WAA Midterm topics

Lesson 1: web development

Servlet
- Request parameters
- HTTPSession
- Front controller

JSP

Spring MVC
- Build-in front controller
- @Controller
- @RequestMapping
- @RequestParam
- ModelAndView class
- Thymeleaf templates

Programming:

You should be able to write a Servlet
You should be able to write a Servlet using HTTPSession
You should be able to write a Spring MVC controller (HTML page using thymeleaf will be given)
No JSP programming
No Java imports

Lesson 2: Spring MVC

Navigation
Forms
Session scope
Form validation
PRG pattern

Programming:

You should be able to write a Spring MVC application using PRG pattern and form validation and scope. (HTML page(s) using thymeleaf will be given)

Lesson 3: REST

Idempotent
RestController
RequestMapping

API design

RestAssured

Programming:

You should be able to write a Spring MVC controller
No RestAssured programming

Lesson 4:

Error handling
- @ControllerAdvice
- @ExceptionHandler

Validation
- Validation constraints
- @ControllerAdvice

Back-end design
- Layering
- DAO/Repository
- Service class
- Dependency injection
- @RestController
- @Service
- @Repository
- @Component

Programming:

You should be able to write a REST application including all classes (Controller, Service, Repository) using Dependency injection and validation

Lesson 5 MongoDB

MongoDB
- MongoDB Repository with Spring (MongoRepository)

DTO classes

Rest client
- RestTemplate

Programming:

You should be able to write a REST application including all classes (Controller, Service, Repository) using Dependency injection including DTO classes and a MongoRepository including simple queries

You do not need to memorize the RestTemplate.

Lesson 6 Webflux and websockets

Reactive programming
- Flux and mono
- ReactiveCrudRepository

Websockets
- TextWebSocketHandler
- WebSocketConfig
- Websocket client in javaScript + HTML

Programming:

You should be able to write a TextSocketHandler for websockets

No programming question on webflux (but you need to understand webflux)

Lesson 7 GraphQL

Problems with REST
How grapQL solves these problems
Disadvantages GraphQL
Implementing GraphQL: Schema, Mutation class, Query class
GraphQL queries

Programming:
You should be able to write a GraphQL schema, the mutation controller and the query controller .
You do not need to memorize the graphql client application.