

LULEÅ TEKNISKA UNIVERSITET

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## Sprint 4

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## Summary

We are working on a e-commerce site for selling patches and accessories such as belts and zippers for student overalls. It is intended to be dynamic with a fully functional content management system.

For educational purposes Ruby on Rails was chosen.

Scrum planing was done at Trello.com and GitHub.com was used as VCS.

User stories was set up to define what functionality we wanted the site to have. From this the database schema was defined. The user stories were then broken down into Scrum stories and tasks, given importance and time estimates. Some basic test cases were added.

## User stories

### Register an account

1. User arrives at the page. Figure 1
2. An unregistered user can only browse the site if the user tries to use any functionality he will be taken to the login page which will let him register. Figure 2
3. User provides minimal amount of info needed for an account. Figure 3
4. On successful registration the user is greeted with a message and can now start using the site fully. Figure 4

### Edit profile

1. By pressing the "Profil" button in the menu the user can access his profile. User sees that his full profile isn't filled in, so he presses "Ändra" (change). Figure 5
2. This brings the user to the profile editing page, where he can fill in the rest of his information. Figure 6

### Place order

1. The user browses the categories and finds something he likes, in this case patches. He does not, however know what kind of patches he's interested in so he presses patches, which renders all products of the subcategories as well. Figure 7
2. The user finds a product he likes and can either add it to his cart directly or click the product and be brought to the product page, containing more information.
3. In this case he wants to know a little more about the product. He's taken to the product page where he can read some more info, see the rating of the product or read reviews from other users. Figure ??

4. After browsing for a while and adding some products it's time to check out. He clicks "Kundkorg" to review his cart. Figure ??
5. After checking that everything is correct he presses "Kassa" and is taken to the checkout
6. To place an order an address has to be given. Since this user has filled in his full profile information his address is sourced from the profile, but could be changes by the user if he wishes this order to be delivered somewhere else. ??
7. Upon completion the user is greeted with a success message and an order confirmation. Figure ??

## Adding a review

1. The user has received his products and now wishes to add a review to it.
2. He goes to the product he ordered. ??
3. Here he can either leave just a rating, or as in this case add a review. He cannot, however leave a review without giving a rating.
4. Upon completion he is greeted with a success message and can control that the review is correct.
5. If, in the future, the user would change his mind about the product he can go back and either change or remove the review. ??

## Changing something as an admin

1. An admin signs in just as a regular user. Figure 2
2. After signing in the admin is greeted with some changes in the interface for a more streamlined experience for changing things. Figure ??

## User roles

Användare

- Butiksadministratör
  - r/w priser
  - r/w kampanjer
  - r/w lagerstatus
  - r/w kategorier
  - r/w reviews (for cleaning up spam)
  - r leveransstatus
  - r kundinfo
- Lagerarbetare

