use the streamDownload method in this scenario. This method accepts a callback, file name, and an optional array of headers as its arguments:

File Responses

The file method may be used to display a file, such as an image or PDF, directly in the user's browser instead of initiating a download. This method accepts the path to the file as its first argument and an array of headers as its second argument:

```
return response()->file($pathToFile);
return response()->file($pathToFile, $headers);
```

#Response Macros

If you would like to define a custom response that you can re-use in a variety of your routes and controllers, you may use the macro method on the Response facade. For example, from a <u>service provider's boot</u> method:

The macro function accepts a name as its first argument, and a Closure as its second.

The macro's Closure will be executed when calling the macro name from a

ResponseFactory implementation or the response helper:

```
return response()->caps('foo');
```

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