# Link Converter

First of all, we need to make a design and implement accordingly. We will have a spring boot project running on Docker, and it requires converting a url to deep link, and vice versa. While doing this, we also need to log both requests and responses.

I initialized a spring boot project including some third-party dependencies for database, code simplicity, etc. It is best to use a persistent database since there may be a need for the statistics about the requests in the future. When the response calculated, it is returned to the user immediately in order not them to wait too long, then the asynchronous method handles the logging part.

If the url matches with one of our regular expressions, then the related converter class handles the request and creates a response accordingly. In the converter classes, we need to parse each query field and compose a new deep link. While doing this we also have to log both request and response to the database, but we do not want user to wait until the write operation to the database is done, so the logging operation is done via an asynchronous method.

Second part of the project is to convert a given deep link to a url with related parameters. The handling part is done same as in the url conversion, whichever the converter class deep link matches with, it handles the conversion.

We need to go to ../docker/prod path and run “docker-compose up” command here so that the project and its dependency, PostgreSql, would start.

Technologies used: Spring boot, Java 17, PostgreSql, Docker