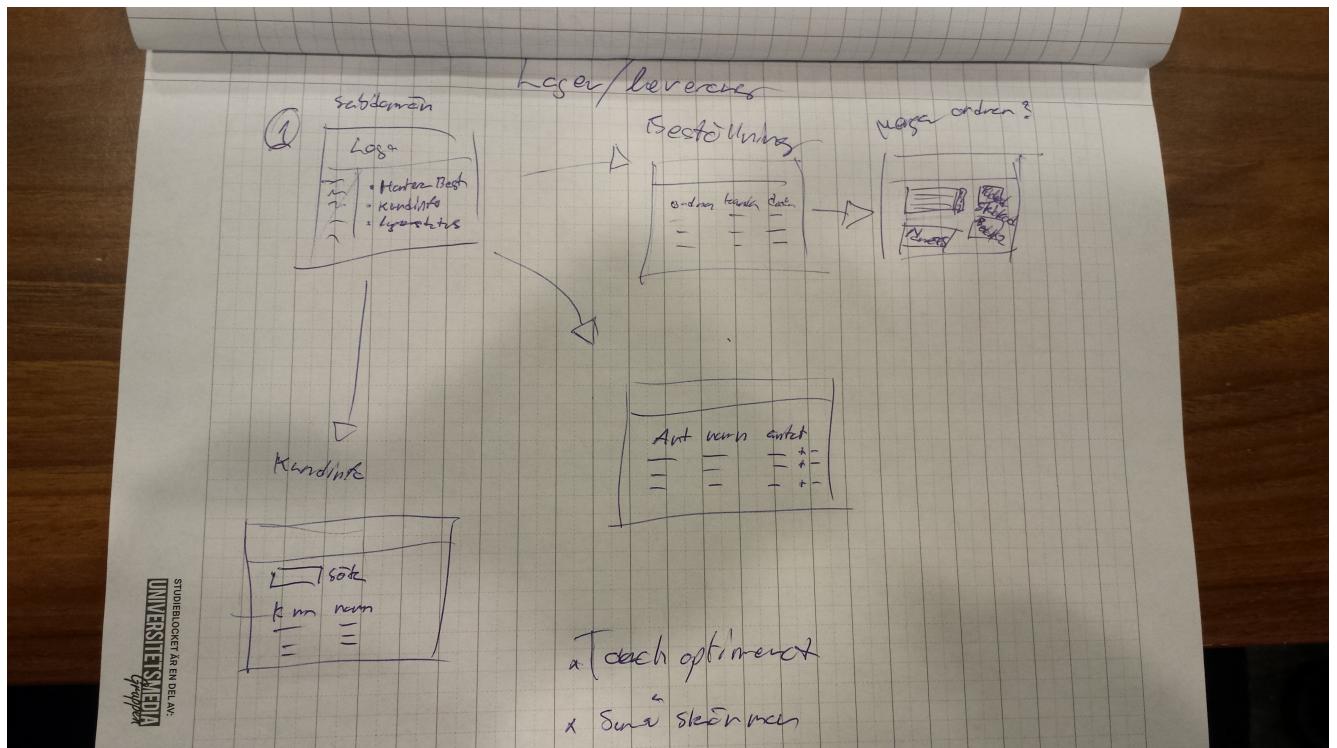


Figure 1

- r/w lagerstatus
- r/w leveransstatus
- r kundinfo
- Inloggad kund
  - r/w sin egen kontaktinformation
  - r/w own reviews
  - r other customers reviews
  - lÄdsa sin egen orderhistorik
  - lÄdsa sortimentet (produkter, priser, kampanjer, lagerstatus)
  - lÄdga orderar
  - Spara/skicka kundkorg

See Figure 8 - 10

## System architecture

During development we run the system on Ruby on Rails' (RoR) built in web server Puma and SQLLight3 for simplicity, but intend to move to a MariaDB database and a Nginx web server with

