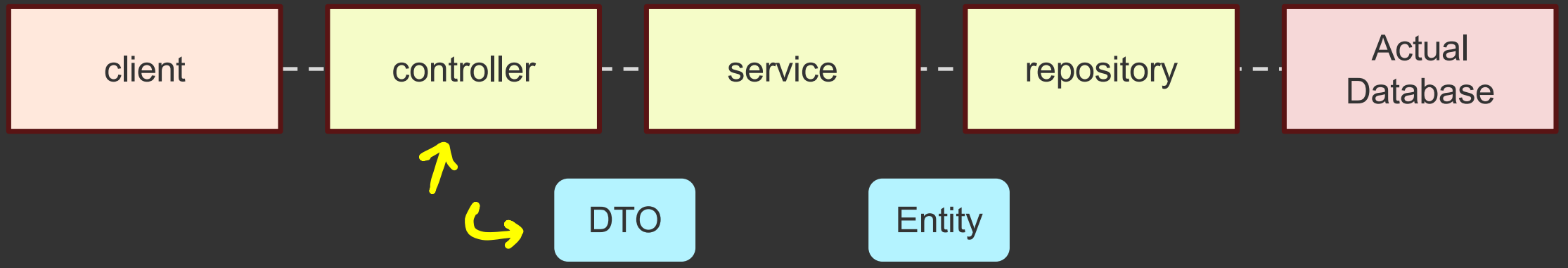
2.2

Presentation Layer

Spring Boot Web Project Structure



Annotated Controllers

Spring MVC provides an annotation-based programming model where @Controller and @RestController components use annotations to express request mappings, request input, exception handling, and more.

The @RestController annotation is a shorthand for @Controller and @ResponseBody, meaning all methods in the controller will return JSON/XML directly to the response body.

This is done by Jackson library which got installed
when we added the springboot-starter-web dependency

Request Mappings

You can use the @RequestMapping annotation to map requests to controllers methods. It has various attributes to match by URL, HTTP method, request parameters, headers, and media types.

There are also HTTP method specific shortcut variants of @RequestMapping:

- @GetMapping
- @PostMapping
- @PutMapping
- @DeleteMapping
- @PatchMapping

Dynamic URLs Paths

@PathVariable

/employees/123

Use path variables when the parameter is an essential part of the URL path that identifies a resource.

@RequestParam

/employees?id=123

Use query parameters when the parameter is optional and used for filtering, sorting, or other modifications to the request.

RequestBody

@RequestBody is used to bind the HTTP request body to a Java object. When a client sends data in the body of a request (e.g., JSON or XML), @RequestBody maps this data to a Java object.

Use Case:

- Typically used in POST, PUT, and PATCH methods where the client sends data that needs to be processed by the server.
- Converts JSON or XML data from the request body into a Java object using a message converter (e.g., Jackson for JSON).