

## Systemudvikling Eksamen

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# 1. Indledning

## 2. Systemudviklingsmodel og metode

### 2.2. Virksomhedens krav

### 2.3. Virksomhedens vision

### 3. Use Case Diagram

## 4. 1 udvalgt Use Case

## 5. Outsourcing proces

## 6. Scrum plan



## 7. XP plan

## 8. Scrum-proces

### 8.1. Roles

### 8.1. Ceremonies

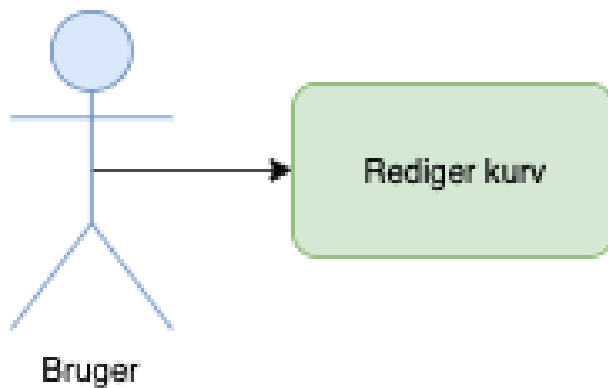
### 8.1. Artifacts

## 9. XP-proces

## 10. Reflektion over processen

# 11. Bilag

## 11.1 Bilag 1) Fully dressed use case



**Use case:** rediger kurv

**Primary Actor:** Bruger

**Goal:** At redigere produkter i brugerens kurv.

**Scope:** Et produkt salgssystem. Baseret udelukkende på software salg, med en anbefaling til hvilken computer kunne tilkøbes til det software der bliver vist.

**Level:** ! (user goal)

**interests:**

- Bruger, som gerne vil ændre antallet af et specifikt produkt i kurven.
- Bruger, som gerne vil slette et produkt i kurven.

**Preconditions:**

- Der skal være mindst et produkt i kurven.

**Success Guarantees:**

- Databasen er oppe med alle produkterne, således at der kan tilføjes til kurven.

**Triggers:**

- Bruger trykker på slet produkt.
- Bruger tilføjer eller fjerner antallet af produkter.

**Triggers:**

1. Brugeren har to produkter i kurven.
2. Brugeren tilføjer til mængden af et produkt x antal gange.
3. Brugeren fjerner det andet produkt.

## 11.2 Bilag 2) Prototype af webdesign

Seeking HTML/CSS designer.

We are looking for a designer to develop a frontend design for our software web-shop. We have made a sketch/prototype, that you should take inspiration from. We would like the design to contain different buttons, labels and input fields, as seen on the sketch. The designs of the pages are completely up to you. You are allowed the freedom to make your own decisions regarding the looks of the components (e.g. labels, filters, menu bars, etc.).

The sketch is merely meant as an inspiration. We would however like to emphasize that the design should resemble the fact that we are selling software.

In the sketches you will see different boxes with P's in them; these are products. They are meant to be images of said product and the price should be featured somewhere on or close to the product.

The logo should be a button.

We would like the filter to feature check boxes, a slider and drop down boxes, all should be reusable.

Lastly it is only the design and styling you will be responsible for. We will make all functionality and make it compatible with our API.

On a side note we would much appreciate it if you will feature descriptive comments on your code, as it will be easier to integrate your work with ours.

### **Header:**

Will contain a logo which has a link to the front page, alongside with a navigation menu with links to subpages, and an icon of a shopping cart which navigates to the shopping cart.

### **Footer:**

Has 3 columns:

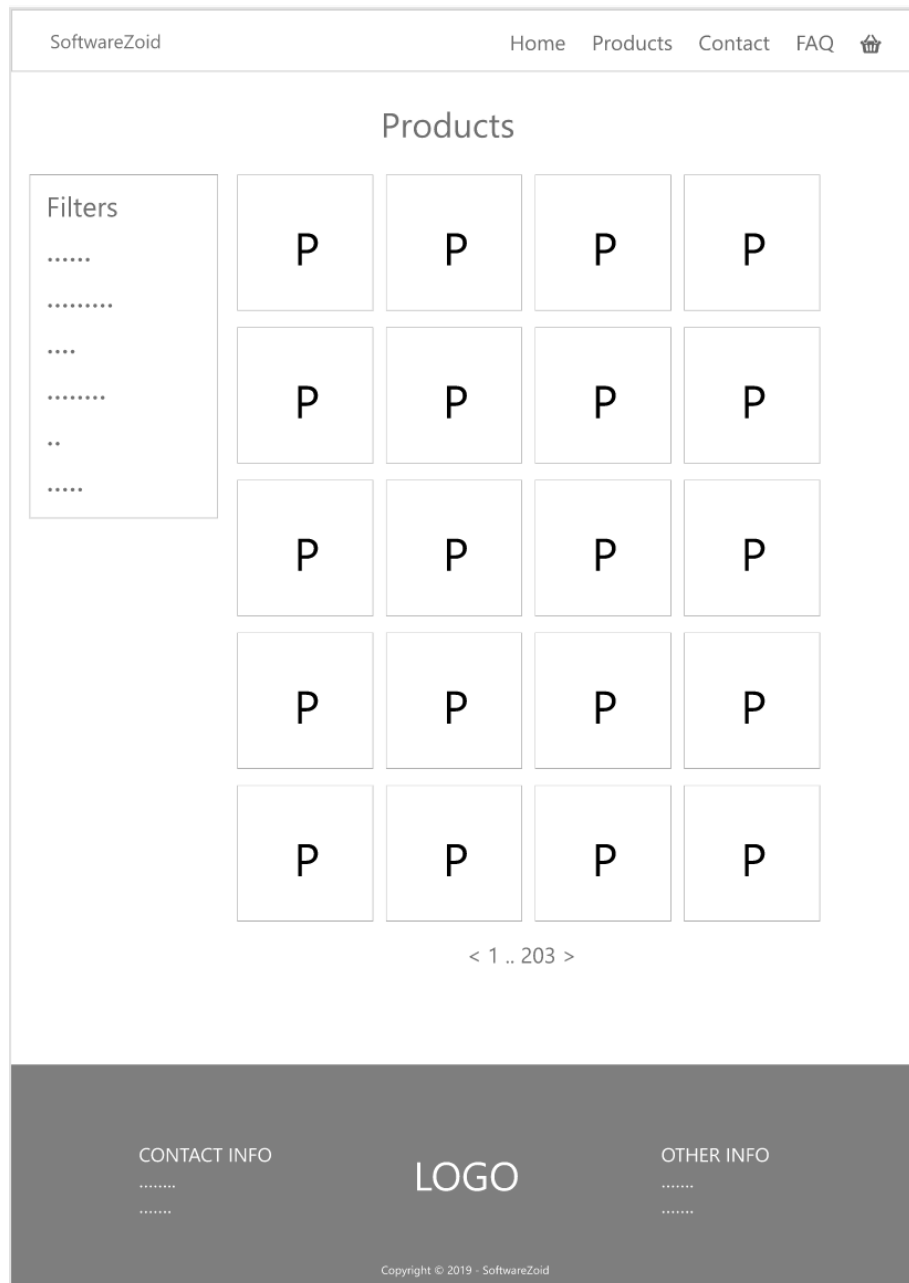
1. Contact information text.
2. Logo along with copyright information.
3. Other info about the company or page.



