

# **Process Report**

## **Car Booking System**

**ICT Engineering**

**Group number: 2**

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**Course: SEP1**

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## INTRODUCTION

In this report we will describe the process of developing a vehicle booking system and revealing the steps we follow in order to complete the task efficiently and without mistakes.

In order to work as a group we first made the personal SWOT for every member in our group and a group SWOT to see the competences of our members and our group and also the weakness points.

## COMPETENCES

This part of the report is about the involvement of every member from the group by establishing the roles that everyone have to do in order to work efficiently.

In the first place we need to have to analyze the Belbin roles and the SWOT for every member so that no mistakes will be done during the project work.

We have analyzed each other both individual and as a group and we have succeeded finding the factors that might influence our group work. Belbin roles helped us to understand what competences our group holds.

This helped us to make a balance in which every team member is performing a role (or more roles) that reflect their strengths and to decide the ideal responsibilities for every team member.

## BELBIN RESULTS

The following part includes a table with our individual results for each member Belbin test;

Implementor	Coordinator	Shaper	Plant	Resource Investigator	Monitor Evaluator	Team Worker	Complete Finisher	Specialist
	Bianca Sgondea	Bianca Sgondea					Bianca Sgondea	
		Nikola Sevo						Nikola Sevo
			Nicholas Papas	Nicholas Papas				
				Sergiu Craciunescu				Sergiu Craciunescu

This table highlights that no one of us is a team worker, we all like to work individual and the fact that we don't have an implementor and a monitor evaluator. For this fact we are trying our best to don't make a disadvantage out of this by aiming to finish the project in time and to prevent not making our team mates lose their power work.

## ROLE DEFINITION

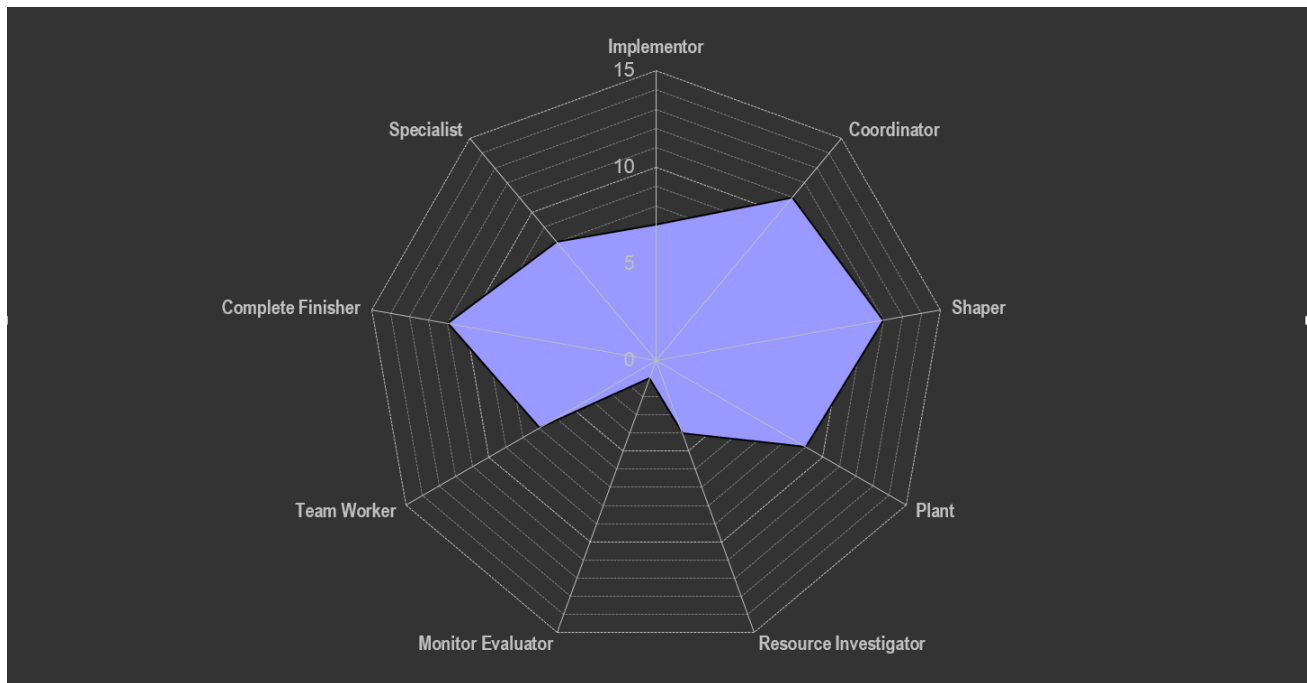


FIGURE 1: BELBIN ROLE DEFINITION FOR BIANCA SGONDEA

According to the chart I display the following Belbin roles: **Coordinator, Shaper, Complete Finisher.**

