

HOGESCHOOL ROTTERDAM / CMI

Project 5-6

Developing a web application



INFPRJ0156

ECTS: 8

Module responsibility: I.S. Paraschiv



Description of the course

Modulenaam:	Project 5-6 – Developing a web application																	
Modulecode:	INFPRJ0156																	
Aantal studiepunten en studiebelastinguren:	<p>This course provides you with eight (8) study points, which corresponds to a workload of 224 hours.</p> <p>The recommended distribution of these 224 hours during the study weeks is as follows:</p> <p><u>Supervised lectures:</u></p> <table><tr><td>Kick-off:</td><td>3 * 50 minutes</td><td>2,5 hours</td></tr><tr><td>Project lesson (during 17 weeks):</td><td>17 * 3 * 50 minutes</td><td>42,5 hours</td></tr><tr><td>Presentations of the product:</td><td>1 * 30 minutes</td><td>0,5 hours</td></tr></table> <p><u>Unsupervised hours:</u></p> <table><tr><td>Time to work on the project incl. self study</td><td></td><td>178,5 hours</td></tr><tr><td>Total</td><td></td><td><u>224 hours</u></td></tr></table>			Kick-off:	3 * 50 minutes	2,5 hours	Project lesson (during 17 weeks):	17 * 3 * 50 minutes	42,5 hours	Presentations of the product:	1 * 30 minutes	0,5 hours	Time to work on the project incl. self study		178,5 hours	Total		<u>224 hours</u>
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Vereiste voorkennis:	Previous knowledge gathered from Dev-Anl-Skl courses can be used																	
Werkvorm:	Project-based education (teamwork)																	
Toetsing:	Examination is based on the delivered product and the process of the project																	
Leermiddelen:	Development tools, Dev and Anl courses literature																	
Draagt bij aan competentie:	<ul style="list-style-type: none">▪ Manage (Beheren)▪ Design (Ontwerpen)▪ Implement (Realiseren)																	
Leerdoelen:	<ul style="list-style-type: none">▪ [B] The student is capable of communicating in a client-centered way▪ [O] the student can design the application at all levels (use cases, modular design, ERD, etc.)▪ [R1] the student can use testing techniques to validate the correctness of the implementation and to grant the quality of the final product▪ [R2] the student can implement a layered data-driven web application by using modern technologies for web development																	
Inhoud:	You learn to work as a team (<i>process</i>) and to realize a realistic project assignment (<i>product</i>) for a client																	
Opmerkingen:	Attendance is obligatory. Teams will be made by the students and communicated to the Tutor. Each team will contain 5 students!																	
Modulebeheerder:	I.S. Paraschiv																	
Datum:	4 September 2017																	



1. General information

1.1. Introduction

During this project you have to deliver a layered data-driven web application. It is up to you to decide what kind of webshop you will make, in agreement with the client: your Product Owner. You will have to work in teams during this project and you are free to use any project method that you would like. The Product Owner and Tutor will monitor your progress and will give you feedback on the process and the product. In this project the Tutor focuses on communicating in a client-centred way.

1.2. Relationship with other courses

Courses from the previous year and the courses that you follow during the project, will provide you with useful knowledge to bring this project to a satisfying end.

2. Program and contents

2.1. Case

For this project you will have to create a webshop with multiple products. It is up to you to decide what products are going to be sold. The website should be comparable to webshops like Bol.com, CoolBlue and Alternate including a whole lot of products.

The customer should be able to register, to select a product, put it in a shopping cart and pay for the products. The customer should get a confirmation e-mail and see the status of his/her placed orders. Moreover, the customer should be able to contact the company through the webshop and general information about the company should be provided. For example; return policy, delivery time etcetera.

2.2. Assignment

In the end of OP2 the product has to be finished and has to meet the following requirements of your Product Owner.

- 1) Every user (registered and unregistered) should be able to search, select, save and order products (R2)
- 2) The admin should be able to create, read, update and delete information about the user accounts and products (R2)
- 3) The application should validate client/server information, for example logins or e-mails (R2)
- 4) There is evidence that the application is build as a result of a well thought-out design (O)
- 5) The application has been improved after testing (R1)
- 6) The admin should be able to visualize statistics about the data available of the store (R2)
- 7) Every registered user should be able to see the history and status of orders (R2)
- 8) The registered user should be able to save a list of products for later use (the list is by default private) (R2)
- 9) Additional feature(s) (coordinate this beforehand with your P.O.)
 - Documentation of the working product (requirements, designs, testing, etc...)
 - Short online (Youtube) video, representing the working product (2 minutes max.)

