Web Development Lab: Middleware

CheckAge Middleware

```
CheckAge.php X
                                                                                     Strategy Control of the Control o
 app > Http > Middleware > ♥ CheckAge.php > ❤ CheckAge > ♦ handle()
                                <?php
                                namespace App\Http\Middleware;
                                use Closure;
                                use Illuminate\Support\Facades\Session;
                                3 references | 0 implementations
                                class CheckAge
                                                  0 references | 0 overrides
                                                  public function handle($request, Closure $next): mixed
        11
        12
                                                  $age = Session::get(key: 'age');
        15
                                                  if ($age < 18) {
                                                                     return redirect(to: '/access-denied');
                                                    } elseif ($age >= 21) {
                                                                     Session::put(key: 'verificationStatus', value: 'Verified');
                                                    } else {
                                                                     Session::put(key: 'verificationStatus', value: 'Unverified');
       23
                                                  return $next($request);
        25
```

➤ The CheckAge middleware checks the user's age from the session. If they're under 18, it redirects them to an access-denied page; if 21 or older, it sets them as 'Verified'; otherwise, they're marked as 'Unverified'. After this, the request continues to the next step.

LogRequests Middleware

```
♣ LogRequests.php X
app > Http > Middleware > ♥ LogRequests.php > ...
      namespace App\Http\Middleware;
      use Illuminate\Http\Request;
      use Symfony\Component\HttpFoundation\Response;
      class LogRequests
            * @param \Closure(\Illuminate\Http\Request): (\Symfony\Component\HttpFoundation\Response) $next
          public function handle(Request $request, Closure $next): Response
               $username = $request->session()->get(key: 'username', default: 'Guest');
               $ipAddress = $request->ip();
               $age = $request->session()->get(key: 'age', default: 'Unknown');
               $verificationStatus = $request->session()->get(key: 'verificationStatus', default: 'Not Verified');
               $logData = sprintf(
                   format: "[%s] %s %s - Username: %s, IP: %s, Age: %s, Verification Status: %s\n",
                   values: now()->toDateTimeString(), // Time
                   $request->method(), // HTTP method (GET, POST, etc.)
                   $request->fullUrl(), // Full URL of the request
                   $username,
                   $ipAddress,
                   $age,
$verificationStatus
```

```
// Proceed with the next middleware/handler in the stack
return $next($request);

}
```

The LogRequests middleware logs important details about each request, like the user's username, IP address, age, and the full URL. It also logs when a user successfully logs in or when access is denied. All the information is saved in a log.txt file, and if it can't write to the file, an error is reported.

Kernel.php

```
🦬 Kernel.php 🗙
app > Http > ♥ Kernel.php > 😝 Kernel > ❤ routeMiddleware
       namespace App\Http;
       use Illuminate\Foundation\Http\Kernel as HttpKernel;
       0 references | 0 implementations
       class Kernel extends HttpKernel
 12
            * @var array
           protected $middleware = [
               \App\Http\Middleware\CheckForMaintenanceMode::class,
               \Illuminate\Foundation\Http\Middleware\ValidatePostSize::class,
               \App\Http\Middleware\TrimStrings::class,
               \Illuminate\Foundation\Http\Middleware\ConvertEmptyStringsToNull::class,
               \App\Http\Middleware\TrustProxies::class,
                                                                 Register middleware as
               \App\Http\Middleware\LogRequests::class,
                                                                 global middleware.
              The application's route middleware groups.
            * @var array
```

```
protected $middlewareGroups = [
    'web' => [
        \App\Http\Middleware\EncryptCookies::class,
        \Illuminate\Cookie\Middleware\AddQueuedCookiesToResponse::class,
        \Illuminate\Session\Middleware\StartSession::class,
        \Illuminate\Session\Middleware\AuthenticateSession::class,
        \Illuminate\View\Middleware\ShareErrorsFromSession::class,
        \App\Http\Middleware\VerifyCsrfToken::class,
        \Illuminate\Routing\Middleware\SubstituteBindings::class,
    'api' => [
        'throttle:api',
        \Illuminate\Routing\Middleware\SubstituteBindings::class,
 * The application's route middleware.
 st These middleware may be assigned to groups or used individually.
 * @var array
0 references
protected $routeMiddleware = [
    'auth' => \App\Http\Middleware\Authenticate::class,
    'auth.basic' => \Illuminate\Auth\Middleware\AuthenticateWithBasicAuth::class,
    'cache.headers' => \Illuminate\Http\Middleware\SetCacheHeaders::class,
    'can' => \Illuminate\Auth\Middleware\Authorize::class,
    'guest' => \App\Http\Middleware\RedirectIfAuthenticated::class,
    'password.confirm' => \Illuminate\Auth\Middleware\RequirePassword::class,
    'signed' => \Illuminate\Routing\Middleware\ValidateSignature::class,
    'throttle' => \Illuminate\Routing\Middleware\ThrottleRequests::class,
    <u>verified' => \Illuminate\Auth\Middleware\EnsureEmailIsVeri</u>fied::class,
    'check.age' => \App\Http\Middleware\CheckAge::class,
    'log.requests' => \App\Http\Middleware\LogRequests::class,
                               Register middleware as route-specific middleware.
```

The **Kernel** class manages middleware in the Laravel app. It includes **global middleware** that runs on every request, like checking for maintenance mode or logging requests, and organizes other middleware into groups for web and API routes. It also lists specific middleware that can be applied to individual routes, like authentication or age checking.

```
web.php X

routes > web.php

1 <?php
2
3 use Illuminate\Support\Facades\Route;
4 use Illuminate\Support\Facades\Session;
5 use App\Http\Middleware\CheckAge; // Import CheckAge middleware
6 use App\Http\Middleware\LogRequests; // Import LogRequests middleware</pre>
```

Import the **CheckAge** and **LogRequests** middleware classes from the **App\Http\Middleware** namespace into the current file.