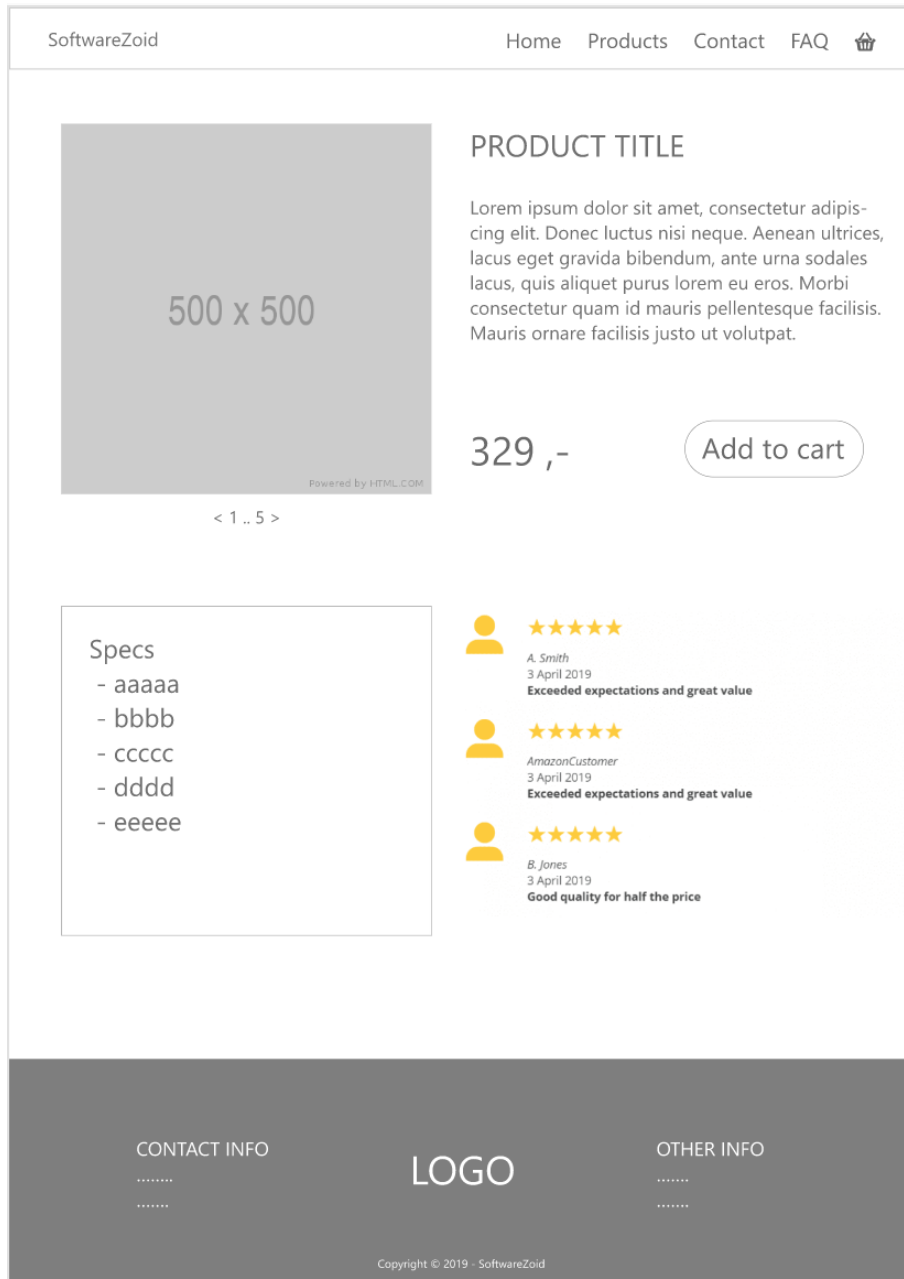
This page consists of 3 sections:

- Header image: The width scales with the page, the height is fixed, though it doesn't have to be "650"
- Best Sellers: Shows the best selling products, where P is the product with an image, title and price.
- Reviews: Must show 4 reviews per page in the slider. Contains stars, title, info and name.