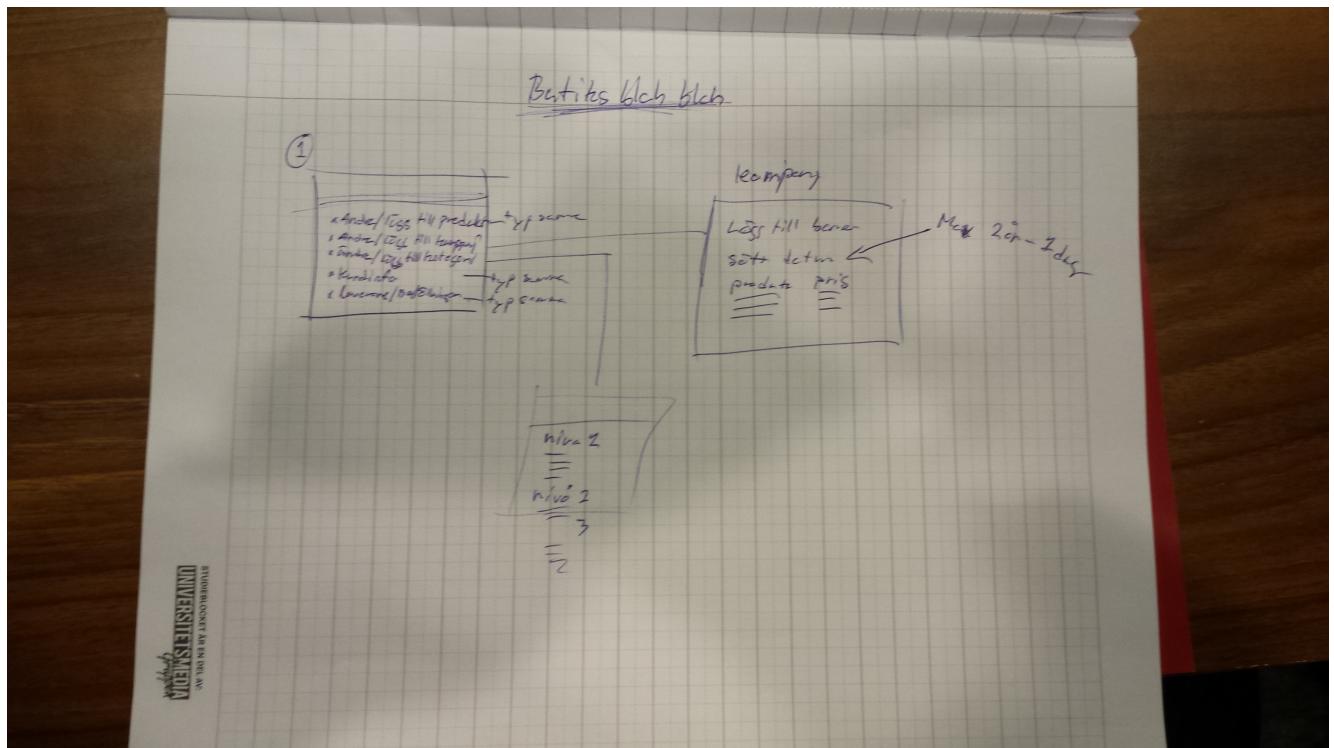


Figure 2

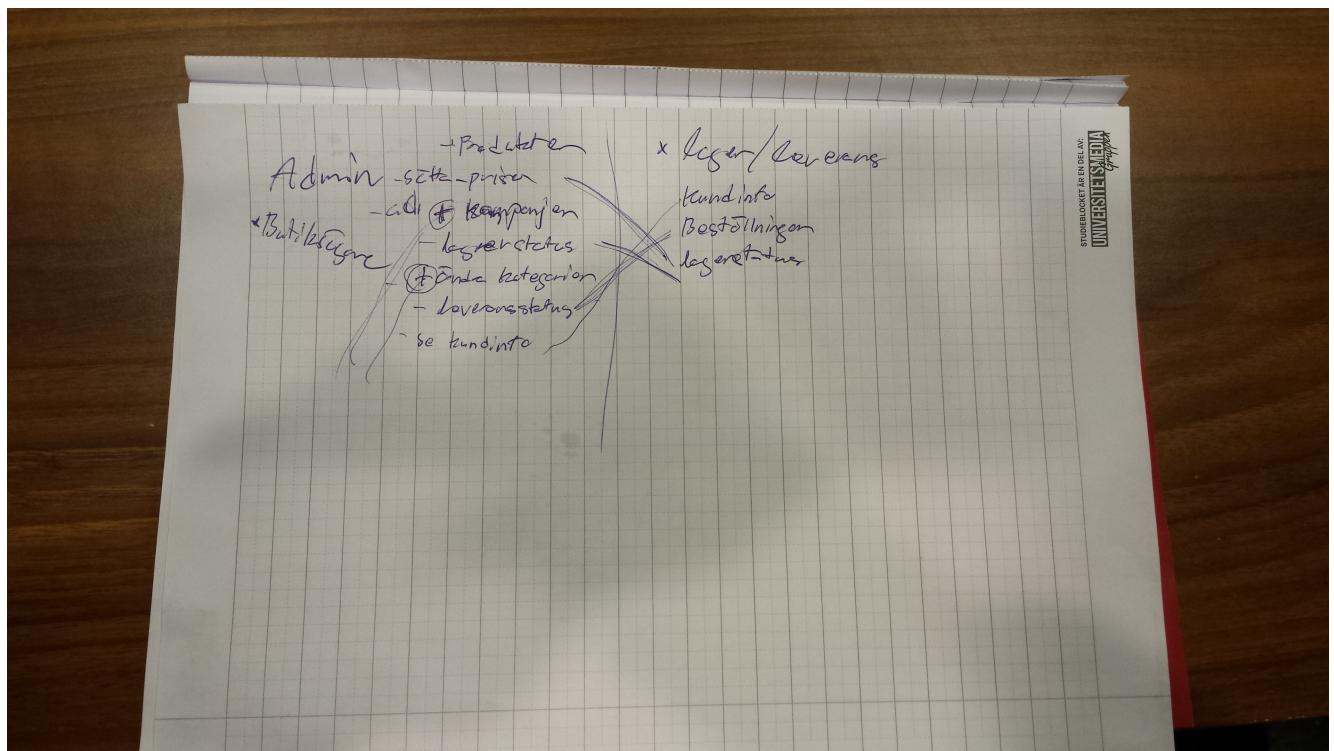


Figure 3

Phusion Passenger for RoR. We host the servers ourselves because it seemed fun, educational and fairly simple.

## Backlog

The backlog was made after discussions after breaking down the user stories into backlog stories, which were further broken down into tasks. They were then given priorities and time estimates. We tried to have a sit down halfway through every sprint to see if any stories needed to be broken down into smaller stories or if some stories needed to be combined. After that the stories would be reprioritized and re-estimated.

These backlog items were dealt with during this (last) sprint. Figure 12 includes a snapshot of the scrum board at the end of this sprint.

#	Sprint 4	Priority	Time est.
301	Startsida	100	2
302	Dynamisk meny frÅen kategorier	90	2
304	Produktsida	110	4
305	Kundkorg	80	8
307	Profilsida (kundkort)	45	2
308	Orderhistorik	45	1
309	Kundinlogg	50	2
310	Registrering	60	4
312	kommentarer/betygsÅttning	70	8
313	Produktkategorier	75	2
400	Backendinloggning	25	2
1	Personnummer -/+ hantering	5	1

These stories were put on hold and eventually scrapped from the project.

