

# REST

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



# Architecture of the Application

- 1 RestConfig configures Spring REST features.
- 2 ProductService provides business logic.
- 3 Class ProductController implements REST endpoint for products:
  - GET /products – get all products,
  - GET /products/1 – get product with id 1,
  - PUT /products/1 – updates product with id 1,
  - DELETE /products/1 – deletes product with id 1
- 4 ProductControllerTest is the corresponding test.
- 5 Similarly the same for Category, later for others.



# Spring REST Configuration Annotations

- `@RestController` – Indicates a REST controller bean
- `@RequestMapping` – Class and method level REST endpoint mapping
- `@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`



# Task



## Task – 1 point

Check out branch *b181-seminar-07-task* of the e-shop project (<https://gitlab.fel.cvut.cz/ear/b181-eshop>).

- First fix the `ProductController.getProducts()`, which should return all products in the database.
- **Acceptance criteria:** A test `ProductControllerTest.getAllReturnsAllProducts` will pass.





## Task – 1 point

- Continue fixing, look for “// TODO:” until all test pass. There is missing GET on path `/ {id}` and DELETE command.
- **Acceptance criteria:** All tests pass.



# Resources

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