As a **Coordinator** my job is to be sure that all group members know when and where next meeting will be and what to do till the meeting, make sure that every members has the opportunity to express their ideas when they have the meetings and keep the group on track.

As a **Shaper** my job is to thrive under pressure and be able to get things moving and also I need to be sure that we achieve our objectives.

As a **Complete Finisher** I need to ensure that the team is working as well as possible and keeping the standards high, finish in time and also be sure that the details are good.

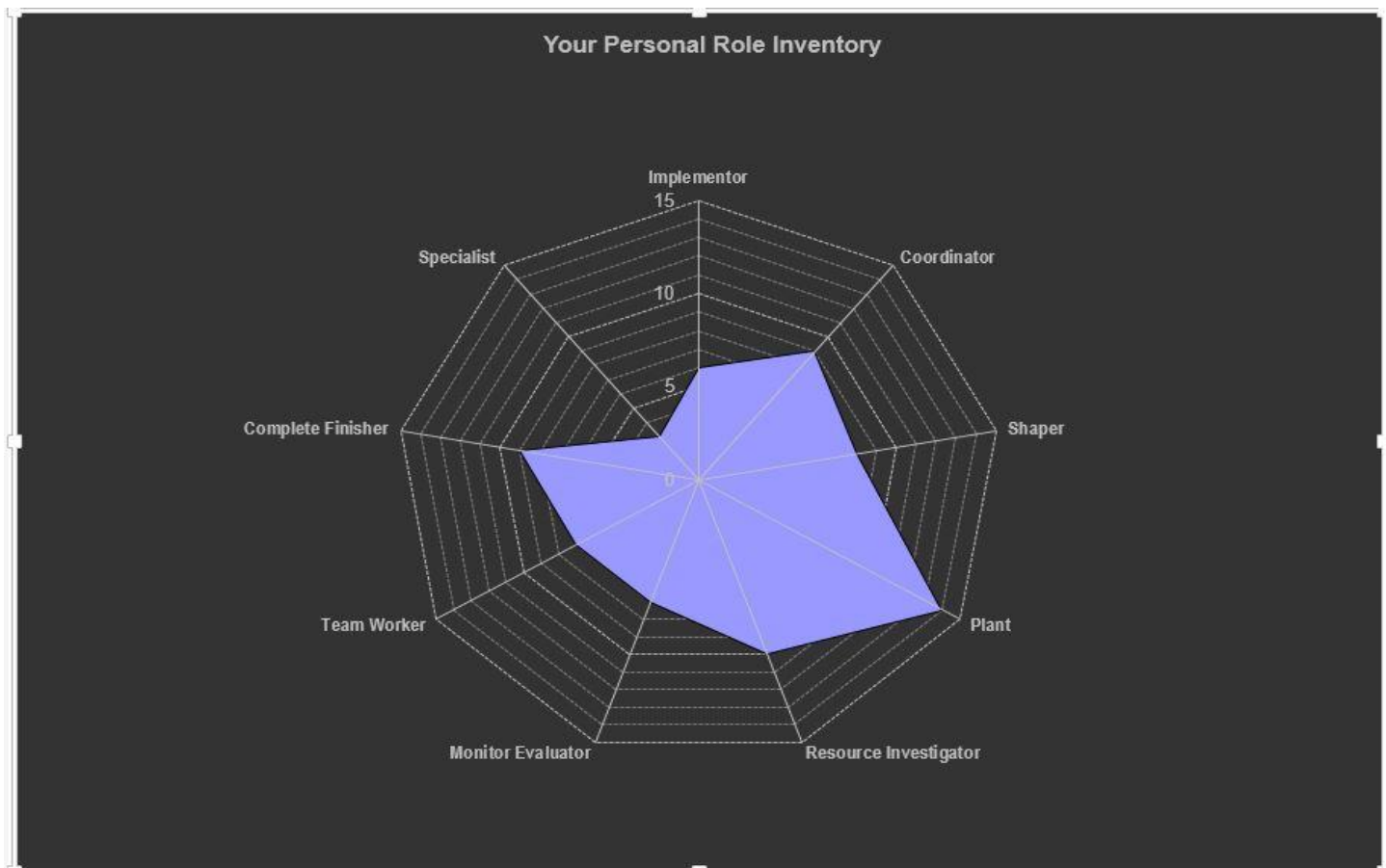


FIGURE 2: BELBIN ROLE DEFINITION FOR NICHOLAS PAPAS

