

## Coding Assignment

When a user buys a ticket for an event, he first needs to add the ticket to his shopping cart. This requires that there are still tickets left for the event and that other constraints are also not violated (for example the maximum amount of tickets per user). It's the ticket reservation services responsibility to validate these constraints and either reserve the ticket for a certain amount of time or reject the reservation.

### YOUR TASK:

It's your task to define and implement an API for this service which is part of a system made up of multiple microservices.

### Requirements for the service:

- Reserve one or more tickets for a specific event
  - check if there are still tickets available for the event
  - check if the maximum allowed tickets for the user is not exceeded
  - ...feel free to add more checks
- Extend the reservation time for a specific reservation
- Cancel an existing reservation
- Get the current reserved tickets

In a real system the ticketing service would probably communicate with other services to retrieve certain data, for example: data about the event etc.

It is not required to implement any of these services, just assume those are present.

### Technical requirements:

- Implementation must be done in scala
- For the API choose one of the following: HTTP, WebSockets, gRPC, kafka/rabbitmq
- Provide API documentation
- Automated tests are a must

We use the lagom framework, you are welcome to use it for this assignment but it's not required. You don't have to implement data persistence (via SQL/NoSQL) but you are welcome to do so.

### What we want to see:

- a well designed API
- Production ready code (clean, well structured, easy to analyze etc. Basically, something you consider as "production ready")
- Solid tests

Note that the assignment is kept very vague on purpose. We want to give you freedom for being creative.

If you need assistance or prefer more precise requirements just reach out to us. This is nothing we see negative at all.

We don't want you to spend more than 2-3 days on this assignment.

If you exceed that time then please feel free to send us the assignment and we will discuss the rest during the technical interview.

Good luck with your assignment!

Your eventWorld Team