

**HACETTEPE UNIVERSITY  
ENGINEERING FACULTY  
DEPARTMENT OF COMPUTER ENGINEERING**

**BBM325  
INTERNSHIP REPORT**

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**Performed at  
INNTHEBOX**

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Duration in Workdays**

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# 1 Introduction

The main idea to do my internship in Innthebox is they are the partner of Microsoft and works with the latest software Microsoft have been published. Therefore, I was learned lots of information about Microsoft's latest projects. The main focus of company is Dynamics 365 which is a software published by Microsoft. Dynamics 365 is a software, created for Customer Relationship Management (CRM). They sell this software via Microsoft. After the deal, they make this software more organized for company by writing plugins. The plugins writing in C# language as a ASP.net project.

Things that I done in company are;

- I wrote a plugin for Borusan Logistic.
- I learned MS Flow which is a new technology and made a presentation for teaching to company workers.
- I made a MS Flow project for Borusan Logistic.

## 2 Company Information

### 2.1 About the company

Innthebox was established in 2014 by the founder Önder Tellioglu. After 2016 works gone wrong and company had failed. In 2018 the founder wanted to make Innthebox great again, from then and now works gone very rights, they are as strong as a rock in the CRM sector. Their location was in Beyoğlu near to Galata Tower, but after 2018 they need to much larger office and they moved to Üsküdar-Altunizade.

They are in CRM sector, therefore their main target area is CRM, also they have a mobile application development department. They make mobile application for create CRM process more useful. They work with huge companies. Starbucks, TeknoSA, Bioderma and Borusan Logistic some their customers.

### 2.2 About your department

My department was CRM Development, but I done a project of Web Development. I worked as a developer in my department. My main topic was developed web plugins, but as I say, I makes their website too. I directly work with company manager who is Ömer Kılıç.

## 2.3 About the hardware and software systems

There was not much kind of hardware except computers. They use lots of Microsoft software such as Visual Studio, Dynamics 365, Azure Active Director, Microsoft 365 etc.

## 2.4 About my supervisor

- *Name – Surname:* Ömer Kılıç
- *Address:* Altunizade Mah. Kısıklı Cad. No:4 Sarkusyan-Ak İş Merkezi 2/1 Üsküdar/İstanbul/Türkiye
- *Telephone Number:* +90 (530) 333 51 45
- *E-mail:* omer.kilic@innthebox.com
- *Education:* Marmara University – Computer Programming ‘98

## 3 Work Done

- ***3.1 The plugin that I wrote for Borusan Logistic CRM system.***

In this part I will explain the plugin, The CRM system has currency field which can be US Dollars, Euros, Pounds. According to change of those currency rate ratio to Turkish Liras those field need to be updated. For solving this problem customer wants to synchronize CRM every night. I take the currency rate from Central Bank of Turkish Republic service [1]. After taking current currency rate every single record, which has currency field updated. I used Visual Studio 2019 which is serviced to me by company. That plugin very important for Borusan which is our customer any error could be very big problem, therefore I done my job very clearly. Before plugin published it was tested in Borusan Test CRM System. After testing with my supervisor, he confirmed that the plugin runs correctly. Then plugin published to live system. It will work every night, and I will be so honored for wrote a program which is using for one of the biggest group in Turkey.

- ***3.2 The Flow project that I made for Borusan Logistic.***

Firstly, I want to explain what MS Flow is. MS Flow is a Microsoft service that it works integration, social media management, too much things that I can not count. In this project we need to a reminder e-mail sending to Borusan Logistics clients. Those e-mails have lots of condition. In Borusan CRM there is an agreement entity which has several fields. Those condition, we set-up on project are;

- Agreements which are ended 90 days ago from control time or which are will ended after 90 days from control time.
- The companies which are has an agreement should be active in CRM.

- And the agreements should be loosed.

Project should be checking every Monday the agreements and send reminder e-mail about agreements, to agreements owners. We choose to do this project with MS Flow because, MS Flow has a trigger which is runs according to schedule, and it has a connection with Dynamics 365.

- **3.3 The presentation that I made about MS Flow to my co-workers.**

MS Flow is a new technology which will been used instead of workflow which is a part of Dynamics 365. Before MS Flow, they used workflow for makes works automated. But workflow is do organization works only in Dynamics 365 and It does not work with third party application. But MS Flow has lots of connection collection with third party application. Luckily when I start my Internship there was no body known how MS Flow works, and there was a conference which is arranged by Microsoft on online. Company choose me to watch this conference and learn what is MS Flow. After watching and learning MS Flow, I made a presentation [2], for teach what I learned in conference to my co-workers.