According to the chart I display the following Belbin roles: **Plant, Resource Investigator.**

As a **Plant** my job is to come up with ideas and suggestions when problems will show up.

As a **Resource Investigator** I am the one responsible with initiating new contacts outside the group, maybe find some useful information for the group work.

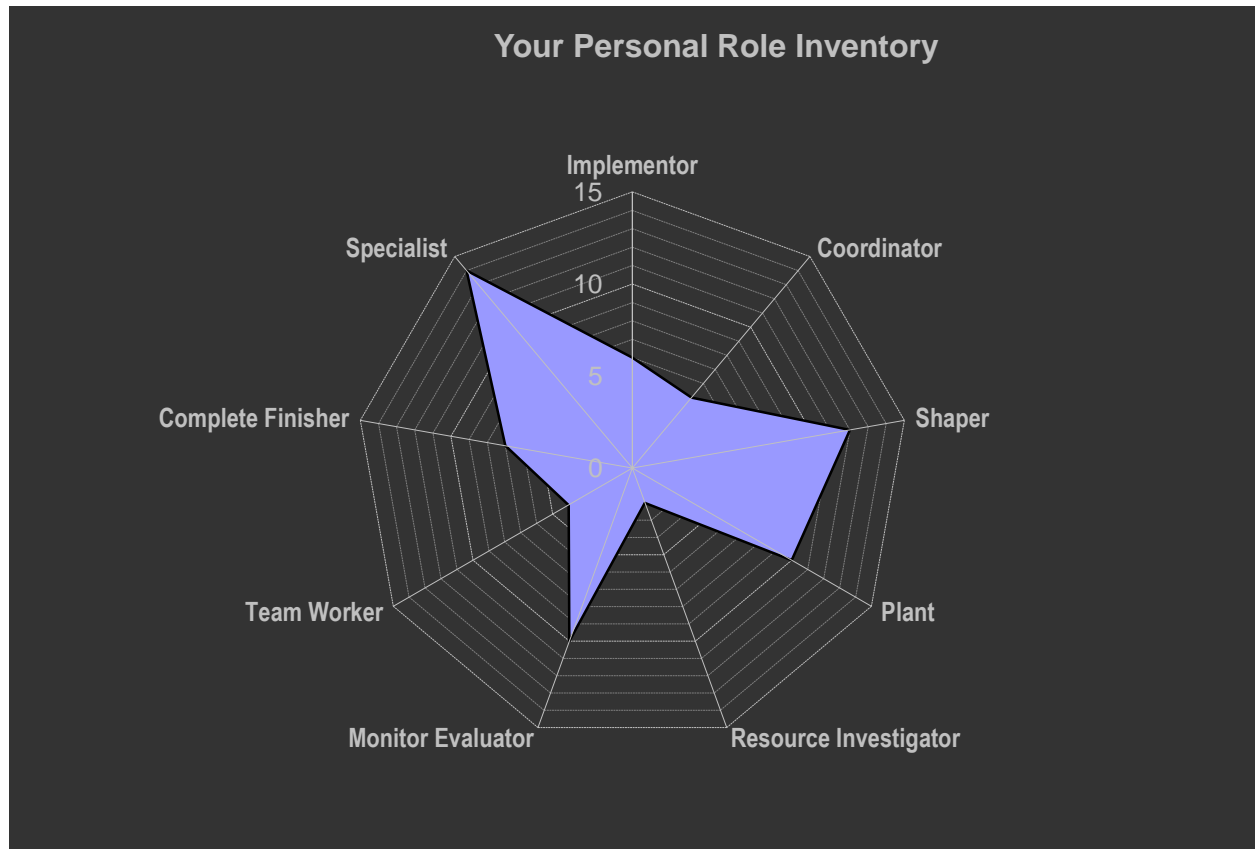


FIGURE 3: BELBIN ROLE DEFINITION FOR NIKOLA SEVO

According to the chart I display the following Belbin roles: **Specialist, Shaper.**

As a **Specialist** my job is to maintain my skills at a high level and I need also to not be concentrated just on the technical part and help my group on the other parts.