#	Left in backlog	Priority	Time est.
410	Kampanjhantering	10	3
311	ProduktsÅtkning	45	1
306	Betalsida	5	12

Planning is done at Trello.com <https://trello.com/b/JxDCHBcm>

This is just a small section of the backlog. For history of all sprints and deeper explanation of the backlog items, refer to Trello.

## Database schema

See Figure 13

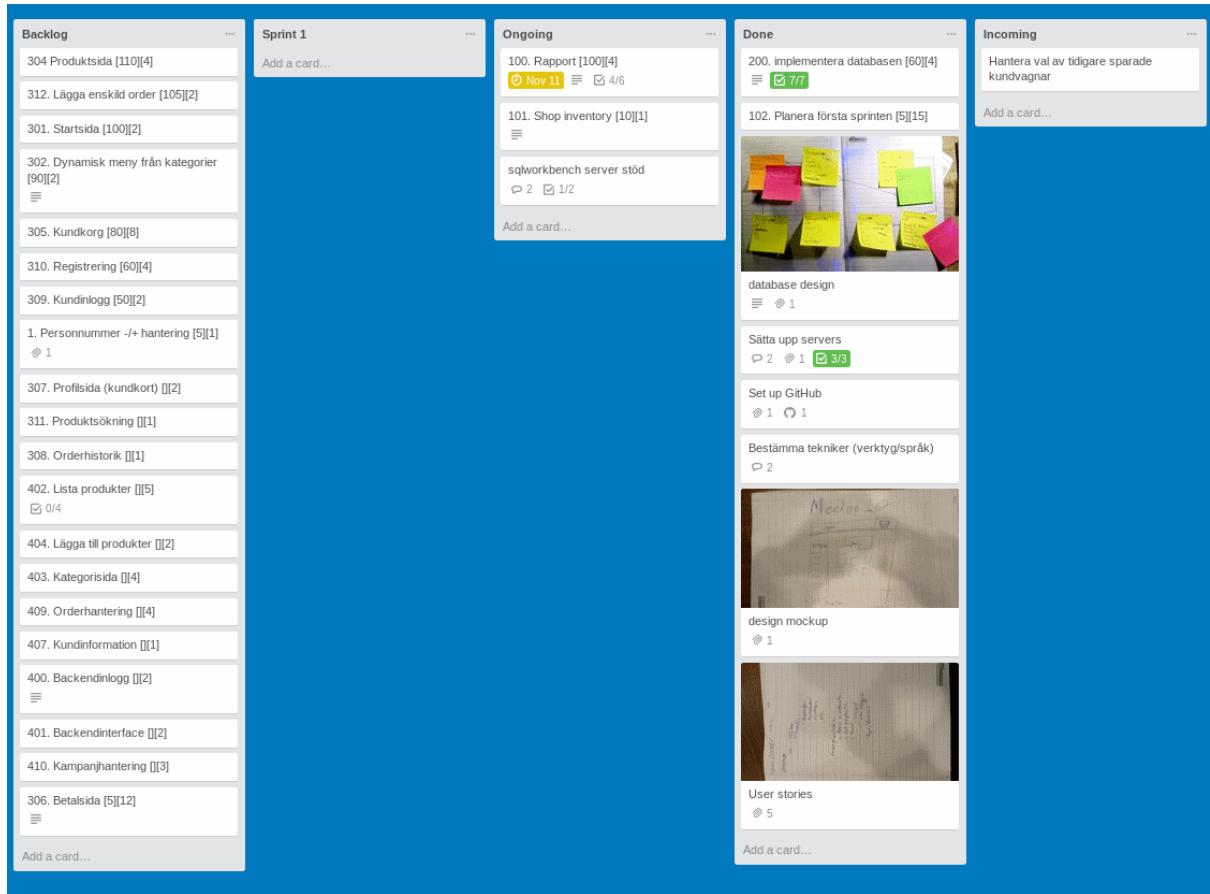


Figure 4: Screenshot of the scrum board going into the second sprint.

## Code

All code is available at github. <https://github.com/nikalas/D0018E-Databasteknik.git>

