**LARAVEL FRAMEWORK**

1. What is the latest Laravel version?

Laravel 10 was scheduled to be released on February 7, 2023, following the release of Laravel 9 on February 8, 2022

### 2. Define Composer.

Laravel is a popular web application framework that allows you to build dynamic websites and applications.

A composer is a tool that includes all the dependencies and libraries. It helps the user to develop a project concerning the mentioned framework. Third-party libraries can be installed easily using composer.

Composer is used to managing its dependencies, which are noted in the composer.json file and placed in the source folder.

### 3. What is the templating engine used in Laravel?

The Laravel Blade templating engine is a powerful piece of the framework that allows you to easily create powerful templates with a syntax that's simple and intuitive.

The Blade templating engine provides structure, such as conditional statements and loops. To create a blade template, you just need to create a view file and save it with a .blade.PHP extension instead of a .php extension. The blade templates are stored in the /resources/view directory. The main advantage of using the blade template is that we can create the master template, which other files can extend.

### 4. What are available databases supported by Laravel?

Laravel has you covered. The database configuration file is app/config/database.php. You can define your database connections in this file and specify which you should use reference. Examples for all of the supported database systems are provided in this file.

Laravel supports four database systems: [MySQL](https://www.simplilearn.com/tutorials/mysql-tutorial" \o "MySQL" \t "_blank), [Postgres](https://www.simplilearn.com/tutorials/sql-tutorial/postgresql-tutorial" \o "Postgres" \t "_blank), [SQLite](https://www.simplilearn.com/tutorials/sql-tutorial/what-is-sqlite" \o "SQLite" \t "_blank), and [SQL Server.](https://www.simplilearn.com/what-is-microsoft-sql-server-architecture-article)

### 5. What is an artisan?

The artisan script is a command-line interface included with Laravel. It's the first thing you'll see when you run composer create-project, or PHP artisan serve.

Artisan is made up of commands and is one of your best friends for developing and managing your Laravel applications. You can view a list of all available Artisan commands by running PHP artisan list.

### 6. How to define environment variables in Laravel?

 In Linux, you have probably become familiar with environment variables. You can check the available environment variables with the printenv command.

To define an environment variable in Linux, use the export command followed by your new variable name: export name=Simplilearn.

The .env file holds your env variables for your current environment. The DotEnv Library powers it.

As the .env file often holds sensitive information like API keys or database credentials, you should never commit it to Git and push it to GitHub.

### 7. Can we use Laravel for Full Stack Development (Frontend + Backend)?

Laravel is a great choice for building full-stack web applications. With Laravel, you can create a backend that will be scalable, and the frontend can be built using blade files or SPAs using [Vue.js,](https://www.simplilearn.com/vue-js-interview-questions-article) which is provided by default. But it can also be used to just provide APIs for a SPA application.

### 8. How to put Laravel applications in maintenance mode?

Laravel makes it easy to manage your deployment with minimal effort. Laravel allows you to quickly and easily disable your application while updating or performing maintenance when you need to make changes to your server or database.

To enable maintenance mode, the following are some helpful laravel commands related to maintenance mode:

# enable maintenance mode

php artisan down

# disable maintenance mode

php artisan up

# if you want the client to refresh

# page after a specified number of seconds

php artisan down --retry=60

### 9. What are the default route files in Laravel?

You can define Laravel routes in your routes/web.php file or create a separate file for other types of routes.

All routes are defined in your route files, located in the routes directory. The Laravel framework automatically loads these files. The routes/web.php file defines routes for your web interface. These routes are assigned to the web middleware group, providing features like session state and CSRF protection. The routes in routes/api.php are stateless and set in the API middleware group.

For most applications, you will begin by defining routes in your routes/web.php file. You may access the routes described in routes/web.php by entering the designated route's URL in your browser or through one of your controllers' actions or methods (explained later).

### 10. What are migrations in Laravel?

Migration is a feature of Laravel that allows you to modify and share the application's database schema. It will enable you to alter the table by adding a new column or deleting an existing column.

If you have ever had to tell a teammate to add a column to their local database schema manually, you've faced the problem that database migrations solve. Migrations are like version control for your database, allowing your team to modify and share the application's database schema. Migrations are typically paired with Laravel's schema builder to build your application's database schema.

The Laravel Schema facade provides database agnostic support for creating and manipulating tables across all of Laravel's supported database systems.