As a **Shaper** my main role is to keep pushing people and make sure that things are done in time and good. Beside that I need to maintain a good atmosphere in the group in order for good performance.

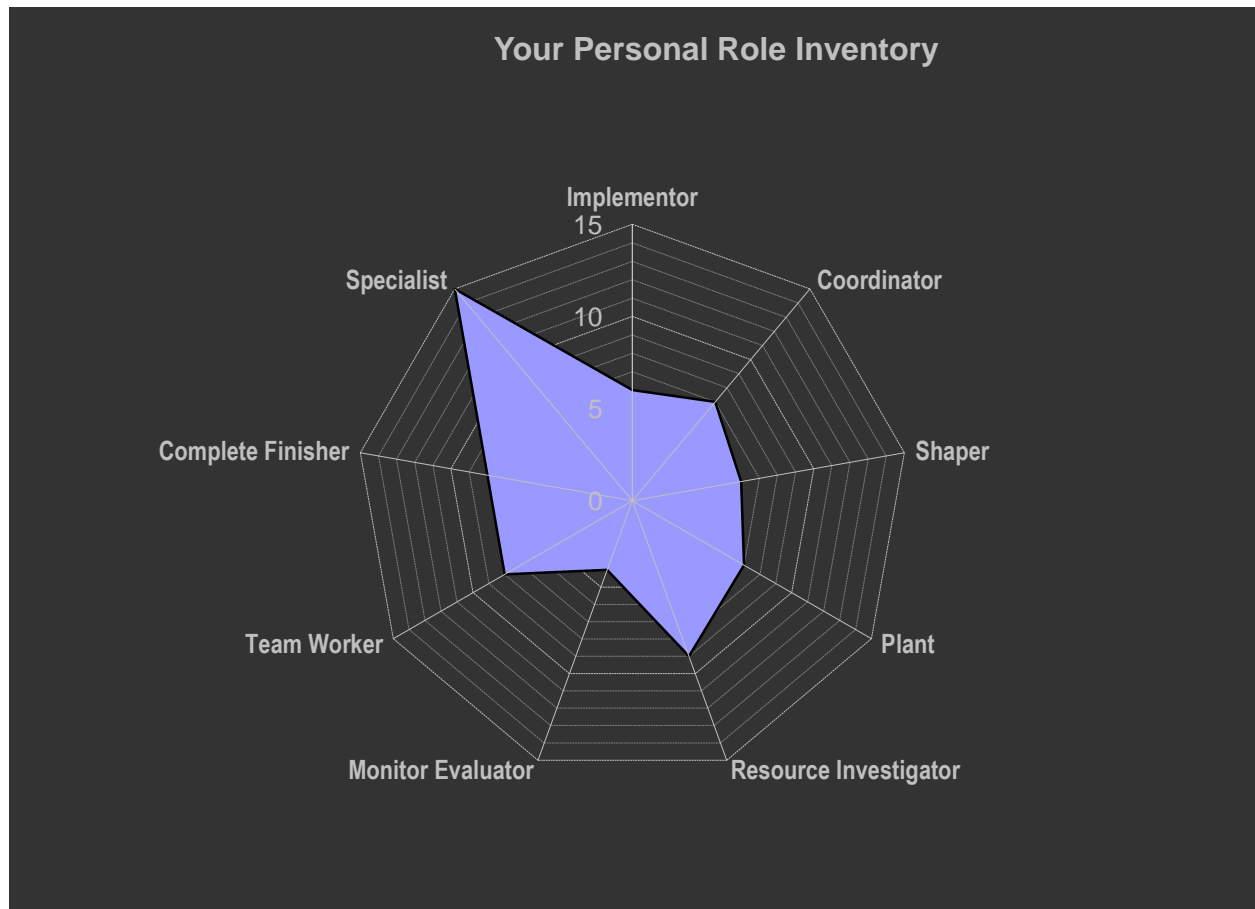


FIGURE 4: BELBIN ROLE DEFINITION FOR SERGIU CRACIUNESCU

According to the chart I display the following Belbin roles: **Specialist, Resource Investigator.**

As a **Specialist** I need to keep my skills high and work on the technical part but also help my other members from my group with other tasks regarding the project.

