Practicum: Development and Testing of Microservice Systems

Preliminary Meeting, 01.07.2024
Who are we?

Informatics i4 – Chair of Software and Systems Engineering

Lena Gregor

Quirin Sailer
What are Microservice Systems?
What are Microservice Systems?
What to expect from this course

Learn how to implement microservices.

Learn how to convert an existing, real world system into a microservice system.

Implement, test, and deploy microservices with a focus on high-quality code and structured development processes.
What you will learn
MyCleanHotel – A hotel task management system

- Features:
  - User management
  - Lost & Found
  - General Task management
  - Room Cleaning Task management
  - Defects management
  - Time Tracking
  - Analytics
  - 4-eye task control
  - Duty roster
  - and many more
Why do we need a new system?

- It’s a monolith
- Data schema is horrible
- Not translated
- Poorly developed (by myself, 8 years ago)
- It’s closed source
Organization (preliminary)

- Teaching on MS dev. and testing
- System Development
- Testing

Timeline:
- 17.10.
- 24.10.
- 31.10.
- 07.11.
- 14.11.
- 21.11.
- 28.11.
- 05.12.
- 12.12.
- 19.12.
- 09.01.
- 16.01.
- 23.01.
- 30.01.
- 06.02.
Max. Participants: 16 Students
Working in Teams: 4 Students / Team
Weekly Meetings (Mandatory): Thursdays, 14:00-16:00, in-person (in Garching)
Prerequisites

You have

Experience with **version control** (Git)

Good programming skills in **Java, C# or Typescript**

Some experience in **testing** applications (recommended)

Some experience with **Docker and containerization** (recommended)

**Motivation** to delve into cutting edge tools and frameworks
Application: until 17th of July to be prioritized
With CV, grade report and short motivational statement
Through the form on our website (link see below)

Don’t forget the registration via https://matching.in.tum.de/

For everything else refer to the practicum homepage:
https://go.tum.de/431242
Motivational Statement

Please address

Why are you interested in this course?

What kind of skills do you have that will be beneficial in this course (technical knowledge, soft skills, experience, etc.)?

Which skills are you most excited about to acquire in this course?