

DEBRE BERHAN UNIVERSITY

COLLEGE OF COMPUTING

COMPUTER SCIENCE DEPARTMENT

Selected topic

INDIVIDUAL ASSIGNMENT

Name bersabeh solomon

Id dbue/773/11

MAC of laravel

* MVC (Model-View-Controller) is a pattern in software design commonly used to implement user interfaces, data, and controlling logic. It emphasizes a separation between the software's business logic and display. This "separation of concerns" provides for a better division of labor and improved maintenance. Some other design patterns are based on MVC, such as MVVM (Model-View-View model), MVP (Model-View-Presenter), and MVW (Model-View-Whatever).
* Laravel is one of the world’s most popular PHP frameworks for building web applications from small to large projects. Due to its performance, features and scalability, Laravel is the choice of professional developers. You can customize Laravel so quickly that you can build your own project structure to meet your web application requirements.
* The three parts of the MVC software-design pattern can be described as follows:
* Model: Manages data and business logic.

• Model is where we perform the database-related operations. Like, insert, delete, edit, update query, etc. The model folder exists in the App folder in Laravel 8. Here you have to create models corresponding to the database tables.

* View: Handles layout and display.
* Controller: Routes commands to the model and view parts.
* Features of Laravel:
* Authentication
* Dynamic Template:
* Database Migrations:
* MVC Architecture
* Unit Testing:

Routing

* Router is a process of selecting path along which the data can be transferred from source to the destination. Routing is performed by a special device known as a router.
* A Router works at the network layer in the OSI model and internet layer in TCP/IP model
* The routing protocols use the metric to determine the best path for the packet delivery. The metric is the standard of measurement such as hop count, bandwidth, delay, current load on the path, etc. used by the routing algorithm to determine the optimal path to the destination.
* Routing can be classified into three categories:
* Static Routing
* A Router can send the packets for the destination along the route defined by the administrator.
* It is a technique in which the administrator manually adds the routes in a routing table.
* Default Routing
* Default Routing is a technique in which a router is configured to send all the packets to the same hop device, and it doesn't matter whether it belongs to a particular network or not. A Packet is transmitted to the device for which it is configured in default routing.
* Dynamic Routing
* It is a technique in which a router adds a new route in the routing table for each packet in response to the changes in the condition or topology of the network.
* In Dynamic Routing, RIP and OSPF are the protocols used to discover the new routes.
* Routing Metrics and Costs
* Routing metrics and costs are used for determining the best route to the destination. The factors used by the protocols to determine the shortest path, these factors are known as a metric.
* Metrics are the network variables used to determine the best route to the destination. For some protocols use the static metrics means that their value cannot be changed and for some other routing protocols use the dynamic metrics means that their value can be assigned by the system administrator.

Migration and relationship

* Migrating an entire data center environment to the cloud or another location is a large-scale, comprehensive process. Completing such a migration project successfully—with minimal downtime or disruption to operations—requires careful planning and coordination.
* Database migration is an example of specialized workload migration. Many public and private cloud providers offer tools that can facilitate or automate parts of the database migration process to ensure that your database remains secure throughout the transfer and that no data loss or corruption occurs. Additionally, most cloud providers offer migration services that can verify your data’s integrity after the transfer.
* Data migration is the process of transferring data from one storage system or computing environment to another.
* Following are the various kinds of migration that take place in the computer world.
* Storage Migration
* Application Migration
* Data Migration
* Domain Migration
* Cloud Migration
* A relationship, in the context of databases, is a situation that exists between two relational database tables when one table has a foreign key that references the primary key of the other table. Relationships allow relational databases to split and store data in different tables, while linking disparate data items.

Blade template engine

* Blade is the simple, yet powerful templating engine that is included with Laravel. Unlike some PHP templating engines, Blade does not restrict you from using plain PHP code in your templates. In fact, all Blade templates are compiled into plain PHP code and cached until they are modified, meaning Blade adds essentially zero overhead to your application. Blade template files use the .blade.php file extension and are typically stored in the resources/views directory.
* Blade views may be returned from routes or controllers using the global view helper. Of course, as mentioned in the documentation on views, data may be passed to the Blade view using the view helper's second argument
* Route::get('/', function () {

return view('greeting', ['name' => 'Finn']);

});

* Blade view files use the .blade.php file extension and are typically stored in the resources/views directory.
* Two of the primary benefits of using Blade are template inheritance and sections. We can define a blade page as a combination of layout and sections.

Directives

* In computer programming, a directive or pragma (from "pragmatic") is a language construct that specifies how a compiler (or other translator) should process its input. Directives are not part of the grammar of a programming language, and may vary from compiler to compiler. They can be processed by a preprocessor to specify compiler behavior, or function as a form of in-band parameterization.
* In some cases directives specify global behavior, while in other cases they only affect a local section, such as a block of programming code. In some cases, such as some C programs, directives are optional compiler hints, and may be ignored, but normally they are prescriptive, and must be followed. However, a directive does not perform any action in the language itself, but rather only a change in the behavior of the compiler.
* A directive is a code line (statement ) that tells the compiler something. It is not code that ever gets executed; it is simply to help the compiler compile your code.
* The declare construct is used to set execution directives for a block of code. The syntax of declare is similar to the syntax of other flow control constructs:
* Code sample
* <?php

// This is valid:

declare(ticks=1);

// This is invalid:

const TICK\_VALUE = 1;

declare(ticks=TICK\_VALUE);

?>