Spring Professional Exam Tutorial v5.0

Question 11

Question 11 - What are some of the valid return types of a controller method?

- `@ResponseBody` – binds method return value to web response body, complex types will be converted with usage of `HttpMessageConverter`

- `HttpEntity<B>, ResponseEntity<B>` - allows to specify full response with headers and body, `ResponseEntity<B>` additionally allows you to specify HTTP status code

- `HttpHeaders` – allows to return response only with headers, without body

- `String` – allows to return logical name of view to use when rendering response, view will be resolved by `ViewResolver`, usually used with implicit model through `@ModelAttribute` parameters or explicit model by declaring `Model` method parameter

- `View` – allows to return instance of view, like `JstlView`, `ThymeleafView`, `FreeMarkerView`, usually used with implicit model through `@ModelAttribute` parameters or explicit model by declaring `Model` method parameter

Question 11 - What are some of the valid return types of a controller method?

▶ `Map`, `Model` – allows you to specify attributes to be added to the implicit model, with the view name implicitly determined through a `RequestToViewNameTranslator`

▶ `@ModelAttribute` – allows you to specify an attribute to be added to the model, with the view name implicitly determined through a `RequestToViewNameTranslator`

▶ `ModelAndView` - view and model attributes to use and, optionally, a response status, view can be specified by logical name or instance of view can be passed, model can be specified as named object or `Map`

▶ `void` – method that returns `void` can correctly handle request by using `ServletResponse` or `OutputStream` as parameter, or `@ResponseStatus` annotation, if none of previous are used `RequestToViewNameTranslator` will identify view based on request, `void` return type can also indicate "no response body" for REST controllers

▶ `DeferredResult<V>` - allows to specify result for controller asynchronously from different Thread or as result of some event callback, part of integration with Servlet 3.0 asynchronous request

Question 11 - What are some of the valid return types of a controller method?

- `Callable<V>` - allows to produce return value asynchronously in a Spring MVC-managed thread

- `ListenableFuture<V>`, `CompletableFuture<V>`, `CompletionStage<V>` - allows to return set of chained, asynchronous operations, with callbacks and transformations

- `ResponseBodyEmitter`, `SseEmitter` – allows to send objects in stream asynchronously, objects will be converted with usage of `HttpMessageConverter`, can be used with `ResponseEntity`, both classes have the same goal, however `SseEmitter` uses Server-Sent Events standardized with W3C SSE specification

- `StreamingResponseBody` – allows to write to the response `OutputStream` asynchronously

- Reactive types – allows to use Reactive types for streaming scenarios, handled by `ReactiveAdapterRegistry`