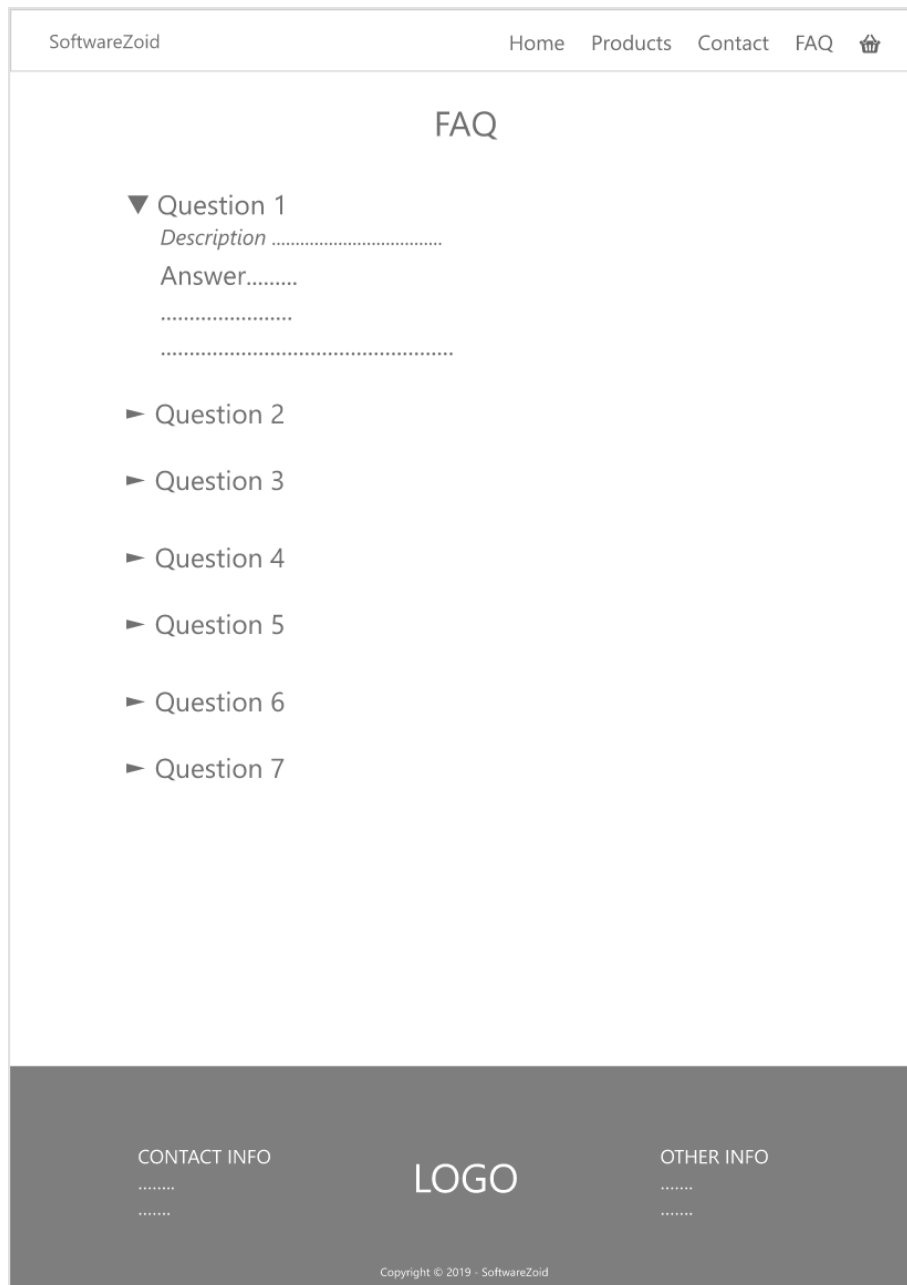




The products page, for each P(product) it should include an image, title and price. The filters (on the left side) includes a checkbox, slider and a dropdownbox. The 3 components must be reusable. We also need pagination under each product.



This page consists of images of the given product with pagination under it. The page includes a product title, a description of the product and a button. The specs must be made as a table of the most important information on the product. This page also includes reviews of the product which includes a rating, name, date and info.



FAQ has 1 section

- This section consists of several questions of which are dropdowns. The description and answer to the question is only shown when the question is clicked/opened.

SoftwareZoid

HomeProductsContactFAQ

Contact Us

Site Description

Who Are We

Have any questions?

Full Name

Email

Phone

Subject

Message ....

Send Message

CONTACT INFO

.....

.....

