

REST

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REST



REST

- REST is a kind of Web service that heavily relies on HTTP and Web standards/habits/best practices. More details are in the lecture.
 - REST uses GET, POST, PUT, DELETE methods
 - URL is important and has its own set of rules (/xxx returns list of xxxs, /xxx/1 returns xxx with id 1, etc.)



Spring REST Annotations

- `@RestController` – Indicates a REST controller bean
- `@RequestMapping` – Class and method level REST endpoint mapping
 - `@GetMapping`, `@PostMapping` etc. – HTTP method mapping shortcuts
- `@RequestBody` – Annotate method parameter to indicate incoming request data
- `@PathVariable` – Annotate method parameter to indicate parameter in request path
- `@RequestParam` – Annotate method parameter to indicate query parameter
- `@ResponseStatus` – Predefine response status
- `@ResponseBody` – obsolete in case of `RestController`



Architecture of the Application

- 1 AppConfig configures the whole Spring Boot app.
 - *Convention over configuration.*
- 2 CategoryService provides business logic.
- 3 Class CategoryController implements REST endpoint for categories:
 - GET /categories – get all categories,
 - GET /categories/1 – get category with id 1,
 - DELETE /categories/1/products/2 – deletes product 2 from category with id 1
- 4 CategoryControllerTest is the corresponding test.
- 5 Similarly for Cart, Order.



Test REST

- Compile and debug the e-shop
- Try it: `http://localhost:8080/eshop`
- Open Developer tools, tab Network
- Find XHR, endpoint `categories` – request, response, body
- Click start page – all categories; click a category, find rest for one category, products for one category



Task



Syncing Your Fork

- 1 Ensure you have no uncommitted changes in the working tree
 - `git status` → your branch is up to date, nothing to commit
- 2 Fetch branches and commits from the upstream repository (EAR/B241-eshop)
 - `git fetch upstream`
- 3 Check out the task branch from **upstream** (one line!)
 - `git checkout -b b241-seminar-07-task upstream/b241-seminar-07-task`
- 4 Do the task
- 5 Commit and push the solution to **your** fork
 - `git push -u origin b241-seminar-07-task`



Task – 1 point

- Implement retrieval methods in `CategoryController`.
- Use tests in `CategoryControllerGetTest` as guidelines for expected functionality.
- **Acceptance criteria:** All tests in `CategoryControllerGetTest` pass.



Task – 1 point

- Implement data modification methods in `CategoryController`.
- Use tests in `CategoryControllerModifyTest` as guidelines for expected functionality.
- **Acceptance criteria:** All tests in `CategoryControllerModifyTest` pass.



Resources

- <https://spring.io/guides/gs/rest-service/>
- <http://www.restapitutorial.com/httpstatuscodes.html>