As a **Resource Investigator** I am responsible with making new contacts outside the group and develop the ideas with which the **Plant** is coming with and make them understandable for all the members in the group.

## S.W.O.T

An S.W.O.T analysis is useful in order to understand each other strengths and weaknesses, opportunities and threats. This will help us in order to know who is good at what and divide the tasks.

### BIANCA'S PERSONAL SWOT:

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"><li>• Hardworking</li><li>• Tolerant</li><li>• Serious</li><li>• Flexible</li><li>• Perfectionism</li></ul>	<ul style="list-style-type: none"><li>• Shy</li><li>• Impatient</li><li>• Stressing</li><li>• Low presentation skills</li><li>• Perfectionism</li></ul>
<b>Opportunities</b>	<b>Threads</b>
<ul style="list-style-type: none"><li>• Improving:<ul style="list-style-type: none"><li>○ programming skills</li><li>○ team working</li><li>○ presentation and communication skills</li><li>○ punctuality</li></ul></li><li>• Learning how to manage time more effectively</li></ul>	<ul style="list-style-type: none"><li>• Stressed by deadlines</li><li>• Distracted by external factors</li><li>• Overthinking</li><li>• Coldness</li><li>• Unpunctuality</li></ul>



NIKOLA'S PERSONAL SWOT:

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Good with Java</li> <li>• Easygoing</li> <li>• Open to new ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Get bored quickly if the topic doesn't match my interests</li> </ul>
<b>Opportunities</b>	<b>Threads</b>
<ul style="list-style-type: none"> <li>• Gain a new experience</li> </ul>	<ul style="list-style-type: none"> <li>• Potential bad financial situation distracts me from fully committing myself</li> </ul>

NICHOLAS'S PERSONAL SWOT:

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• Group leader</li> <li>• Team worker</li> <li>• English</li> <li>• Gathering Resources</li> </ul>	<ul style="list-style-type: none"> <li>• Attention span</li> <li>• Level of urgency</li> <li>• Time management</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Time management</li> <li>• Punctuality</li> <li>• Programing skills</li> </ul>	<ul style="list-style-type: none"> <li>• Games</li> <li>• People (because I'm a very social)</li> <li>• Deadlines</li> <li>• Knowledge</li> </ul>

SERGIU'S PERSONAL SWOT:

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"><li>• Hardworking</li><li>• Determinate</li><li>• Serious</li><li>• Flexible</li><li>• Respectful</li></ul>	<ul style="list-style-type: none"><li>• Stressing</li><li>• Speaking for crowds</li><li>• Losing the track of time</li></ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"><li>• Improving:<ul style="list-style-type: none"><li>○ presentation skills</li><li>○ programming skills</li><li>○ punctuality</li><li>○ learning how to work in a group/team</li></ul></li><li>• Learning how to manage time more effectively</li></ul>	<ul style="list-style-type: none"><li>• Distracted</li><li>• Oversleep</li><li>• Get bored easily</li><li>• Job</li></ul>

## GROUP SWOT:

For a better view of our SWOT group we have put all the common features obtaining a general approach of our group.

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"><li>• Spending time productively</li><li>• Flexible</li><li>• Positive</li><li>• Good team environment</li></ul>	<ul style="list-style-type: none"><li>• Easy going</li><li>• Level of professionalism</li><li>• Inexperience with group work</li></ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"><li>• Learn from each other</li><li>• Pass semester with good grades</li><li>• Improve communication skills</li><li>• Improve working with other people</li></ul>	<ul style="list-style-type: none"><li>• Stressed by deadlines</li><li>• Unpunctual</li><li>• Distracted by external factors</li><li>• Overthinking</li></ul>