LOGO

OTHER INFO

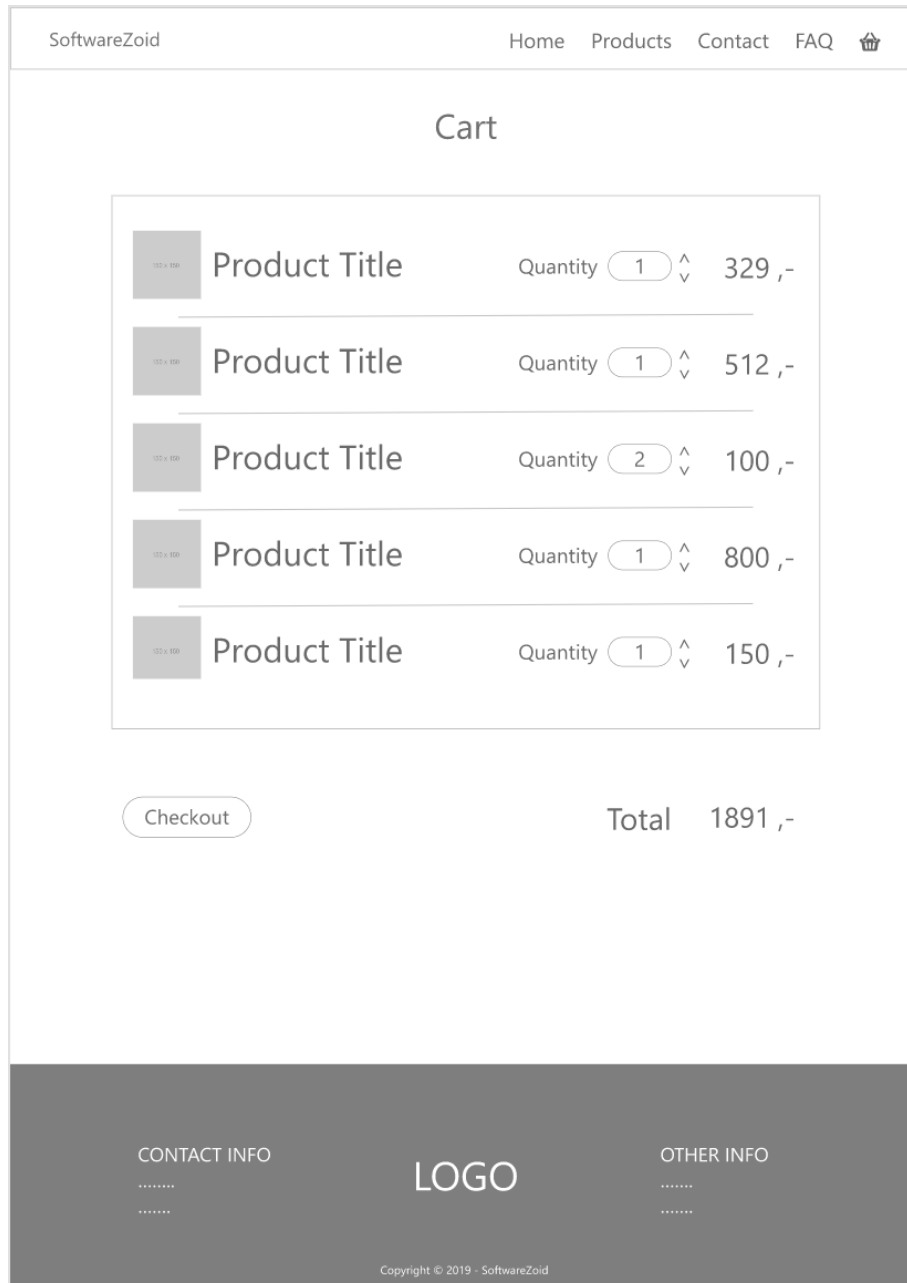
.....

.....

Copyright © 2019 - SoftwareZoid

The contact page consist of 3 sections:

- A site description and a “who are we”: Has to show a lot of text in a pretty and manageable way.
- Have any Questions: a form with these input fields: full name, email, phone, subject and message.



The cart page has a list of all the products that the customer has put in their basket, has to be presented in a table. In each table row there must be a product image, a product title, a display of quantity, and a price. Under the table there has to be a checkout button, alongside with a total price for all products in the basket.

SoftwareZoid
Home
Products
Contact
FAQ

## Checkout

	Product Title	Quantity	1	329 ,-
	Product Title	Quantity	1	512 ,-
	Product Title	Quantity	2	100 ,-
	Product Title	Quantity	1	800 ,-
	Product Title	Quantity	1	150 ,-

Total 1891 ,-

Full Name

Email

Phone

Address

ZIP

City

☐ Other delivery address?

Powered by

CONTACT INFO

LOGO

OTHER INFO

The checkout page will contain a list of the products that were put in cart, shown in a table. In each table row there has to be a product image, product title, quantity and product price. Under the table there has to be a display of the total price and a checkout form. The checkout form must contain following fields: full name, email, phone, address, zip and city, the form must also include a checkbox for alternative shipping address. Lastly a pay with paypal button.

## 11.3 Bilag 3) Outsorce Korrespondance af webdesign

Tuesday, November 12, 2019 – Andreas Vikke

We're a team of backend developers that are working with a client that sells software and software packages.

We're looking for a frontend designer with a simplistic form of creativity, and likes the creative style of minimalism. The actual design of the frontend page(s) is not specified, you will be provided a sketch of how and where labels and buttons should be places, but we will gladly take input from you if you have better ideas.

We do although require that the code is documented to some degree with comments so that we can more smoothly integrate it with our backend. We also require that you as the designer can both understand, and write English.

The sketch is made in Adobe XD, and provided here there's a demo page:

<https://xd.adobe.com/view/5da95fa7-c677-44d6-6430-3383f6cf8c37-2b98/> (Bilag 2)

(Attached is the 3 files: The Sketch in PDF and XD format, and a general description PDF of all the pages)

Est. Budget: \$200.00

Milestone 1: Basic Structure / design

Due: Friday, November 15, 2019

Amount in escrow: \$50.00

Tuesday, November 12, 2019 – Andreas Vikke

Hello Ahmed, I found your profile and previous work very well done, and I'm hoping you'll accept our offer. If you have any questions regarding the milestones or their meanings please do contact me.

