Starting my internship in LeadExpress and knowing my assignment which is connected with one of their products – Expandi, I wanted to know more in-depth information about the software itself, the purpose it is being used and how it is structured. For that reason, I organized an interview with one of the main developers for Expandi, also my mentor – Martin Savov.

The interview was held on 1st September 2020 and transcript can be seen below.

For convention I will use “P” for Plamen Zaykov (intern) and “M” for Martin Savov (developer-mentor)

P: What is Expandi and the added value of the product for its clients?

M: Expandi is a cloud-based software which manages more easily and fully automates the business process in a LinkedIn account. The benefit our users get from Expandi is that they only spent time only once, when they set-up their campaigns, add people to it and think of the strategy they want to apply to the target audience, after that the software starts sending out the connection requests with message (if specified) and follow up messages if the user has set-up ones. During sending out of the requests and messages, the user only needs to check if their contacts in the campaign have replied to their message and give them a reply manually.

P: You mentioned in the beginning that it fully automates the business process of LinkedIn account, right? What is that business process?

M: By business process. I meant the interaction flow between profiles in LinkedIn. There are certain actions possible when you are not connected with other account and also other type of actions when you are already connected with the contact. Currently we are able only few of both situations and that’s where your assignment comes.

P: So, what actions are possible in LinkedIn and which of them are currently supported from Expandi?

M: Lets split them into 2 groups: people who are connected with you, so 1st degree connections, and the other group is with people who are not connected yet – 2nd and 3rd degree connections. Let’s start with the second group first, because that is the normal case, you find your target people from search, go into their account and explore it. What you could do before sending the connection request is view the profile, the person will be notified that you have viewed it, then if they view yours back, you will be notified as well. You can also follow their profile which will mean that you will see the posts they are sharing but you are still not connected yet. After that, you can finally send a connection request to them with or without a connection message, the benefit of adding one is that people will feel as they are really wanted to connect with and also will see your motivation for sharing the same network. That of course depends on the message you sent them. These were the actions available for people who are 2nd and 3rd degree connections. For the first group – people who are already connected with you, 1st degree – there are many other actions available after establishing connection. You can freely write them a message through the chat, you can endorse skill, like and share their posts, give them kudos and congratulate them when they have started on new position.

Now let’s get back to what Expandi offers from all these actions. Currently, to all 2nd and 3rd degree connections, it is possible to only send connection request with or without the connection message, of course while sending the connection request the profile will be viewed, but that is not the full activity people expect. After the contact accepts the connection request, if he/she does, it is possible to sent them messages through the chat. If they decline the request it is not possible to do anything with the person and the flow stops for the contact. As you can see, Expandi is offering very small part of what LinkedIn is capable of and we would like to improve in that aspect.

P: That was very in-depth explanation for both flows, which I am very thankful for! I think this topic is fully covered. Let’s jump to the next question. After explaining the whole process done by Expandi, could you describe what is done also behind the scenes, so the architecture of the system?

M: That’s a very interesting topic as well! Do start with, I think it would be better to first explain what we have on the front-end and back-end side. What the user sees is the front-end side or also known as client side, which is built on the Angular Framework version 9, it was chosen because Angular supports complex systems and the functionality is easily split between the different components. Once the user makes certain actions Angular sends the data to our back-end. There you will find Docker containers which contain the different frameworks working simultaneously. We have the Django framework which works in Python, PostgreSQL database, Celery workers and the Selenium hubs. Each framework has its own responsibility for the system. When data is sent from Angular, Django receives it and knows what actions should be taken, could be that the data to be stored in the database, or celery tasks needs to be scheduled for certain action, could be both as well. After tasks are queued in the celery queue, they have position in which they are executed, when task has reached the processing time, the celery worker activates and searches for free Chrome browser in the Selenium hub in which to execute the task. After one is found, the certain action is taken into LinkedIn and processed. After it finishes, LinkedIn returns if it was successful or not and the result is passed to Django which continues the flow to the database and back to Angular. In other words, data has been shown to the user.

P: Just to make sure everything is understood, what do the Docker containers do?

M: They are providing the celery workers and queue, hold instance of the specified frameworks and make possible to exchange the data between all components of the back-end

P: Thank you for that great interview, all my questions were answered and now I have a clear overview on what happens of both client – LinkedIn and also back-end - Expandi side. I am more than ready to start!

M: You are very welcome and good luck with your assignment, let me know if I can help you with anything else!