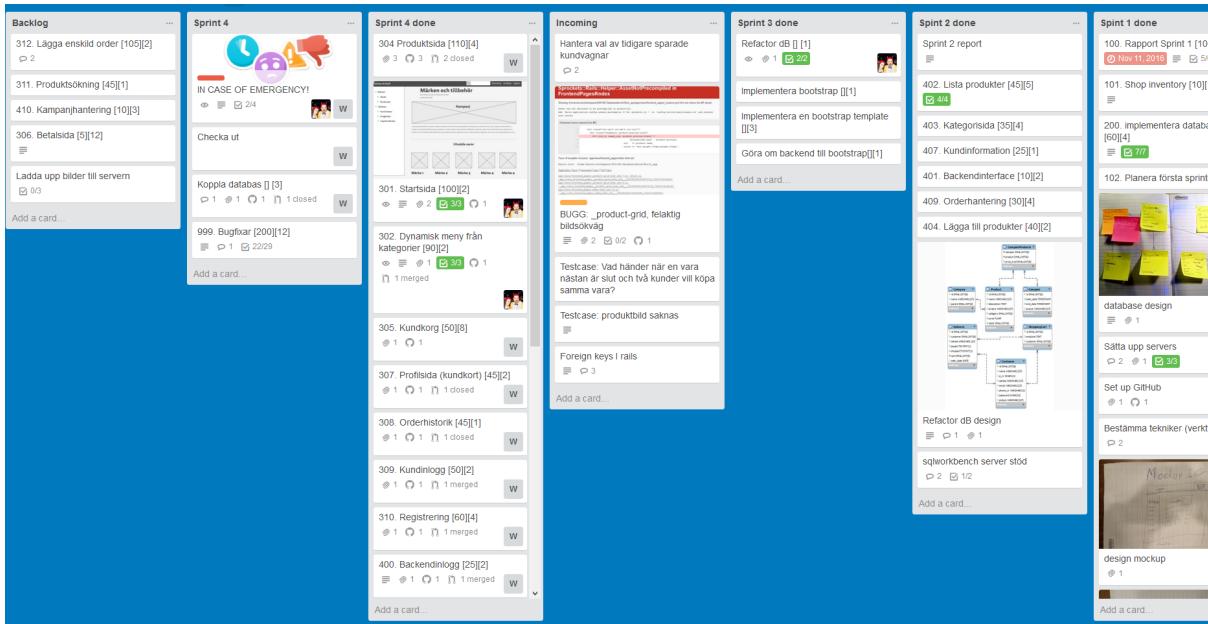
## Test case specifications

Problem: Item out of stock?

A customer adds a product to the basket. If the product goes out of stock before checkout, how is this handled?

Solution:

At checkout a check is made if the product is still in stock. If not the customer is brought back to the 'carts' page and asked to remove the product that is no longer available and that the cart has to be updated.



**Figure 5:** Screenshot of the current state of the scrum board.

## Limitations and improvements

We decided to put off saving payment methods and/or information. Might end up re-adding it to the backlog if it looks like we will have time to spare. Non-registered customers have also pretty much been put on hold for now. Products search, sorting, sale campaigns, and uploading pictures through the backend has also been put on hold, since we didn't have time to fully implement them.