Tuesday, November 12, 2019 – Ahmed Hassan

Hello Andreas I will check the attached files now and get back to you

Tuesday, November 12, 2019 – Andreas Vikke

Perfect, thank you.

Tuesday, November 12, 2019 – Ahmed Hassan

Hello Andreas, I checked the files and I can start in anytime , thank you.

Tuesday, November 12, 2019 – Ahmed Hassan

Ahmed Hassan accepted the offer

I will start now can I know if you use angular for front-end ?

also I will use scss is this good for you or you preferred css ?

Tuesday, November 12, 2019 – Andreas Vikke

We use react for front end, not angular.

You can use scss, as long as you provide us with a css file afterwards

Both the scss and css file i mean :)

Tuesday, November 12, 2019 – Ahmed Hassan

great, thank you.

Tuesday, November 12, 2019 – Andreas Vikke

Looking forward to seeing what you make :)

Tuesday, November 12, 2019 – Ahmed Hassan

I will do my best :)

Tuesday, November 14, 2019 – Andreas Vikke

Hello Ahmed, do you have some basic structure and design you can show me as per the first milestone? :)

Tuesday, November 14, 2019 – Ahmed Hassan

Hello Andreas, I will give you tonight the layout and home page, don't worry :)

Tuesday, November 15, 2019 – Ahmed Hassan

Ahmed Hassan requested payment for the milestone

this is the layout and home page also I create a global css buttons and selectors.

I added overview section, our team and contact us. I think Contact us is important to be in home page but if you want to delete any section I will.

please give me your feedback or changes If you want to change anything

Milestone 1: "Basic Structure / design"

Due: Friday, November 15, 2019

Amount: \$50.00

Tuesday, November 15, 2019 – Andreas Vikke

Hello Ahmed, at first glance it looks great! my team is just reviewing it and coming with thoughts and changes, then i will send them and the money to you :)

Tuesday, November 15, 2019 – Ahmed Hassan

Okay and also I will update small things to improve the homepage :)

Tuesday, November 15, 2019 – Andreas Vikke

Sounds great! :)



Tuesday, November 15, 2019 – Andreas Vikke

Hello Ahmed, everything seems very well. It seems like the buttons aren't really going to the right places though, FAQ goes to "best sellers", basket goes to contact us, contact us goes to a "about us" section. I'm assuming this is because the faq and cart page haven't been made yet? :)

We like the OPA style that you've made, although we don't need an about us section as a "our team" sort of thing.

I think it's a good idea with the contact section being on the home page, i haven't heard any comments from my team regarding this though, so we'll keep it like that for now :)

Now that the basic structure and design is in place, we're just missing some of the remaining pages (Specific product page, FAQ, basket and checkout). As said you still have your artistic freedom over these pages as long as it has the requirements from the sketch (e.g. specific product has title, description, price and so on).

If you have any questions or uncertainties, don't hesitate to write me, I'll respond as quickly as possible.

Looking forward to what you produce :)

Andreas Vikke approved the milestone

Milestone 1: "Basic Structure / design"

Due: Friday, November 15, 2019

Amount paid: \$50.00

Amount: \$50.00

Andreas Vikke activated the milestone

Milestone 2: "Final Outcast/Evaluation"

Due: Sunday, November 17, 2019

Amount: \$50.00

Tuesday, November 15, 2019 – Andreas Vikke

For the final Outcast we'd like that the specific single products get their own page, as well as faq, basket and checkout. :)

Tuesday, November 16, 2019 – Ahmed Hassan

Don't worry in the final outcast everything will be like you want :)

Tuesday, November 16, 2019 – Andreas Vikke

Perfect! :)

Tuesday, November 16, 2019 – Ahmed Hassan  
Ahmed Hassan requested payment for the milestone

please check the whole website design and I still have some work with it

Milestone 2: "Final Outcast/Evaluation"

Due: Sunday, November 17, 2019

Amount: \$50.00

Tuesday, November 16, 2019 – Andreas Vikke  
Hello Ahmed, very impressive! :)

We do have a few pointers though:

I can see you haven't quite finished the contact page, and that the navlink contact currently goes to whatever page it is currently on, that of course just needs fixing and I'm assuming that this is what you mean with you still have some work to do :)

On the basket page i can see that there's a payment option, we only want that in the checkout page.

On the product page, the filter tab is responsive with the body and the body shrinks according to the filter, but the footer does not, we'd like that it does as well.

I can see we are also missing the page when you click on "more details" on a product. i can see it's there, it's just not linked from what i can get. :)

I haven't been able to check yet whether or not it looks nice on mobile, but this is also important to us, that the website can adapt to this.

So just the last bits and mobile friendly and we're about there! We're very happy with what you've provided so far, looks very nice!

Andreas Vikke approved the milestone

Milestone 2: "Final Outcast/Evaluation"

Due: Sunday, November 17, 2019

Amount paid: \$50.00

Amount: \$50.00

Andreas Vikke activated the milestone

Milestone 3: "Final Product"

Due: Tuesday, November 19, 2019

Amount: \$100.00

Tuesday, November 19, 2019 – Andreas Vikke

Did you see and understand my message Ahmed? :)

Tuesday, November 19, 2019 – Ahmed Hassan

Yes I am working now to give you final design :)

Tuesday, November 19, 2019 – Andreas Vikke

Perfect! :)

Tuesday, November 19, 2019 – Ahmed Hassan

Ahmed Hassan requested payment for the milestone

Milestone 3: "Final Product"

Due: Tuesday, November 19, 2019

Amount: \$100.00

this the final version please check it and if you face any problem send to me anytime also if you face any problem in my work after closing the contract I will fix it for free :)

Tuesday, November 19, 2019 – Andreas Vikke

Perfect, we're just going to look it through and I'll come back to you, at first glance here it looks amazing :)

Tuesday, November 19, 2019 – Andreas Vikke

I've sent it off to the rest of my team, and awaiting to hear some response and feedback from them, but i noticed some small details I'd liked fixed :)

When in basket, continue shopping doesn't go to products.

