**Tomas**

This semester has brought a lot of new information and knowledge which we the implemented in the semester project. We learned a lot about separating a system into multiple tiers, where each has its own purpose. We have also learnt about security and authorizations of users, to secure our applications even better. This semester was the hardest for me in terms of subjects and all the new information, that we had to implement immediately into assignments or projects. The thing I enjoyed learning about the most was Computer Architecture. It was interesting to learn how a computer actually works and how much effort had to be put in for us to have today’s computers and smartphones.

For the semester project group, as I was a new member in an already well-oiled machine, I had to adjust to the new group. But I felt welcomed by my team members which has made it a lot easier. The group consisted of people from 4 different countries, but because we are all from Eastern European countries, we had a lot in common and a lot to talk about, so we had a very good chemistry. We had quite a few team-building events in form of trips or just meeting together and having fun. I believe we worked pretty well together and we managed to do considerate job on the project and all of our assignments.

We decided to repeat last year’s development methods Scrum and Unified Process, as we all agreed that it is something we are very familiar with already and it was much simpler and easier to follow than first semester’s Waterfall. We split requirements into smaller tasks and worked on that specific requirement until it was marked as done and then we moved on to the next one. That way it was much easier to see what was implemented and what was not and it brough us a little bit of satisfaction seeing a feature working.

As for the implementation itself, it was very challenging in the beginning to get all three tiers running. We had to use .NET and Blazor Web Assembly which we did not previously used, but there were very detailed tutorials which showed us how it is done and it was not as hard. However I myself had a hard time working on the front-end of the application, as I am more suited for back-end work, so anytime I had a task which included working on the presentation tier, I struggled, but I managed to finish my tasks every time. Another new technology we used was Spring Boot Framework. Although we were already familiar with Java, the framework itself was little harder to grasp, but we managed to do that as well.

We also decided to use a technologies which was just briefly explained in the class – JPA & Hibernate which was used for mapping java classes to database tables. For the middle ware technologies we used RESTful web API with HTTP protocol and Google’s Remote Procedure Calls. Implementing REST API was not as challenging as we thought and we managed to make that work pretty easily. The hardest part of the project for me was implementing gRPC communication. It took us multiple hours before we managed to make the service work how we intended.