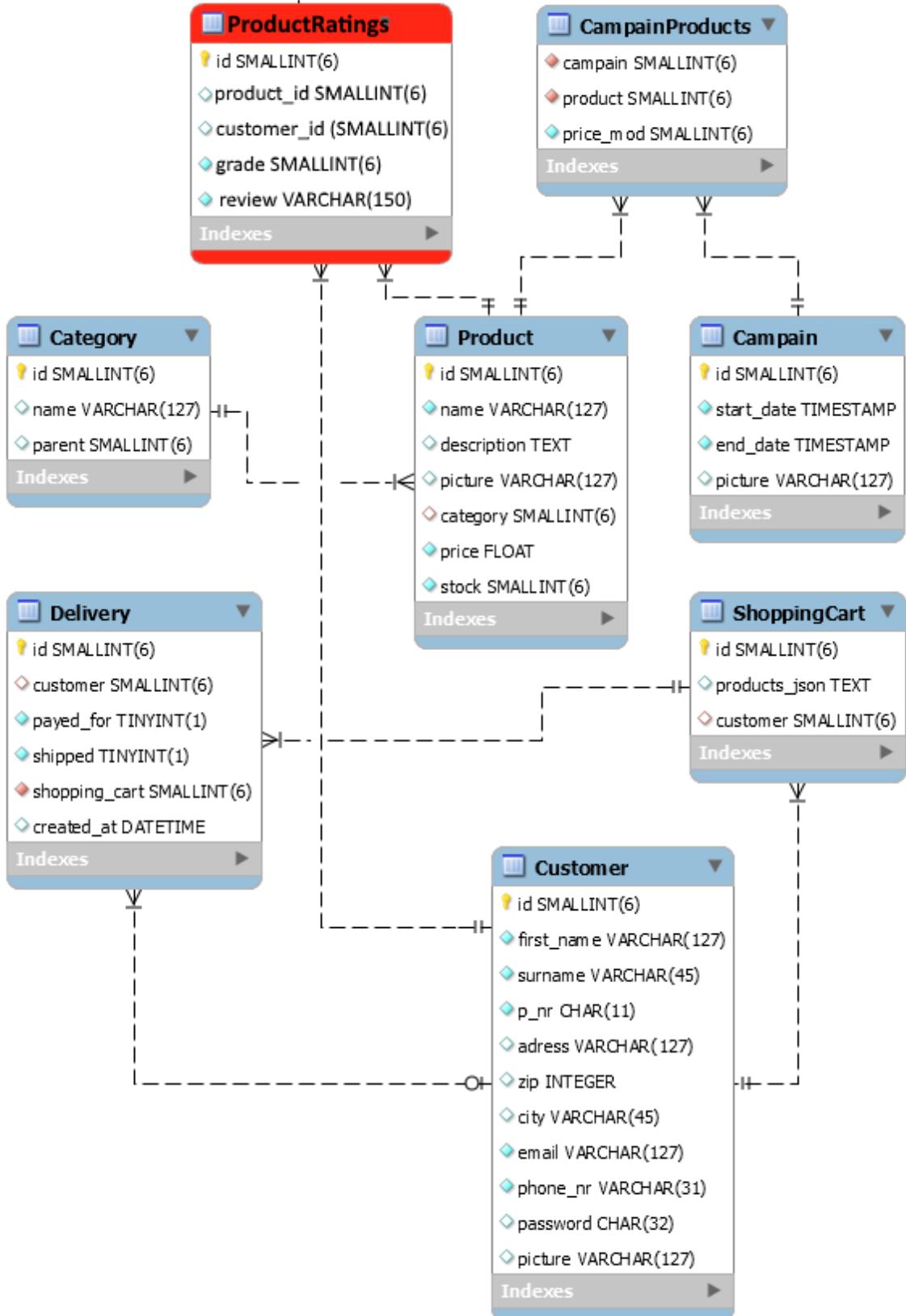


Figure 6: Database design.

Patches-N-Stuff - +

**Patches-N-Stuff** ← link to index page

menu → Inköpslista Profil → Logga in Checka u  
Changes depending on user state ( if logged\_in? )

Märken ← Categories

- » Vävda
- » Broderade

Tillbehör

- » Dragkedjor
- » Karbinhakar
- » Capshanddukar

Randomized items →

## Märken och tillbehör

Här hittar du allt du behöver för din studentoverall.

## Utvalda produkter

 <p>Störsten</p> <p>Pris: 100.0:-</p> <p><span style="border: 1px solid black; padding: 2px;">Buy</span></p>	 <p>Kränt</p> <p>Pris: 20.0:-</p> <p><span style="border: 1px solid black; padding: 2px;">Buy</span></p>
 <p>JAG STÖDJER Musikhjälpen 2016 FÖR ATT BARN KÖR KÖR KÖR ATT GÅ I SKOLEN</p>	

<https://d0018e-nikeli.c9users.io/> [1/1]