## LIST OF TASKS

Tasks	Group members
Requirements	Bianca, Sergiu, Nikola, Nicholas
Use case	Bianca, Sergiu, Nikola
Use case diagram	Bianca, Sergiu, Nikola
Use case description	Bianca, Sergiu, Nikola
Activity diagrams	Bianca, Sergiu, Nikola
Class diagram	Bianca, Sergiu, Nikola
Java doc	Nikola
Java code implementation	Bianca, Sergiu, Nikola
Data files	Bianca, Sergiu, Nikola
Adapters	Bianca, Sergiu, Nikola
GUI	Bianca, Sergiu
User guide	Bianca, Sergiu
Test	Bianca, Sergiu, Nikola
Result	Bianca, Sergiu, Nikola
Conclusion	Sergiu
Table of contents	Sergiu
Abstract	Sergiu
Introduction	Sergiu
List of references	Sergiu
Group policy	Bianca, Sergiu, Nikola, Nicholas
Individual SWOT	Bianca, Sergiu, Nikola, Nicholas
Group SWOT	Sergiu
Consideration before writing reports	Sergiu
Bloom's forms	Bianca, Sergiu, Nikola, Nicholas
Individual reflection	Bianca, Sergiu, Nikola
Logbook	Nikola

## RESPONSIBILITIES

We discuss about the responsibilities out functions in the group work reading the description of every responsibility and chose the one who represent us the most. So we decide that:

### Monitor and the recorder - Bianca Sgondea

The main responsibility of a recorder is to write down notes, making every one ideas to be easy to understand for the rest of the group (e.g. sketches) and to begin a written conclusion. Monitor means almost the same thing, the only thing extra a monitor should make is to ask from help from someone outside the group.

### Checker – Nicholas Papas

The main responsibility of a checker is to check again a solution and gives his approval (for spelling mistakes, aesthetics etc.) before the final work should be handed in.

### Presenter – Nikola Sevo

The presenter is responsible for communicating and dividing the tasks between the group members, finding solutions for work issues and come up with some work strategy. For that he needs to make summaries during discussions for other members to get the main idea.

### Coordinator – Sergiu Craciunescu

His main responsibility is to be sure that all group members know when and where next meeting will be and what to do till the meeting, make sure that every members has the opportunity to express their ideas when they have the meetings and keep the group on track.

## GROUP POLICY

### GENERAL RULES

1. The fact that we are working in groups require effective communication therefore all the members have to establish such communication.
2. All members are required to attend all meetings with the teacher.
3. All members are required to meet at VIA every day from Monday to Friday.
4. If any of the group members is unable to attend a meeting because of some valid reason (illness, etc.) they have to inform other group members in the sufficient amount of time beforehand.
5. All members agree to complete their given part of work by given deadlines.
6. Every single group member is entitled to their own opinions, perspective, and ideas. All the other members are therefore required to respect them and provide constructive feedback without insults so that the person can improve their performance by knowing their weaknesses, and strengths said to them by other group members.
7. The members must be willing to present their ideas in a respectful way and they should not be afraid to say anything and be aware of the fact that the team is only as strong as its weakest point.
8. Any amendments to the above or any group policy or decision require a unanimous vote.

## CONSEQUENCES

Group members may be warned and ultimately risk exclusion from the group because of the following:

1. None compliance with the above rules or guidelines or any other form of breaking them.
2. Non-attendance or non-participation in the work group without a valid reason.
3. None delivery of allocated tasks or failure to complete work within agreed deadlines.

## MEETING WITH THE SUPERVISORS

### SUPERVISOR MEETING 13.05.2016

At our first meeting we discuss about our requirements and use case diagrams. The supervisor gave us a feedback regarding them and tell us some ideas to make them look better and improve them. It turned up that they weren't so good.

The first meeting helped us to understand how some good requirements should be written and helped us to understand more about how the project should look and what it supposed to contain.

### SUPERVISOR MEETING 17.05.2016

At the second supervisor meeting we discussed about the file system that we are going to implement in our system. We had an idea of which approach to take but was advised by the supervisor that the other approach would be better and more efficient for our system. We also discussed elements that we wanted to implement in our program and if some where necessary or not. It turned out that they were necessary and are needed in our system for it to be more efficient and user friendly.

So in conclusion now we know what kind of files we need to use to make the program work property.

## GENERAL SUMMARY

The aim of project can be divided into few parts, making a functional program, and documenting the progress. In their entirety they make up the whole system that is the goal of SEP1.

The first week of the work should have been the most crucial (and was) one, because the tasks and the whole concept was being developed in the beginning. Group 2 managed to split the tasks among themselves and then they proceeded with their implementation.