> Since we added age in the form, and there is a need to verify that age, we added code in the logic to **retrieve user's age** and **verification status** from the session and then display them along with the username on the user view page.

```
Route::post(uri: '/user', action: function (): Redirector|RedirectResponse {
   $username = request()->input(key: 'username', default: 'Guest');
   $age = request()->input(key: 'age'); // Retrieve the age input from the form
   if (!preg_match(pattern: '/^[A-Za-z]+$/', subject: $username)) {
       $username = 'Guest';
                                                                      Added code to store
   Session::put(key: 'username', value: $username);
                                                                          user's age in the session
   Session::put(key: 'age', value: $age); // Store age in session
                                                                         If the age is 21 or older, it sets
                                                                              the verification status to
   $verificationStatus = ($age >= 21) ? 'Verified' : 'Not Verified';
   Session::put(key: 'verificationStatus', value: $verificationStatus
                                                                              "Verified"; otherwise, it sets it to
                                                                              "Not Verified." This status is also
   return redirect(to: '/user');
                                                                              saved in the session.
```

- When the user visits the /logout route, the code removes the username, age, and verificationStatus from the session. This effectively logs the user out by clearing their stored information.
- After clearing the session data, the user is **redirected** to the **register** page (/). This means they will no longer have access to their previous session data and will see the main or login screen.

```
// Group routes that require age validation and logging
// Route::middleware(middleware: [LogRequests::class, CheckAge::class])->group(callback: function (): void {
Route::get(uri: '/welcome', action: function (): Factory|View {
return view(view: 'welcome');
});

Route::get(uri: '/dashboard', action: function (): Factory|View {
return view(view: 'dashboard');
});

Route::get(uri: '/user', action: function (): Factory|View {
// Get the username from the session
susername = Session::get(key: 'username', default: 'Guest');
// Retrieve age and verification status
$age = Session::get(key: 'username' + VerificationStatus', default: 'Not Verified'); // Default value if not set
// Return the user view with the username and verification status
return view(view: 'user', data: ['username' -> $username, 'age' -> $age, 'verificationStatus' -> $verificationStatus]);
});

// Return the user view with the username and verification status
return view(view: 'user', data: ['username' -> $username, 'age' -> $age, 'verificationStatus' -> $verificationStatus]);
});
```

> Sets up a group of routes that require both logging of requests and age verification, ensuring that users must meet specific criteria before accessing the associated views.

```
// Route to handle when access is denied

Route::get(uri: '/access-denied', action: function (): Factory|View {

// Get the username from the session

$username = Session::get(key: 'username', default: 'Guest');

// Clear the username and age from the session

Session::forget(keys: 'username');

Session::forget(keys: 'age');

return view(view: 'access-denied');

});
```

Removes the username and age from the session so that values are reset if they want to go back to register again. Then, it displays the access-denied view, informing the user that they do not have permission to access the requested content.

access-denied.blade.php

➤ Blade template for the "Access Denied" page. This is where users are redirected if they are below 18.

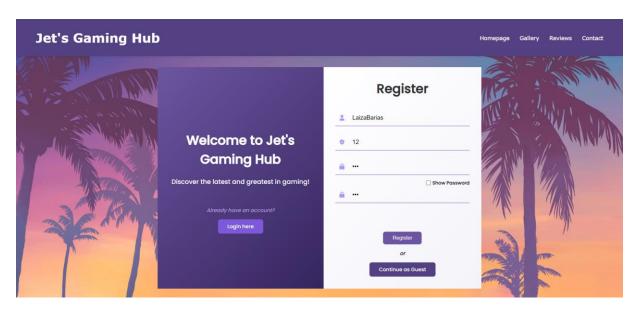
register.blade.php

In the register page, we added an input field for the **age**.

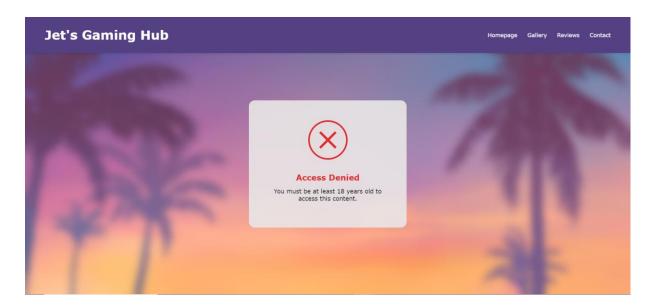
user.blade.php

> Added verification status

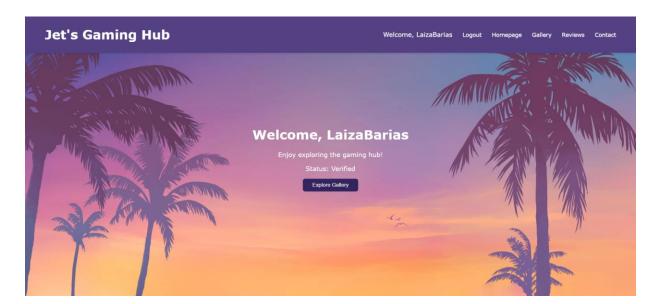
VIEWS



> Register page where users will input their information.



> access-denied page where users are redirected if they are under 18 years old



If user's age passes the verification, they will be redirected to user page. Here, it will show the **username** along with the **verification status**.

*Other views (Gallery of Games, Game Reviews, Contact Us page) were not changed/modified but will still be included for documentation purposes.

