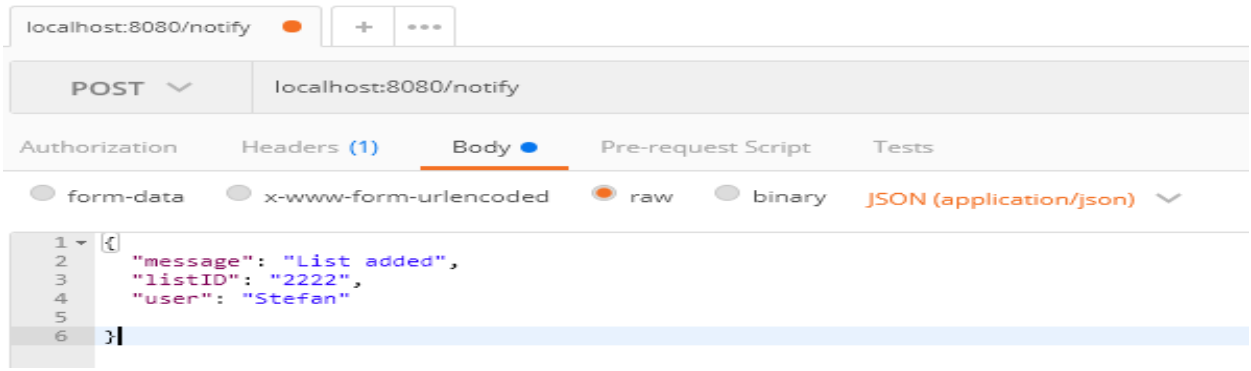
MS4-Notification-Service

Design and Collaboration

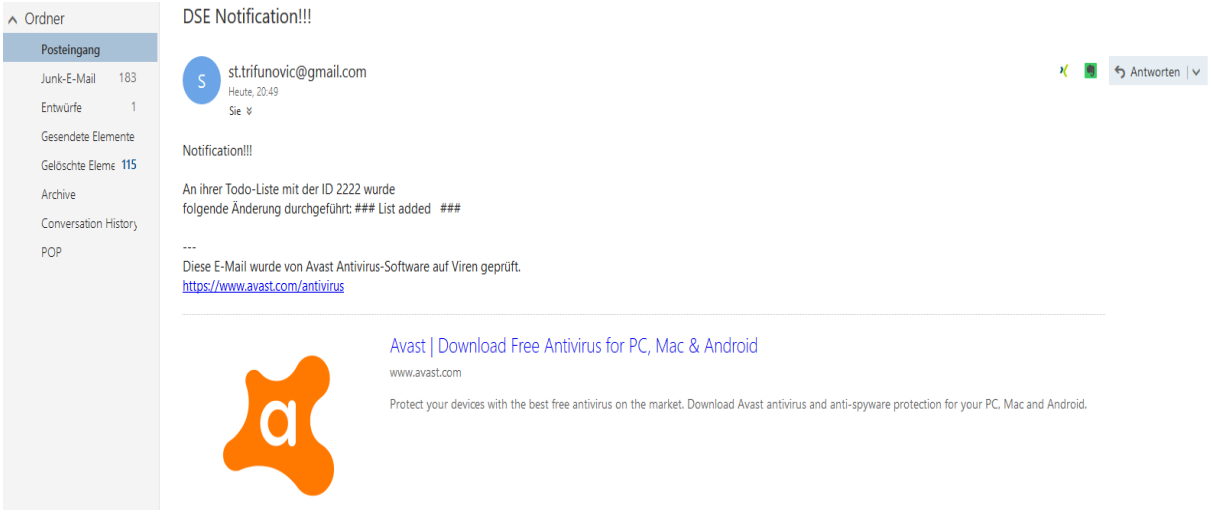
The background design of the application has a Notification class which saves all necessary data like notificationid, notification-message and an ArrayList of all receiver. The notifications are manageable by NotificationDAO. My service has a REST API and reacts to HTTP requests. The HTTP request triggers my background business services which has access to my DAO. My main business services are sendNotification, which sends Emails, and askM1ForUser, which connects to MS1 for getting the emails where my service need to send these. I also have services for managing the notifications and testing the app like getAllNotifications. The main design idea did not change since supd but I needed more time to understand the functionality of Spring better and to understand how the communication between the microservices can be implemented properly.