In addition to that, 2 most important supervisor meetings took place in week 1. First week ended with actual implementation of work tasks that were designated in the beginning of the week, while before that general preparations (like work space preparation) were made to ensure functional environment.

While focus point of week 1 was planning and setting up, core of week 2 was actual implementation most of the code and analysis. The group had its good and bad moments, but most things were solved without too much problems. Base classes were finished in this week (like Vehicle parent class and Reservation class, as well as all classes that are linked to them). By the end of the week, plans for adapter classes and GUI were made, although they were not successfully implemented. Since diagrams and reports had in this week higher priority than GUI and files, they were done first, whereas the rest was left for last week.

Last week, the third one, was most difficult. Some planning mistakes that were made let a lot of tasks to be accumulated in last week. While GUI and Files were made to be on more or less semi-functional level, we were not satisfied with that. The whole system did not function properly and there was still a considerable amount of reports to be polished/done so we had quite a task on our hands.

With all that said it looked like we will not finish in time, but we done a lot of tasks and made things closer to their supposed state. GUI and Files were main focus, but since there was no time to polish them functionality remained somewhat disputable. When the deadline caught up with us there was no choice but to wrap things up and to submit the done project.

See daily logs in Appendix G

## CONSIDERANTION

When we started the project we had some discussions about how to structure the system documentation because none of us known how should look like. The report guideline and the project reports example from previous year presented in class helped us to structure the information. We tried to make a level balance of formality in order to be understandable for every kind of people, even if they are ICT specialists or not. Different kind of audience need to have different ways to present the information. So we decide to approach the following writing style:

1. The Project Report shall be written in an academic writing for experts in Information and Communication Technology domain.
2. The Process Report shall be written in an informal style using informal writing.
3. The User Guide shall be written in the simplest way in order for every audience to be able to understand.

## ASSESSMENT OF GROUP

**Bianca Sgondea:** The goal for our semester project was to create a booking system for a small vehicle renting business. The main purpose of the project was to learn how to work as a group, and also to apply the knowledge that we have learned during the semester. That is the reason why we were supposed to work in groups of 4 members of different nationalities.

At the beginning we did not realize how important it is to have a clear plan and to discuss every step that we are going to do. Because of that we rushed to split the tasks and also we did not realize that we spend too much time working on details.

Each team member has their own way of approaching the problem that is why we wasted time arguing. We created our own deadlines to make sure that we would be able to finish it on time, but we did not realize at that moment how much time we were going to spend on different tasks.

For me, the most important part is that I have gained a lot of knowledge about what working in a group means and also about the importance of considering others' points of view. I have learned how to manage my time in a more effective way and I have also improved my language skills. Having learned by my mistakes, I now feel more prepared for the next group project.

In the end, considering that this was our first project as a group, I feel satisfied with the result.



**Nicholas Papas:** At first there was a lot of uncertainty in what we wanted to achieve with our system and what functionalities we wanted it to have. This resulted in some heated discussions between the group that I never really was in the middle of. I found myself was playing the role of the adjudicator, trying to let everyone get there point across without in being an argument.

I played this role thought out the time we spent together, but then at the end of each discussion I'd end up not having as much tasks left to complete as I'd want to, due to my role of adjudicator I'd end up delegating a lot of the work off and I think that's my down fall in the role I played.

Uncertainty quickly went away once we gained confidence in our self's and worked better as a team than we thought. We were consistent with our work output and team attendance, and in a few short weeks we were looking at the final tasks we needed to finish to complete our project as a whole.

**Nikola Sevo:** At the beginning we only knew that our task was to create and document a system for our semester project. It was confusing and to some extent intimidating.

Our initial confusion could be seen on how much progress we made day by day. I myself was also caught up in this, and turned out to be not so productive part of the group. This posed a huge potential risk to our completion of the project, since if we continued like that we would not have made it in time.

Fortunately, we overcome this obstacle, and after it all other were small and insignificant. It turned out that if we calm ourselves and make a clear structured program of action, we can achieve a lot. This has taught us a lot, especially what can confusion make out of people (even when our individual skills are enough to tackle the task ahead of us).

