***Answer on research internet***

Q1: What is Laravel pattern?

* Laravel is a free and open-source PHP-based web framework for building high-end web applications.

Q2: What is M,C,V?

* M : model
* Function: Models are used to interact with the database. We represent the structure of the data and contain methods to retrieve, insert, update, and delete records from the database and control to controller.
* C : Controller
* Function: Controllers contain the logic to handle requests, process input data, and return responses and control to view.
* V : View
* Function: Views are responsible for displaying the data provided by the controller to the user. They are typically HTML files mixed with templating language (Blade in Laravel) to display dynamic data.

Q3: What is query builder ?

* Query builder is function for query on databases have **Selecting Data, Inserting Data, Updating Data** and **Deleting Data.**

Q4: What is Laravel Eloquent?

* Laravel Eloquent is the Object-Relational Mapping (ORM) which provides an extremely easy way to communicate with a database, **so** Defining a Model, Creating a Record, Retrieving Records, Updating a Record, Deleting a Record and relationships its.

Q5: What is .env file?

* . env file in Laravel is a simple text file that stores all the configuration settings for the application. It is responsible for storing environment-specific configuration values, such as database credentials, API keys, and other sensitive data.

Q6: What is migrations?

* Laravel Migration is a set of instructions that define the changes you want to make to your database schema.

Q7: What is Seeder?

* In Laravel, a seeder is a class used to populate your database with initial data, often called seed data. We are command create seeder **php artisan make:seeder UsersTableSeeder.**

Q8: What is file.blade.php ?

* file.blade.php is default templating engine for the Laravel framework. It lets you use variables, loops, conditional statements, and other PHP features directly in your HTML code. Which allows you to write clean and reusable templates for your web application.

Q9: What is Factory?

* Factory is a class used to define a pattern for generating fake data for your application's models. We are command create factory **php artisan make:factory UserFactory --model=Use**.

Q10: What is API?

* API (Application Programming Interface) refers to a set of rules and endpoints that allow different software applications to communicate with each other. And for get data form databases to display data to front end.

Q11: What is end-point,method,request-body,handle error validation and respond?

* End-poit is a URL where the API is accessed
* Method is HTTP methods (GET, POST, PUT, DELETE) define actions
* Request-body is data sent by the client in POST or PUT requests
* Handle error validation is validate incoming data and handle errors and show for data error
* Respond is send structured responses back to the client with data.

Q12: Which method to use when I want to create new Post?

* method that I want use to create new Post. When we usually use the HTTP POST method. The POST method is designed for sending data to the server to create a new resource and this is requests are commonly used for creating new records in a database.

Q13: Why you need to use Resource and Request and getAttribute ?

* We need to use resources, requests, and the getAttribute method are common practices that contribute to writing clean, organized, and maintainable code.
* Resources is transform model data for API responses, versioning, and reusable formatting logic
* Requests is centralize validation logic, keep controllers clean, and provide custom error messages and reusable.
* getAttribute is the count data on year, month, minuet and result.

Q14: What is compact()?

* compact() is a PHP function and have totally different purposes, and creates an array from existing variables given as string arguments to it.

Q15: list down at least 10 query builder and Laravel Eloquent?

* 10 query builder and laravel Eloquent have:

1. **Select All Rows:**

$users = DB::table('users')->get();

1. **Select with Where Clause:**

$user = DB::table('users')->where('name', 'John')->first();

1. **Insert Data:**

DB::table('users')->insert(['name', 'email', 'password']);

1. **Update Data:**

DB::table('users')->where('id', 1)->update(['name']);

1. **Delete Data**

DB::table('users')->where('id', 1)->delete();

1. **Select Columns**

$users = DB::table('users')->select('name', 'email')->get();

1. **Select name**

DB::select(DB::raw(“SELECT \* FROM `users` WHERE name = ‘$name’ ”));

1. **Select name the relationship**

DB::select(DB::raw("SELECT \* FROM `users` WHERE `name` = :username"), array('username' => $name));

1. **Order By**

$users = DB::table('users')->orderBy('name', 'asc')->get();

1. **Using a WHERE clause**

Group::where('name', '=', ‘Group01’)-date(array('name' => ‘Group1’));

Q16: Why we need to use wherehas?

* Because whereHas is a versatile tool within Laravel's Eloquent ORM that enables you to filter query results based on the existence of related models. It is particularly useful when dealing with relationships between models, such as one-to-many or many-to-many relationships.

Q17: Please give example of Column Types at 10 difference don't forget to description?

1. **String is creates a VARCHAR column with a default length of 255 characters.**

$table->string(‘name’);

1. **Text is used for storing long text entries, such as blog posts or article content.**

$table->text(‘description’);

1. **Integer is used for storing whole numbers.**

$table->integer(‘vote’);

1. **BigInteger is used for storing large all numbers,**

$table->biginteger(‘view’);

1. **softDeletes is adds a nullable deleted\_at TIMESTAMP equivalent column for soft deletes.**

$table->softDeletes();

1. **softDeletesTz is adds a nullable deleted\_at TIMESTAMP (with timezone) equivalent column for soft deletes.**

$table->softDeletesTz();

1. **binary is BLOB equivalent column.**

$table->binary('data');

1. **date is DATE equivalent column.**

$table->date('created\_at');

1. **dateTime used for storing date and time values.**

$table->dateTime('created\_at');

1. **Timestamp Used for storing date and time values. Commonly used for automatic management of created\_at and updated\_at columns.**

$table->timestamp('updated\_at')->nullable();

Q18: can you descript about this $table->integer('age')->nullable()->default(0);

* $table->integer(‘age’)->nullable()->default(0) are:
* **-> integer(‘age’)** a column type is integer, meaning it will store whole numbers.
* **-> nullable()** is means that the column can contain NULL values, indicating the absence of a value.
* **-> default(0)** it will automatically be set to 0.

Q19: Can you tell me why when we use file api.php and web.php ? explain?

* api.php file is used to define routes that are intended for the API endpoints of your application.
* web.php file is used to define routes that are intended for the web interface of your application, such as pages that a user can view in their browser.

Q20: What is relationship Laravel ? Please give example:

-one to one

-one to many

-many to many

* Laravel, relationships are defined to establish connections between different database tables, making it easier to interact with related data.
* **one-to-one relationship is a very basic type of database relationship.**

$phone = User::find(1)->phone;

* **one-to-many relationship is used to define relationships where a single model is the parent to one or more child models.**

$comment = Post::find(1)->comments()->where('title', 'foo')->first();

* **many-to-many relations are slightly more complicated than hasOne and hasMany relationships.**

users

id - integer

name - string

roles

id - integer

name - string

role\_user

user\_id - integer

role\_id – integer

Q21: can you explain me why we need to use Route::apiResource in route api and Route::resource in route web