

Quarkus @ HTL Leonding

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1. Preface

HTL Leonding is a vocational college in Austria with about 1000 students and four departments:

- Informatics
- Media Engineering
- Electronics
- Medical Engineering

The curriculum in each department lasts five years. Quarkus is taught in Informatics and Media Engineering in the 4th and 5th grade.

2. 4th grade

department informatics: 3h department media engineering: 3h

assumption: The students have knowledge working with JavaSE, maven, git, uml, json.

Topic	Contents
Java-ecosystem	IDE's, maven, git-repositories
Introduction	<ul style="list-style-type: none">• Jakarta EE and Jakarta EE implementations,• microprofile and microprofile implementations• Quarkus - create a first project (hello world)• how to create a quarkus project (quarkus.io, ide-wizard, maven)
RESTful Resources	architectural constraints, http-methods, create a simple REST-Endpoint

Topic	Contents
REST with entities	<ul style="list-style-type: none"> • JSON Processing in Java (JSON-B, JSON-P) • Create a simple REST-Endpoint with entities (CRUD) • use different clients to consume REST-service (curl, httpie, browser-plugin, Postman, Insomnia) • create automated tests (REST-assured, karate)
Java Persistence API (JPA)	<ul style="list-style-type: none"> • Entity states • Annotations • Entity Relationships • Configuration in quarkus • Transactions • JPA in quarkus vs. JPA in JavaSE • Queries • Lifecycle methods • Testing with jUnit, AssertJ-core und AssertJ-db • Create