Also in basket, the home link doesn't respond when clicked (can't go from basket to home).

When on products page, notice how it's not the same logo in the cart as in all other pages, we'd like that the logo for the cart is consistent throughout the pages.

That's what i just noticed quickly looking through it, I'll send the feedback if i get any later today, and if i don't get anything I'll just send you the money :)

Tuesday, November 19, 2019 – Ahmed Hassan

okay bro, I fixed the issues that you noticed :)

Tuesday, November 19, 2019 – Andreas Vikke

It looks good, some things went missing and/or misaligned though

Filter icon gone and misalignments in the cart

Tuesday, November 19, 2019 – Ahmed Hassan

oh, sorry :D

Tuesday, November 19, 2019 – Andreas Vikke

Perfect, thanks 'haven't heard back from my team yet, but expecting some feedback soon! :)

Tuesday, November 19, 2019 – Andreas Vikke

So what seems to be the last feedback is that we'd like a "back" button from product details to products, do you think you could do that quickly? :)

Tuesday, November 19, 2019 – Ahmed Hassan

I added it :)

Tuesday, November 19, 2019 – Andreas Vikke

Perfect, thank you very much 'My team doesn't seem to have any more feedback, so i thank you for your help! :)

Andreas Vikke approved the milestone

Milestone 3: "Final Product"

Due: Tuesday, November 19, 2019

Amount paid: \$100.00

Amount: \$100.00

Tuesday, November 19, 2019 – Andreas Vikke

Andreas Vikke ended the contract

Tuesday, November 19, 2019 – Ahmed Hassan

thanks you very much , I am here anytime if you need any help :) I hope you give me a good feedback :)

Tuesday, November 19, 2019 – Andreas Vikke

Thank you very much :) and I've given you 5 stars a long with a good review text :D

Tuesday, November 19, 2019 – Ahmed Hassan

thank you :)

## 11.4 Bilag 4) Outsorce Korrespondance af 404 side

3. Dec. - William Huusfeldt

1. **Your existing website link to get the feel of your website.** The website that we're building is linked below. [softwarezoid.surge.sh](http://softwarezoid.surge.sh)
2. **Any special requirements for your design** Be as creative as you like, however, we'd like it that the page reflects that we're dealing with software sales.

3. Dec. - Mizanur

Hello, thanks very much for your order. Unfortunately, I am out of my workplace until tomorrow. Will it be possible for you to increase the deadline by 2 days? I promise to get back to work as soon as I return to my workplace. Thanks.

3. Dec. - William

Hi again, That's quite alright.

3. Dec. - Mizanur

Thank you very much. I really appreciate it.

3. Dec. - Mizanur

to clarify, you need a 404 page design both in Photoshop and HTML and CSS? Did I get it right?

3. Dec. - William

No problem :) HTML and CSS is top priority and actually mainly what we're looking for, and yes, it's a 404 page we'd like to get.

3. Dec. - Mizanur

Thank you for your reply. I will get back to you as soon as I can. In the meantime, I am sending you a request to extend the deadline by two days. Please accept. Thanks.

– Deadline rykkes 2 dage til d. 7. Dec.

6. Dec. - Mizanur

Hello, I have made designed the page. I have followed the design style, color and font combination of your current website. I hope you will like it. Please have a look and give your feedback. Thanks.

6. Dec. - William

Perfect, thank you!

6. Dec. - Mizanur

Hi willhuusfeldt, Thanks again for your order! Your delivery is enclosed. You will find the source files in the zip format attached here. If there are any problems, please let me know. I'll get back to you as soon as I can.

If you need anything to change in the design please message me. Don't forget to appreciate me in the comments.

Thanks again and have a great day! :)

Mdmizanur3950

– Godkendt

## 11.5 Bilag 5) Outsorce Korrespondance af Favicon

4. Dec. - William Huusfeldt:

This is our website [softwarezoid.surge.sh](http://softwarezoid.surge.sh)

We don't have a logo per se, so take inspiration from the site and make something that you think fits the site.

Regards, William

4. Dec. - Pro\_Graphics\_4U:

Hey willhuusfeldt, please see the attached files.

I added you even bonus (source file)

Before leaving feedback, please let me know if you have ANY issues with your files and I'll do everything in my power to correct it for you at no additional charge.

If you like it, I would sincerely appreciate a good and honest review.

I want you to be 100% satisfied with my work, otherwise, I insist that you ask me for a full refund. No hard feelings.

Ps. Do you have any more work to do? Or something you are struggling with?

Thank you, Regards Cris

– Godkendt

## 11.6 Bilag 6) Retrospective Meetings

### **Retrospektiv møde - Spint 1, Fredag d. 22/11**

Gruppen som helhed, mente der var positiv feedback. Sprintets udvalgte user stories var alle på nær en enkelt blevet færdigudviklet, men holdes "åbne" for eventuelle fremtidige modificeringer. Internt i gruppen er der blevet reflekteret over det første sprint. Her er stemningen, at arbejdsfordelingen har været velfungerende og passende, hvorfor det også menes at første sprint har været effektivt; vi har udviklet meget og sat os i en fin position i forhold til de fremtidige sprint. Det menes også at selvstændigheden har fremmet det positive arbejde. Dog ønsker vi i gruppen at øge indsatsen for pair programming til næste sprint, så vi forhåbentlig kan udbedre nogle af de kommunikationsproblemer, der har præget arbejdet i dette sprint. Ydermere var den eneste konklusion at drage vedr. Estimering af tid på user stories: dette skal forbedres. Estimeringerne var konsekvent forkerte. På baggrund af det har vi diskuteret og ændret estimeringer på alle andre user stories, for at imødekomme fejlene og forhåbentlig give en mere præcis estimering.