Note: read the rubrics carefully to know exactly what you will be graded on.

2.3. Technical requirements

We highly recommend using:

- React/TypeScript
- .Net Core (or Java equivalent)
- Entity Framework + LINQ (or Java equivalent)

- Rest + MVC
- SQL Database

2.4. Deliveries

Deliveries must be done through N@tschool, at least 48 hours before the team and individual assessments. For collaboration with the teachers during the project we advise to use Google Classroom. There are no requirements nor deliveries for every week, but you should be able to show the progress with regard to your product and to reflect on the process as a team.

2.5. Week scheme

The project will cover half a year, during OP1 and OP2. The Product Owner and Tutor will be present every week, and it depends on the week and on your own schedule what feedback you will get from your Tutor or Product Owner. You will be formatively assessed at the end of OP1 and in OP2 the quality of your product is checked through a final summative assessment of your application.

Week	Teachers present	Topic
2-OP1	P.O. & Tutor	Kick-off & review on the process and product
3-OP1	P.O. & Tutor	Review on the process and product
4-OP1	P.O. & Tutor	Review on the process and product (individual Tutor assessments)
5-OP1	P.O. & Tutor	Review on the process and product
6-OP1	P.O. & Tutor	Review on the process and product
7-OP1	P.O. & Tutor	Review on the process and product (individual Tutor assessments)
8-OP1	P.O. & Tutor	Review on the process and product
9-OP1	P.O. & Tutor	Formative team assessment (P.O and Tutor)
1-OP2	P.O. & Tutor	Review on the process and product (individual Tutor assessments)
2-OP2	P.O. & Tutor	Review on the process and product
3-OP2	P.O. & Tutor	Review on the process and product
4-OP2	P.O. & Tutor	Review on the process and product (individual Tutor assessments)
5-OP2	P.O. & Tutor	Review on the process and product
6-OP2	P.O. & Tutor	Review on the process and product
7-OP2	P.O. & Tutor	Review on the process and product (individual Tutor assessments)
8-OP2	P.O. & Tutor	Summative team assessment/demo (P.O and Tutor)

3. Evaluation

Your team grade will be determined mostly by the quality of the webshop (Product Owner). You can lose one point individually on your final grade if you do not pass the client-centered learning goal. You can also get an individual No Go if you are not present enough or if you do not deliver a substantial contribution to the final product (Tutor).

The final grade of the project for each student is a minimum of 1 and a maximum of 10 points.

3.1. Cesuur

You will get the following grade:

- **Individual Go** for presence and contribution
- **0 points** from client-centered approach
- **6 points** from webshop

bring to a final grade of $0 + 6,0 = 6,0$ (**voldoende**)

You will get the following grade:

- **Individual Go** for presence and contribution
 - **-1 point** from client-centered approach
 - **6 points** from webshop
- bring to a final grade of $-1 + 6,0 = 5,0$ (**onvoldoende**)

You will get the following grade:

- **Individual No Go** for presence and contribution
 - **0 points** from client-centered approach
 - **9 points** from webshop
- bring to a final grade of **ND** (**niet deelgenomen**)

3.2. Resit

In case of an insufficient grade (*onvoldoende*) for INFPRJ0156, the following scheme applies:

- If you have got an individual No Go, then you **cannot** repeat the project this year
- If your final grade is below 5,5, you will take part in the resit during OP3 of this year. This will mean that, depending on your final score, you will discuss with your P.O and Tutor what you will have to improve to pass this project

If you do not succeed in the resit, you will need to follow this course again during the next school year.

3.3. Tutor part

In this project the Tutor will focus on communicating in a client-centered way (learning goal B). If you do not meet the criteria of this learning goal, you will get a -1 on your final grade. Attendance will also be checked by the Tutor. The individual student can get a No Go if he has delivered considerably less work during the entire project. Moreover, when the student was absent more than twice without a valid reason, he/she will also get a No Go.

3.3.1. Attendance

Attendance will be checked during every lesson.

3.3.2. Client-centered approach

During this project, you need to show that you are capable of communicating in a client-centered way. This means that every individual student analysis the needs of the client, gives advice and manages expectations of the client.