Implementation & Deployment

My Service is a standalone Service which uses Java Spring Framework and everything that was planned works fine. It has a REST API, takes Http-Requests and listen to port 8080. My Service cooperates with MS2 and MS3. MS2 sends me a request every time when some changes happen to ToDoLists as a JSON Object at http://10.102.107.17:8080/notify (method must be POST). The JSON must look like this(see below).



My business service takes the ID out of the JSON and asks MS1 for all user emails that have access to the ToDoList with this ID. After getting these emails, my service adds a new Notification and sends an email to all that should be notified. The Emails will be sent by my personal account st.trifunovic@gmail.com over smtp gmail host and looks like this(see below).



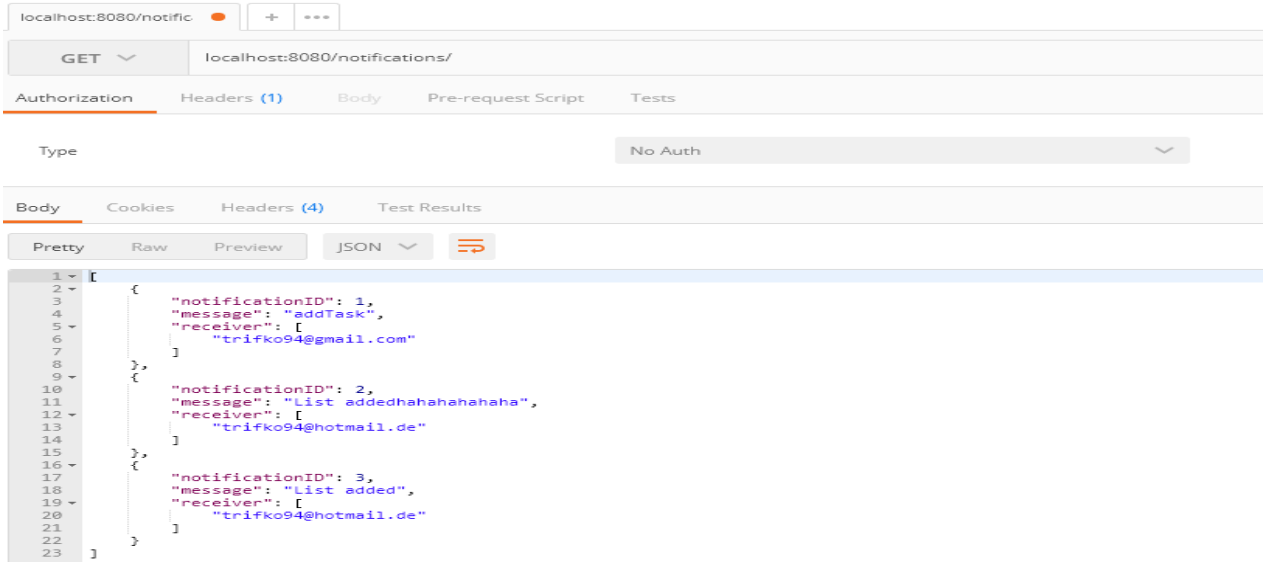
Testing and Presentation

For testing I use the Google Chrome RESTClient Add-on App “POSTMAN”.

To simulate getting a change notification from MS2 only send a request to http://10.102.107.17:8080/notify (method must be POST) with the right Body (JSON Object) (see at first picture)

If MS1 is not available and my service can’t get the user emails I made a URI for presenting that my service is able to send emails. The URI triggers the service and only sends emails to my other personal email trifko94@hotmail.de. The request is at http://10.102.107.17:8080/notifytest (method must be POST) with the right Body (JSON Object) the same way as requesting http://10.102.107.17:8080/notify.

For testing the service, I also have few other URIs.
Getting all Notifications that happened - http://10.102.107.17:8080/notifications method GET



Getting all Notifications specific by a user - http://10.102.107.17:8080/notifications/”email-address” method GET