### **Retrospektiv møde - Spint 2, Mandag d. 2/1**

Godt med pair programming - fungerede godt på zoom. Det var både effektivt og hyggeligt. De velfungerende elementer fra sidste sprint er blevet taget med videre til dette. Ydermere har vi taget kritikken fra sidste sprint og forsøgt at udbedre disse, hovedsageligt har gruppen fokuseret på at inkorporere pair programming mere, hvilket var et ønske blandt medlemmerne fra sidst. Arbejdet var effektivt, men en user story i dette sprint blev ikke udviklet – arbejdet blev ikke påbegyndt. Dette er på baggrund af, at datasættet vi skulle bruge, ikke var blevet leveret i en tilstand, hvor gruppen kunne arbejde på det hvor der var tilstrækkelig tid til det. Arbejdsfordelingen har fortsat været god og fungeret godt med pair programming. Der er kommet øget ønske blandt medlemmerne på at påbegynde dokumentationen, rapporten.

### **Retrospektiv møde - Spint 3, Fredag d. 6/1**

Der var fin tilfredshed i gruppen over, at arbejdet på projektet har været så langt henne, så der kunne fokuseres på de sidste detaljer. De velfungerende aspekter fra sidste sprint var blevet taget med i dette, dog mener nogle medlemmer, er deres egen arbejdsindsats ikke har været på et tilstrækkeligt niveau. I sprintet blev vi også udsat for en mindre ubekvemhed; gruppen vi arbejder sammen havde undladt at informere os om, at de havde gået væk fra deres oprindelige idé om at sælge hardware. Et ønske fra flere medlemmer var at bruge tid på rapporten, som fik muligheden grundet den relativt lille mængde programmering som manglede. Alle user stories blev lavet færdig og en unødvendig blev skrottet, eftersom denne ikke ville give mening at lave.



## 11.7 Bilag 7) User stories

### Sprint-1

#### **#1 Som bruger vil jeg gerne kunne se en liste af software.**

En bruger skal kunne se en liste af softwares, hvor de herefter kan klikke ind og få mere information omkring det enkelte software. Acceptens krav:

- Alle produkter skal have billede, titel og pris.
- Billeder, titel og pris skal hænge sammen med produktet.
- Listevisioning skal fremvises på en præsentabel måde.

Subtasks:

- #14 Sdens liste skal kunne vise en titel for hvert software.
- #15 Sdens liste skal kunne vise pris for hvert software.
- #16 Sdens liste skal kunne vise en thumbnail.
- #89 Listen skal bruge en DTO klasse til fremvisning af en software givet fra databasen (Titel, thumbnail, description).
- #90 Listen skal hente software gennem et rest-endpoint, som returnere en DTO klasse.
- #91 Opret en entitet til software, med de forskellige fields der skal gemmes i database. (Titel, thumbnail, description).
- #92 Opret facade som fetcher software fra databasen og omdanner den til DTO'en.

#### **#17 Som bruger vil jeg gerne kunne se information om et enkelt software.**

Som bruger vil jeg gerne have at jeg kan tilgå softwares fra en database, således at de tilgængelige software hele tiden er opdateret. Acceptens krav:

- Informationen om softwaren skal kunne vises på en hjemmeside.
- Hvert software skal være på hver sin side.

Subtasks:

- #93 Siden skal kunne vise en titel for hvert software.
- #95 Siden skal kunne vise pris for hvert software.
- #97 Siden skal kunne vise en thumbnail.
- #98 Siden skal kunne vise en description.
- #99 Listen skal hente software gennem et rest-endpoint, som returnere en DTO klasse(getSingle).
- #100 Opret facade som fetcher software fra databasen og omdanner den til DTO'en(getSingle).

- #112 Siden skal kunne vise specifikationer.

#### **#4 Som bruger vil jeg gerne kunne se et softwares indhold ved at navigere gennem listen.**

Der skal kunne fremvises en liste af softwares, hvor der kan fremvises detaljer om hvert software. Acceptens krav:

- Der skal kunne være en knap der navigere til det valgte produkt.
- Der skal være en knap fra produktsiden der navigerer tilbage til listen over produkter.
- Sammenhæng mellem produkt og liste.

Subtasks:

- #94 Opret links til softwaren.
- #96 Opret routing til softwaren.

#### **#64 Som bruger vil jeg kunne se ofte stillede spørgsmål.**

En FAQ side, som beskrevet er ofte stillede spørgsmål med deres besvarelser. Acceptens krav:

- Skal være relevante spørgsmål ift. brugeren.
- Svaret skal hænge sammen med spørgsmålet.
- Spørgsmålene skal være enkle.

Subtasks:

- #83 Opret FAQ side.
- #84 Opret liste visning af spørgsmål og svar.
- #85 Skriv spørgsmål og deres tilhørende svar.

