2. Spring REST Hands-On Answers

# 1. HTTP Request and Response

- HTTP Request contains method, resource, headers, etc.  
- Response includes status code, headers, content.  
- Use browser DevTools to inspect headers and content.

# 2. Benefits of RESTful Web Services

- REST is lightweight, scalable, maintainable.  
- Based on HTTP methods and stateless communication.

# 3. Hello World RESTful Service

- @RestController, @GetMapping("/hello")  
- Method returns "Hello World!!"  
- Log start and end.

# 4. REST - Country Web Service

- @RequestMapping("/country")  
- Load "IN" bean from XML and return.  
- Automatically converted to JSON.

# 5. REST - Get All Countries

- @GetMapping("/countries")  
- Load list from XML and return as JSON array.

# 6. REST - Get Country by Code

- @GetMapping("/countries/{code}")  
- Use @PathVariable and CountryService to return matched country.  
- Case insensitive match.

# 7. REST - Exception Handling

- Throw CountryNotFoundException with @ResponseStatus(HttpStatus.NOT\_FOUND)  
- Return custom error JSON when no match is found.

# 8. MockMVC Testing

- Autowire CountryController in test class.  
- Use MockMvc to perform GET requests.  
- Use jsonPath to validate JSON values.  
- Use status().isOk() and status().isBadRequest().