It is your job to convince your Tutor that you meet all the criteria, see chapter 4.1 for further details. If you miss one or more, you will get a -1 on your final grade. As a team it is up to you to decide in what weeks who is responsible for this (make sure that you do this 3 consecutive weeks each). In week 4, 7 of OP1 and week 1, 4, 7 of OP 2 you will be assessed on this learning goal through an individual assessment. During the 10 minute assessment, you are asked to explain what you have learned regarding these criteria. You will have to deliver prove of this. Hand this in by uploading files, at least 48 hours before your assessment, through Natschool.

3.4. Product Owner part

During this project you will have the chance to collaborate with the P.O. on a weekly basis. The P.O. will assess the team on their final delivery of the product by evaluating the requirements of your assignment, see chapter 2.2 for further details. This will be done through a demonstration, with a maximum of 10 minutes. The product will be graded as shown in next chapter 4.2.

4. Rubric

4.1. Process (Tutor)

Criteria	Sufficient 0 points	Insufficient -1 point
Analysing the needs	The student can define and analyse the needs of the client with regard to the desired webshop (for example through a problem analysis model or interview).	The student cannot define and analyse the needs of the client with regard to the desired webshop.
Giving advice	The student can professionally provide an advice to the client (for example about the techniques they plan to use or the process decisions they want to make).	The student cannot professionally provide an advice to the client.
Managing expectation	The student can manage expectations by setting clear boundaries as to what they can deliver when. The student is capable of discussing deadlines with the client, while trying to satisfy him/her.	The student cannot manage expectations by setting clear boundaries as to what they can deliver when. The student is not capable of discussing deadlines with the client, while trying to satisfy him/her.

4.2. Product (P.O.)

Criteria	Excellent - 1.75 point	Sufficient - 0.9 point	Poor - 0 points
1) Every user (registered and unregistered) should be able to search, select, save and order products (R2)	The students made the system in such a way that the searching, selecting, saving and ordering of products can be done fast, intuitive and without bugs.	The students made the system in such a way that the searching, selecting, saving and ordering of products can be done.	The students made the system in such a way that the searching, selecting, saving or ordering of products cannot be done.
Criteria	Excellent - 1.5 point	Sufficient - 0.75 point	Poor - 0 points
2) The admin should be able to create, read, update and delete information about the user accounts and products (R2)	The students made a system wherein the admin can easily (without bugs) modify any information about the user accounts.	The students made a system wherein the admin can modify information about the user accounts.	The students did not make a system wherein the admin can modify information about the user accounts.
Criteria	Excellent - 1.25 point	Sufficient - 0.65 point	Poor - 0 points

3) The application should validate client/server information, for example logins or e-mails (R2)	The students implemented the validation efficiently and completely.	The students implemented the validation.	The students did not implement the validation.
Criteria	Excellent - 1 point	Sufficient - 0.5 point	Poor - 0 points
4) There is evidence that the application is built as a result of a well thought-out design (O)	The students can visibly proof that they implemented their designs and the design meets designing standards.	The students implemented their designs.	The students cannot visibly proof that they implemented designs that meet designing standards.
5) The application has been improved after testing (R1)	The students tested the application and made significant improvements.	The students made some improvements after testing.	The students did not make improvements after testing.
6) The admin should be able to visualize statistics about the data available of the store (R2)	The students made a system wherein the admin can easily (without bugs) visualize statistics about the data available of the store.	The students made a system wherein the admin can visualize statistics about the data available of the store.	The students did not make a system wherein the admin can visualize statistics about the data available of the store.
Criteria	Excellent - 0.75 point	Sufficient - 0.4 point	Poor - 0 points
7) Every registered user should be able to see the history and status of orders (R2)	The students made a system wherein the registered user is easily able to view his/her orders history and status.	The students made a system wherein the registered user is able to view his/her orders history and status.	The students made a system wherein the registered user is not able to view his/her orders history and status.
8) The registered user should be able to save a list of products for later use (the list is by default private) (R2)	The students made a system wherein the registered user is easily able (intuitively and without bugs) to save a (private) list of products.	The students made a system wherein the registered user is able to save a (private) list of products.	The students made a system wherein the registered user is not able to save a (private) list of products.
Criteria	Excellent - 1 point	Sufficient - 0.5 point	Poor - 0 points
9) Additional feature(s) (coordinate this beforehand with your P.O.)	The students added extra features that significantly improve the product and are in accordance with the P.O.'s requests.	The students added extra features that were in accordance with the P.O.'s requests.	The students did not add extra features.