#### **#66 Som bruger vil jeg kunne se min indkøbskurv, hvor jeg kan tilføje og fjerne produkter.**

Indkøbskurven har alle de produkter man har valgt. Hertil skal produkter tilføjes, men hvis kunden skifter mening skal kunden kunne slette produktet. Ønsker kunden flere eller færre af samme produkt, skal kunden også kunne ændre på dette fra deres indkøbskurv. Acceptens krav:

- Alle produkter skal gemmes i en session.
- Visning af alle produkter skal være overskueligt.
- Når et produkt rammer en quantity på 0 skal varen slettes.
- Samlet pris skal være korrekt ift. de produkter der er valgt.
- Prisen på produkterne skal være samme priser som produkterne viste på produkt siden.

Subtasks:

- #74 Vis software i liste fra cookie.
- #76 Tilføj quantity funktion.
- #78 Lav knap til at fjerne software fra liste.

### **#87 Spike: Læse op på React billede håndtering.**

- #73 Vis en liste a valgte produkter. (Pris, titel og billede).
- #75 Vis samlet pris for alle software.
- #77 Tilføj knap til checkout.

## **Sprint-2**

### **#67 Som bruger vil jeg kunne skrive og se en anmeldelse af et produkt.**

Når en bruger har købt et produkt, skal brugeren have mulighed for at anmelde det, således at andre brugere kan se hvad andre synes om produktet. Acceptens krav:

- Review skal have en titel og der skal være givet 1-5 stjerner.
- Det er valgfrit at komme med en beskrivelse til anmeldelse.
- Anmeldelsen skal have en dato på hvornår den var indgivet.

Subtasks:

- #72 Anmeldelsen skal gemmes til produktet og vises på produktet.

### **#105 Som kunde, vil jeg gerne kunne komme i kontakt med firmaet.**

Som kunde skal jeg kunne kontakte firmaet hvis jeg har et problem eller har spørgsmål til noget. Acceptens krav:

- En kontakt formular skal kunne oprettes og vises.
- Kontakt formularer som er færdigbehandlet skal ikke vises.

Subtasks:

- #106 Siden skal indeholde en formular, således at kunden kan kontaktes (navn, nummer, mail, emne og besked).
- #107 Siden skal indeholde information om kontakten (nummer, lokation, mail).
- #108 Formularen skal gemmes i en databasen.
- #109 Man skal kunne hente alle formularer igennem et rest endpoint.
- #110 Opret facade metode der fetcher formularer og omdanner dem til DTO'er, således at der ikke er dato eller behandlings status.

### **#116 Som bruger vil jeg gerne kunne filtrere produkt siden.**

Acceptens krav:

- Filtrere produkt efter titel.
- Filtrere produkt efter pris.

Subtasks:

- #129 Endpoint, getall med en parameter for kategorier.
- #130 Endpoint, der kan get all kategorier.
- #131 Frontend, Filter bar, med kategorier fra databasen.
- #132 Frontend, når en kategori bliver valgt skal den fetche nye produkter.

### **#115 Som sælger vil jeg gerne se en liste af brugerhenvendelser.**

Acceptens krav:

- En liste over brugerhenvendelser
- Mulighed for afslutte og slette henvendelser

Subtasks:

- #122 Opret facade som fetcher data fra databasen og omdanner det til DTO.
- #123 Listen skal bruge en DTO klasse til at vise data fra databasen.
- #124 Listen skal hente en DTO klasse gennem et rest-endpoint.
- #125 Listen skal vise titel på henvisning.
- #126 Listen skal vise navn på afsenderen af henvisningen.
- #127 Listen skal vise dato for henvisningen.
- #128 Listen skal vise ID på henvisningen.

## **Sprint-3**

### **#34 Som bruger vil jeg gerne kunne se en computer ud fra en anden sides API.**

Acceptens krav:

- Skal være på produkt siden.
- Skal kunne vise en computer ud fra en fane.

Subtasks:

- #144 Fetch metode der henter fra eksternt API.
- #145 Liste visning af computer.

- #146 Fane til computeren.

### **#35 Som sælger vil jeg kunne tilgå en side hvor man kan tilføje software.**

Der skal kunne tilføjes software til databasen gennem webapplikationen, fra en side lavet til dette formål. Acceptens krav:

- Oprette en side til tilføjelse af software.
- Siden skal kunne tage imod alle informationer fra en software som input.
- Siden skal kunne tage imod et billede (url f.eks.).
- Siden skal have en knap der tilføjer softwaren baseret på input informationen.

Subtasks:

- #133 Nødvendige facade metoder.
- #134 Rest API med POST.
- #135 Javascript der håndtere eventet når man trykker på knappen.
- #136 Javascript der fetcher med POST.
- #137 Tilkobling af javascriptet på HTML.
- #138 Tilføj HTML side.
- #139 Lave tests.

### **#113 Som bruger vil jeg gerne kunne checke mine varer i indkøbskurven ud og få en faktura.**

Som bruger vil jeg gerne kunne checke de varer, som jeg har tilføjet til indkøbskurven, ud. Acceptens krav:

- En kunde skal kunne se en liste over valgte produkter (indkøbskurven).
- En kunde skal kunne trykke på en knap når de varerne er blevet valgt.
- En kunde skal kunne se datoen for købet.
- En kunde skal kunne se prisen for købet.

Subtasks:

- #117 Tilføj javascript med fetch til checkout-knappen.
- #118 Oprette entity klasse til en kvittering.
- #119 Oprette REST API til entity klassen.
- #120 Oprette facade klasse til entity klassen med metoder til at kunne gemme og læse entiteter fra databasen.

**#121 Som sælger vil jeg gerne se en enkelt brugerhenvendelser ud fra listen.**

Acceptens krav:

- Der skal vises en enkelt bruger henvendelse ud fra listeform ved tryk.
- En bruger henvendelse skal indeholde navn, dato og description.

**#88 Spike: Læse op på Hardware API.**