### 11. What are seeders in Laravel?

Laravel's database seeding feature allows you to quickly insert data into your database. It is helpful for development environments where you may not have access to your production database.

Laravel includes the ability to seed your database with data. By default, a Database seeder class is defined for you. You may use the call method from this class to run other seed classes. All seed classes are stored in the database/seeders directory.

A seeder class only contains one method: run. This method is called when the db:seed Artisan command is executed. You may use the query builder to insert data or Eloquent model factories.

### 12. What are the factories in Laravel?

Laravel has an excellent model factory feature that allows you to build fake data for your models. It is beneficial for testing and seeding counterfeit data into your database to see your code in action before any accurate user data comes in.

By default, Laravel's database seeding feature will create a new row in the database table and insert the value into each field. But sometimes, you might want a few extra areas or some sort of random string instead of a numeric value. That's where model factories come in handy!

Model Factories allow you to create a new model instance using their rules. You can do anything from creating an empty model instance to creatinbuildingth all fields filled out with values or even random ones!

### 13. How to implement soft delete in Laravel?

 Laravel 5.6 has a new feature called soft deletes. When soft deleted models, they aren't removed from our database. Instead, a deleted\_at timestamp is set on the record.

To enable soft deletes for a model, you have to specify the soft delete property on the model like this:

Use Illuminate\Database\Eloquent\SoftDeletes;

Use SoftDeletes; in our model property.

After that, when you use the delete() query, PHP will not remove records from the database. Then a deleted\_at timestamp is set on the record.

### 14. What are Models?

 Laravel is a framework that follows the Model-View-Controller design pattern. All your models, views, and controllers are stored in their directories, making it easy to keep track of everything.

You'll use controllers to handle user requests and retrieve data by leveraging models. Models interact with your database and recover your objects’ information. Finally, views render pages.

Laravel comes with a fantastic, built-in command line interface called Artisan CLI that provides complete commands to help you build your application.

### 15. What is the Laravel Framework?

Laravel is an open-source [PHP framework](https://www.simplilearn.com/tutorials/php-tutorial/php-framework), which is robust and easy to understand. It follows a model-view-controller design pattern. Laravel reuses the existing components of different frameworks which helps in creating a web application. The web application thus designed is more structured and pragmatic.

Laravel offers a rich set of functionalities that incorporates the basic features of PHP frameworks like CodeIgniter, Yii, and other [programming languages](https://www.simplilearn.com/best-programming-languages-start-learning-today-article) like [Ruby on Rails.](https://www.simplilearn.com/tutorials/java-tutorial/what-is-ruby-on-rails) Laravel has a very rich set of features that will boost the speed of web development.

With Laravel, you can build applications for any type of business or organization. Whether it’s eCommerce, social media marketing, or an online ticketing system, you can create any type of web application with Laravel because it’s flexible and scalable enough to accommodate any size project easily.

### 17. How to enable query log in laravel?

Our first step should be

DB::connection()->enableQueryLog();

After our query, you should place it

$querieslog = DB::getQueryLog();

After that, you should place it

dd($querieslog)

### 18. What is Middleware in Laravel?

Middleware in laravel is a platform that works as a bridge between the request and the response. The main aim of middleware is to provide the mechanism for investigating HTTP requests entering into your application. For instance, middleware in laravel ensures that the user of your particular application is authenticated. If they find that the user is not authenticated, it will redirect the user to the main login page of the application.

Middleware in laravel also helps you to handle a request from a user who has already been authenticated. For example, if you want to display information about a user who has already been established, then middleware will help you by providing this functionality within your application.

### 37. What is Nova?

Laravel Nova is an admin panel built on the Laravel Framework. It's perfect for managing your database records, and it's easy to install and maintain.

Laravel Nova comes with features that have the ability to administer your database records using Eloquent.

### 38. Explain ORM in Laravel.

ORM stands for Object-Relational Mapping. It is a programming technique that is used to convert data between incompatible type systems in object-oriented programming languages.

The ORM is used to map objects in the application's domain model to relational database tables, and vice versa. In this way, the ORM lets you work with your domain objects as if they were an old-fashioned collection of fields and properties while keeping the more recent advantages of a relational database.

39. Explain MVC Architecture

MVC stands for Model View Controller. It segregates domain, applications, business and logic from the user interface. This is achieved by separating the application into three parts:

* Model: Data and [data management](https://www.simplilearn.com/what-is-data-management-article) of the application
* View: The user interface of the application
* Controller: Handles actions and updates

