**56. Spring REST – Overview**

**57. Spring REST - JSON Data Binding**

JSON Values:

* Numbers: no quotes
* String: in double quotes
* Boolean: true, false;
* Nested JSON object ({})
* Array ([])
* Null

Data binding is the process of converting JSON data to a Java POJO. Also known as Mapping, Serialization/Deserialization, Marshalling/Unmarshalling.

Spring uses Jackson Project behind the scenes. Package: com.fasterxml.jackson.databind.

By default, Jackson will call appropriate getter/setter method.

Example, JSON to Java POJO:



POJO to JSON:



When building Spring REST application Spring will automatically handle Jackson Integration.

**58. Spring REST - Create a Spring REST Controller**

Most common use of REST is over HTTP. Leverage HTTP methods for CRUD operations:

* POST – Create a new entity
* GET – Read a list of entities or single entity
* PUT – Update an existing entity
* DELETE – Delete an existing entity

HTTP Request Message:

* Request line: the HTTP command
* Header variables: request metadata
* Message body: contents of message

HTTP Response Message

* Response line: server protocol and status code
* Header variables: response metadata
* Message body: contents of message

Status code ranges:

* 100-199 Informational
* 200-299 Successful
* 300-399 Redirection
* 400-499 Client error
* 500-599 Server error

MIME Content Types – the message format. Multipurpose Internet Mail-Extension. Basic syntax: type/sub-type

Spring Rest. New annotation @RestController:

* Extension of @Controller
* Handles REST requests and reponses

Spring REST development process:

1. Add Maven dependency for Spring MVC and Jackson project (and java servlet api)
2. Add code for All Java Config: @Configuration @EnableWebMvc @ComponentScan
3. Add code for All Java Config: Servlet Initializer: AbstractAnnotationConfigDispatcherServletInitializer –extend. Specify servlet context and location of app config
4. Create Spring REST service using Spring REST Controller

**59. Spring REST - Retrieve POJOs as JSON**

Development Process

1. Create Java POJO
2. Create Spring Controller @RestController

**60. Spring REST - Using PathVariable for REST Endpoints**

Development Process:

1. Add request mapping to Spring REST Service
   1. Bind path variable to method parameter using @PathVariable