What should I do if I find myself in a similar situation in the future? Well, I certainly need to take a deep breath and not to rush, I need to picture the task and its structure in my head clearly, and to map out the possible and desired outcomes. And then to proceed with implementation, that will save me time and nerves in the future since I will need to make less amendments to the project.

**Sergiu-Mihai Craciunescu:** Our main objective for the semester project was to create a car booking system for a small company from Horsens. At the beginning it was hard to understand all others way of learning and working on this but in a small time after the project started we started to be more united as a group and start sharing all the ideas even if there wasn't the best in the world. In a couple of days we founded out who is good on what so we started to divide tasks in order to everyone to go what they are good at. Even if we were scared at the beginning because no one knows what to do because it was the first project and group work for all, we managed to get over that concern and started to work and be more confident on ourselves, but overall everything went well and it was a great experience for me. I learned a lot of new things. But the most important thing, that I'm very glad of it, it's the thing that I learned how to manage my time and work in an actual group for a really project. From my opinion the project period started a little roughly but in time things started to go better.

## BLOOM PROFILES

**Bianca Sgondea**

**Bloom profile:**

X – Start of the semester

Y – End of the semester

Fill in this form – include it in your portfolio – discuss it with the rest of the group	Bloom's level	Keeping a portfolio	Reflecting on learning	System development	SCRUM	Java Programming	Object-oriented design and programming	UML	Web Programming	Database design	Written English	Spoken English	Team working	Sharing knowledge	Project planning	Presentation / exam skills
<b>Date.....</b>																
<b>Excellent</b>	6															
	5															
<b>Good</b>	4		y	y		y	y	y	y		x		y	x	y	
	3	x									x	x	y	x		
	2		X									x			x	
<b>Basic</b>	1														x	x
<b>No knowledge</b>	0	x		x	X y	x	x	x	x	X y						

TABLE 1: BIANCA SGONDEA'S BLOOM

**Nicholas Papas:**

**Bloom profile:**

X – Start of the semester

Y – End of the semester

Fill in this form – include it in your portfolio – discuss it with the rest of the group  Date.....	Bloom's level	Keeping a portfolio	Reflecting on learning	System development	SCRUM	Java Programming	Object-oriented design and programming	UML	Web Programming	Database design	Written English	Spoken English	Team working	Sharing knowledge	Project planning	Presentation / exam skills
<b>Excellent</b>	6		Y								X Y	X Y	Y	Y		
	5												X	X	Y	
<b>Good</b>	4			Y		Y	Y									Y
	3	Y														
<b>Basic</b>	2					X		Y	Y	Y					X	X
	1	X	X				x	x	x	x						
<b>No knowledge</b>	0			x	x Y											

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TABLE 2: NICHOLAS PAPAS'S BLOOM

**Nikola Sevo:**

### **Bloom profile**

X – Start of the semester

Y – End of the semester

<b>Fill in this form – include it in your portfolio – discuss it with the rest of the group</b>  <b>Date...26.02.2016.....</b>	Bloom's level	Keeping a portfolio	Reflecting on learning	System development	SCRUM	Java Programming	Object-oriented design and programming	UML	Web Programming	Database design	Written English	Spoken English	Team working	Sharing knowledge	Project planning	Presentation / exam skills
<b>Excellent</b>	6					y	y				xy	xy	xy	xy	xy	xy
	5						x	y								
<b>Good</b>	4		x y	y		x										
	3	y x		x				x		x x						
<b>Basic</b>	2	x x							y x	x x						
	1								x							
<b>No knowledge</b>	0				x y											

TABLE 3: NIKOLA SEVO'S BLOOM

## Sergiu Craciunescu:

### Bloom profile:

X – Start of the semester

Y – End of the semester

Fill in this form – include it in your portfolio – discuss it with the rest of the group  Date..... .....	Bloom's level	Keeping a portfolio	Reflecting on learning	System development	SCRUM	Java Programming	Object-oriented design and programming	UML	Web Programming	Database design	Written English	Spoken English	Team working	Sharing knowledge	Project planning	Presentation / exam skills
Excellent	6										X Y	Y	Y			
	5	Y	Y					Y	Y			X	X	Y	Y	
Good	4			Y		Y	Y									
	3		x						X					X	X	Y
Basic	2															X
	1	X		x		X				XY						
No knowledge	0				X Y		X	X								

TABLE 4: SERGIU CRACIUNESCU'S BLOOM