## 4 Performance and Outcomes

### 4.1 Applying Knowledge and Skills Learned at Hacettepe

The skills that I have learned at Hacettepe and applied during on the internship

- Algorithms
- Research skill which I developed in Hacettepe

Those are the main skills that I learned in Hacettepe and applied during on the internship.

### 4.2 Solving Engineering Problems

During the internship there was only one engineering problems that I solved. The problem was about time complexity. Before my work on Borusan Logistic the program, which was working for currency update has unacceptably algorithm, therefore the program working like a turtle. For solving that problem, I use one of the algorithm that I learned in Hacettepe. The algorithm that I used was Binary Search Algorithm. After I used that algorithm, runtime performance increased almost 30%.

### **4.3 Teamwork**

During my internship, I was participated in a team, which was working on Borusan Logistics request about their CRM system. We were three people in the team.

- Sevim Kara – Developer (Education: Graduated from Physics)
- Sümeyra Vegin – Consultant (Education: Bachelor from Industrial Engineering)

Sümeyra's role keeping touch with Borusan's workers whose were responsive that their CRM system. Sevim was working for developing the requests which are directed from Borusan to Sümeyra, my role also was developer. I develop the request that came from Borusan and directed to me according to planning time for developing because of 30 workdays.

### **4.4 Multi-Disciplinary Work**

During my internship I did not worked in neither multi-disciplinary work nor multi-disciplinary team.

### **4.5 Professional and Ethical Issues**

During my internship I did not observed any professional issues, but I can talk about an ethical issue. In Sevim's project there was a part of work which needs to be done by Murat İşimer who was a worker on system-support side. When Sevim wanted to be done that part for Murat. Murat suddenly grumbled with high voice, said that "There was too much work wait for being done and you should wait your turn". After this conversation, The CEO Önder, invite them to his room and wants an apology from Murat to Sevim. According to information's that I heard from Sevim.

### **4.6 Impact of Engineering Solutions**

During my internship, I had been at a meeting with company customers for understood the why they need that CRM system. The Dynamics 365 which is an engineering solution provided by Microsoft, keep in touch the companies with their customers. Using that system companies keep track which customer can buy that products or which customer can be satisfied an opportunity that company may provide.

## 4.7 Locating Sources and Self-Learning

I want to list all the thing that I get self-learning.

- ***Microsoft Flow***

I did not hear anything about MS Flow before my internship. During my internship there was a project which need to be done using MS Flow. There was nobody knows anything about MS Flow. Luckily there was an online conference [3] on 10 September 2019 which is all about MS Flow and organized by Microsoft. I joined that conference and take notes on demands from my supervisor.

- ***C# ASP.Net***

I was graduated from Istanbul University – Computer Programming in 2015, I learned C# and ASP.Net in that school. In Borusan project I need to take data from TCMB for currency update. I was not developing any project like this before. Therefore, I get some information on this website. [4]

## 4.8 Using New Tools and Technologies

The new tools and technologies that I encountered during internship;

- ***Microsoft Dynamics 365 (7/10)***

Before my internship, I had not heard anything about Dynamics 365. My super-visor gave couple of presentation to me and other interns. Taking notes from those presentations, really helped me to learn that system.

- ***Microsoft Flow (9/10)***

Before my internship, I had not heard anything about MS Flow. There was a online conference about that technology, by joined that conference and taking notes was really helped me to learn that technology.

- ***Postman (10/10)***

Before my internship, I had not heard anything about Postman. During my internship there was some test need to be done by using Postman, Murat Demir who was also a worker on that company, teach me what that do and how to use it.

## 5 Conclusions

As a summary I really appreciated that I done my internship in this company. In my internship I learned some Microsoft services like Flow and Dynamics 365 and some other software which is Postman. The things that I learned at Hacettepe and used during on internship;

- Algorithms from *BBM202*
- Data Structures from *BBM201*
- General knowing from *BBM105*

## References

- [1] “Currency service which is serviced by Central Bank of Turkish Republic”.  
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- [4] “Reading data from an XML file on a URL”.  
<https://docs.microsoft.com/tr-tr/dotnet/api/system.xml.linq.xelement.load?view=netframework-4.8> [Accessed; Oct 2, 2019].



# Appendices

