

**Report from the praxis
In the period from 1.7.2011 to 6.10.2011**

Information about student:

First name: Luboš
Surname: Hořínek

Date of birth: 24.10.1989

College graduate specialization: Applied Informatics

The term of praxis:

Start: 1.7.2011
End: 6.10.2011

Workplace:

logi.cals
Mailüfterlweg 1
3124 Oberwölbling
AUSTRIA

Praxis: course and subject

The praxis began in Austria on 1st July 2011. Me and another student Lukáš Tyc were travelled to Vienna to meet our guide Sunil. We met him after arrival to Vienna. We travelled together by the train to Sankt Pölten immediately after arrival. We found accommodation in dormitory in Sankt Pölten. Me and Lukas were living in this dormitory throughout our stay at the logi.cals. We have move back to Vienna just after we have accommodated.

At Vienna we met Angelina Kratschanova together with all guys from Czech Republic and she gave us important information about our stay in Austria. Then we had common dinner and after the dinner me and Lucas travelled back to Sankt Pölten again. Me and my schoolmate Lukas were working at the same company during our praxis in Austria. We, i.e. me and Lukas, had the opportunity to do some two-day sightseeing in Sankt Pölten, because we had arrived just before weekend.

Monday 4th July was our first working day. We met Sunil at the train station in the morning and after that we went together to Statzendorf. Edwin Bruckner waited for us in Statzendorf. We had introduced ourselves and after that he took us by his car to the logi.cals company based approx. 2 km away from the station. Edwin had shown us the part of logi.cals' building just after the arrival, and then he presented us to our boss Florian Eder.

Florian Eder showed us the rest of the company's building. He introduced us to our colleagues and gave us places in an office. We shared the office with our colleagues Franz Gunacker and Harald Nistelberger.

The company lent us corporate notebooks with preinstalled logi.CAD software. Our colleagues demonstrated the logi.CAD to us. They showed us basics of the graphical programming methods of the logi.CAD used to program target systems. They had given us two days to get in touch with the software and then our boss set us a two weeks task. We were assigned to make a model of traffic lights. This project was intended for us to practice not only the graphical programming of the logi.CAD itself, but also to practice code commenting and online documentation writing. After having finished this project we were set the task to get in touch with vendor blocks programming. The vendor blocks programming comprises of two steps. The block itself is designed using the logi.CAD in the first step. Than the block functionality has to be programmed using C language.

So the content of the first two weeks of our praxis was to get in touch with the logi.CAD software and block building using this software. After we got in touch with the software tools used in logi.cals we were given the task for the rest of our praxis.

Our main task at logi.cals was the development of blocks library called "Safety Library". Block from this library should be designed with the same functionalities as "standard" blocks, but with different data types. The usage of different data types in blocks from "Safety Library" is critical.

The “safe” blocks and variables used in the “Safety Library” are then error-proof against confusion with ordinary blocks and variables. We can name the “numerical blocks”, “logical operation blocks”, “timers” and “counters” as examples of blocks to be made.

There was great obstacle in the blocks conversion unfortunately. This obstacle was the strict usage of the ANSI C code. This restriction was caused by the usage of different compilers requiring the ANSI C code.

The strict demand of ANSI C code usage from the side of compilers was of great benefit to me. This demand pointed to substantial differences among C/C++ languages and also different C language standards. This gave me the great opportunity to learn the differences not only in theoretical way, but more important through practice.

The work on the “Safety Library” was a collaborative work in the 4 persons team. This gave us the opportunity to take part in short stand-up meetings with colleagues, where we have informed each other about the progress and shared our knowledge. The work in team gave us the chance to absorb the best practice used in this company.

There were also some changes in our project from time to time. These changes involved e.g. changes in data types used in blocks. Changes complicated the project a bit, but they were also inspiring for our programming skills progress.

The functionality of individual blocks had to be tested throughout the library development. Lukas and Me were build a test project, that enabled us to cross-check the outputs of blocks we had developed and the original ones.

Our test project was of great interest of our colleagues and our boss Edwin. Edwin showed us their toolbox for logi.CAD automated tests development, so we rewrote our test project using this toolbox. We had also equipped our project with the documentation, help and code comments to enhance the usability of the test and document the test functionality. So we provide the company with our fully automated test project as another product of our praxis.

So our praxis at the logi.cals went to the end and we had to finish our work at logi.cals in last few days of our praxis. We had to polish the details as the visual aspects of individual blocks. We were ordered also to install the new version of logi.CAD and upgrade the installation with the new Safety Library. The Safety Library installer and integration was prepared by our colleagues at logi.cals. Our task was to test the integration and the level of completeness of this library, i.e. which blocks had been integrated so far. Those tests were done several times using different versions of the library.

The last day of our praxis was devoted to the praxis evaluation. We had the meeting with our College representatives, the Fachhochschule Technikum Wien representatives and our boss at logi.cals. We had discussed the praxis progress and benefits for us and the logi.cals. We had

discussed the pros and cons of the praxis and developed tools. After this discussion we had to say good bye. We were delighted when logi.cals representative had given us gift parcel in appreciation of our work for logi.cals.

The praxis was great benefit to me. It was a great experience and I cordially recommend this praxis to all the other College students.

The shortcomings

I have not discovered any major shortcomings. I enjoyed the stay at Austria well. If I had given the possibility to prolong the praxis, I would have stay longer. One of the minor shortcomings was the distance between our dormitory and logi.cals residence, which is located in the suburb of small village away from bigger cities. I would appreciate the possibility to have the internet in our room at dormitory also. It was pleasant to have breakfast at the dormitory canteen on the other hand.

The praxis benefits

The main benefits of the praxis are new programming skills and experience of living and working abroad. Foreign praxis will be valuable item in my CV also. The great benefit is the improvement of my language skills too.

There was student from Italy, who was at logi.cals at summer job. She was accommodated in the same dormitory as we were and she told us many interesting information about her homeland. We made also a sightseeing of Vienna and together with Sunil we were on trip to Melk.

The atmosphere at the logi.cals company was very pleasant and inspiring, so I think this was very good first work experience for me.

Conclusion

I could cordially recommend the foreign praxis to any other student, who wants to enhance his or her experience and knowledge. I have gained interesting programming and work skills, as I have mentioned before. I hope I utilize these skills in my future career.