

# WEB TECHNOLOGIES USING **JAVA**

➡ COURSE 6 – REST WEBSERVICES.

# AGENDA

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- REQUEST PARAMS
- REQUEST BODY
- RESPONSE
- HEADERS

# REQUEST PARAMS

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- Path param - `@PathVariable`
  - path variables may be substituted with identity-based values:
    - GET /leagues/{leagueId}/teams/{teamId}/players/{playerId}
- Query param - `@RequestParam`
  - is an URI's optional query
  - comes after the path
  - can provide clients with additional interaction capabilities (searching, pagination or filtering)
    - GET /users?role=admin
    - GET /users?pageSize=25&pageStartIndex=50
  - for complex searching / filtering, consider designing
    - a special resource such as `search`: POST /users/search
    - a GET request with a body

# REQUEST PARAMS

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- any required parameters should be put in the path, and any optional parameters should be query string parameters
- optional parameters in the path cause unexpected results when trying to write URL handlers that match different combinations

# REQUEST BODY

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- `@RequestBody`
- Usually mapped to JSON
- Usually used for POST, PUT, PATCH
- Possible to use it with a GET, less used

# RESPONSE

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- **ResponseEntity**: used when extra information is needed on the response, apart from the possible retrieved entity
- HTTP status codes
- HTTP headers

# HEADERS

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- Various forms of metadata may be conveyed through the entity headers for the HTTP request and HTTP response ([@RequestHeader](#) for requests)
- HTTP standard headers:
  - [Content-Type](#):
    - the type of data found within a request or response message's body
    - media type: application, audio, image, message, model, multipart, text, or video
    - commonly used: text/html, image/jpeg, application/xml, application/json
  - [ETag](#): identifies a specific “version” of the resource. Usually sent in response to GET requests
  - [If-Match](#): identifies a specific “version” of the resource. Usually sent in request for PUT or PATCH
  - [Location](#): the URI of a newly created resource. Usually sent in response to the successful creation of a resource
  - [Accept](#): the type of data found within a request
- Custom headers

# BIBLIOGRAPHY

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- Spring in Action, by Craig Walls
- Spring REST, by Balaji Varanasi, Sudha Belida
- REST API Design Rulebook, by Mark Masse
- <https://www.ics.uci.edu/~fielding/pubs/dissertation/top.htm>

# Q&A

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**THANK YOU**

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