**Figure 7:** Greeting page of the web shop.

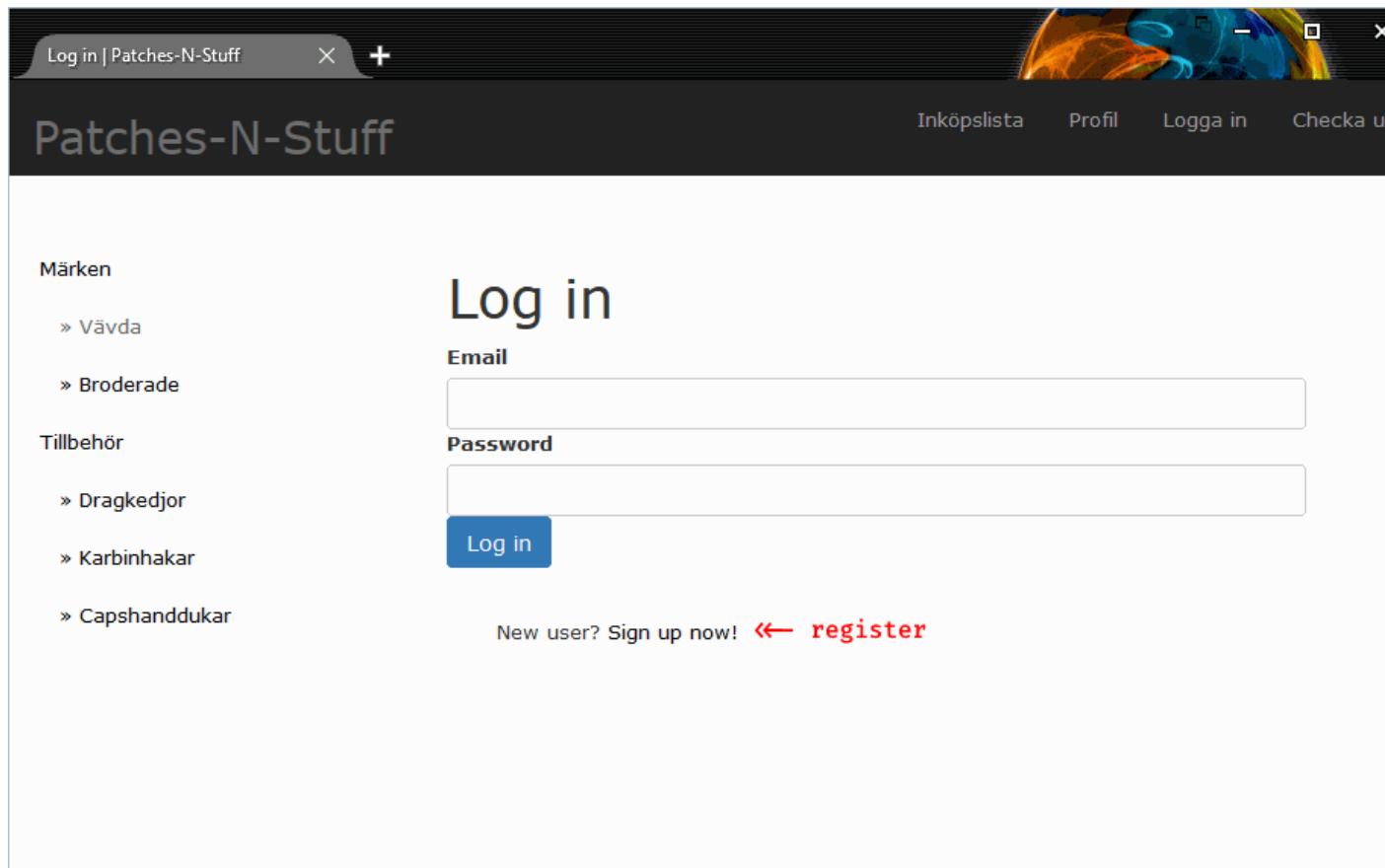


Figure 8: Login page

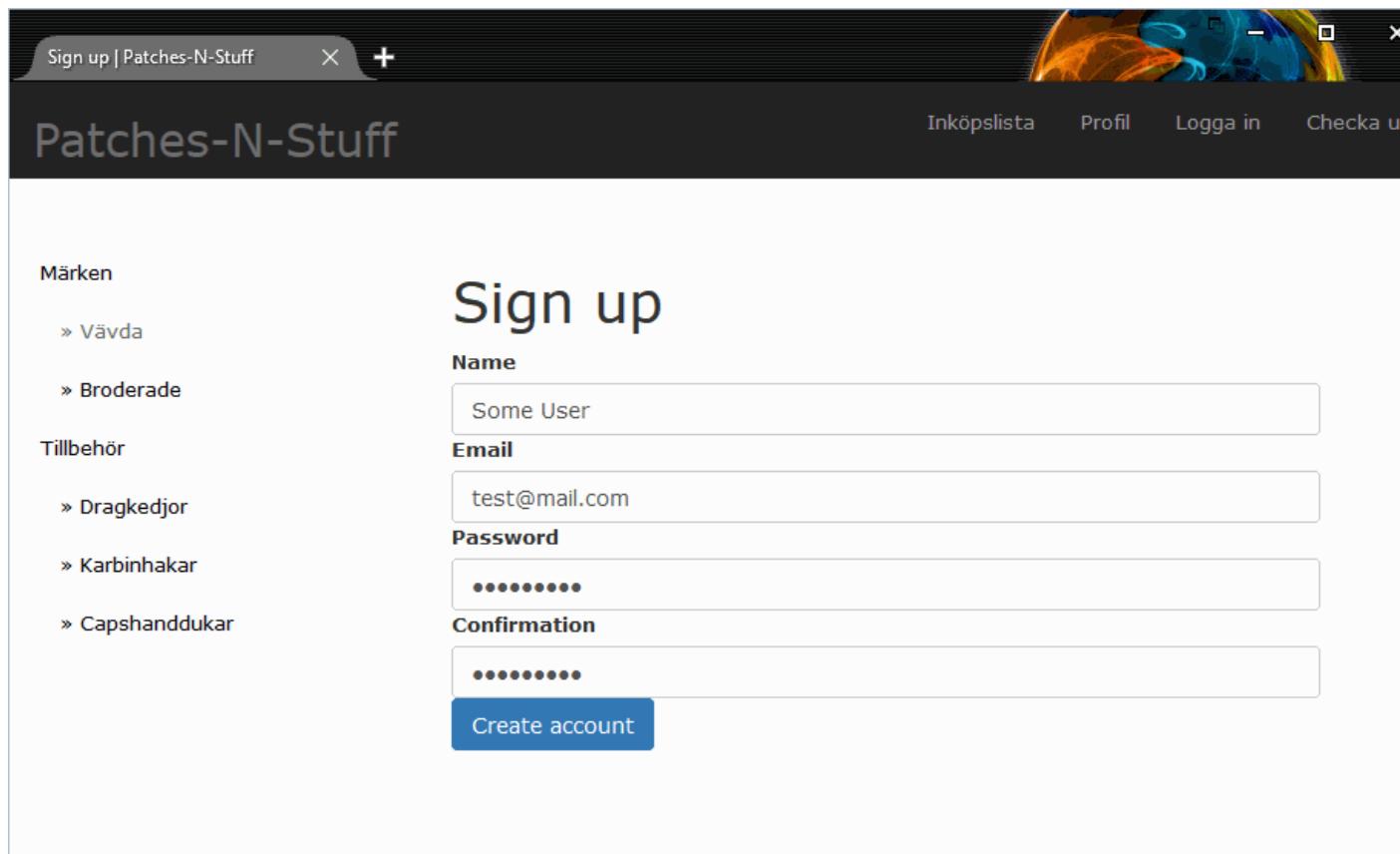


Figure 9: Register page

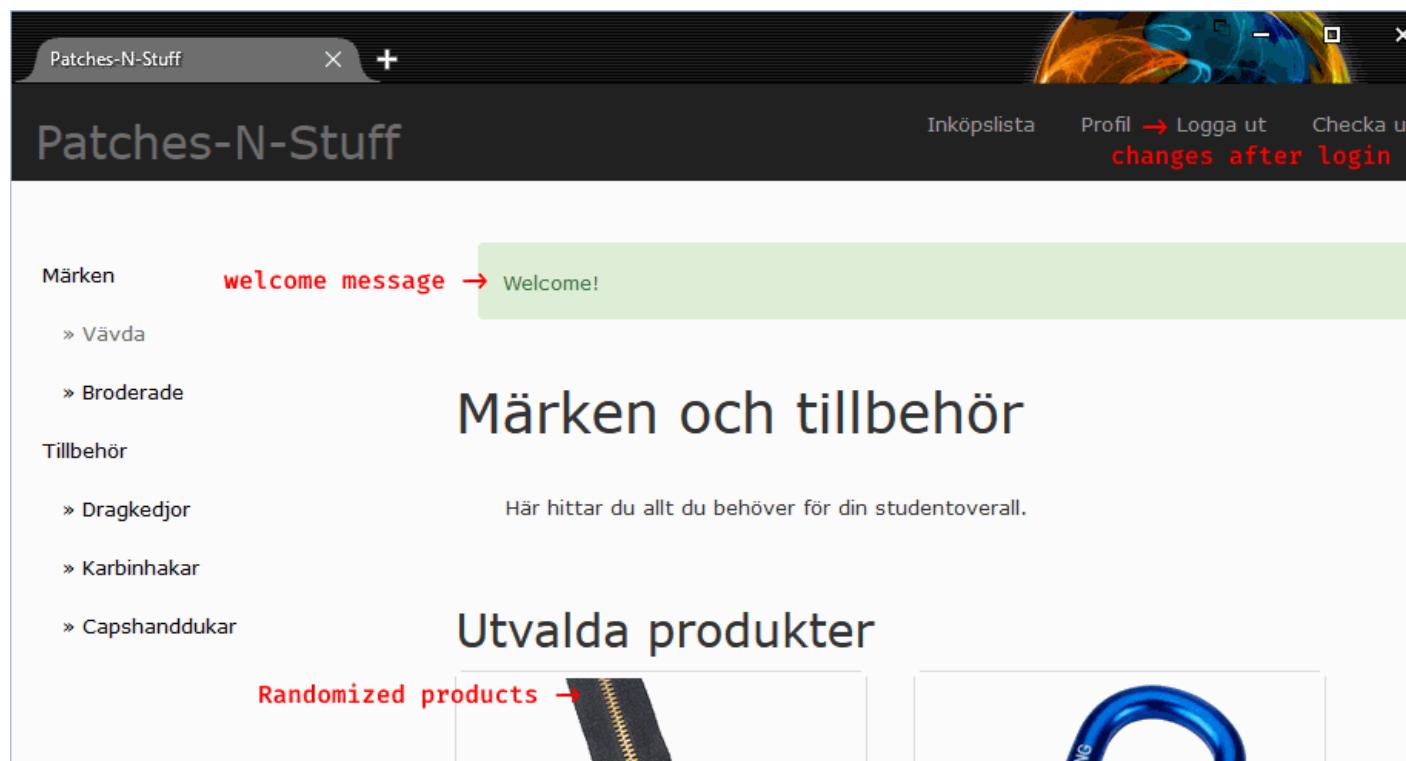


Figure 10: Registration complete

The screenshot shows a web browser window with a dark header bar. The title bar contains 'Profil | Patches-N-Stuff' on the left and standard window controls (X, +) on the right. Below the header is a dark navigation bar with the site name 'Patches-N-Stuff' in white. To the right of the name are links for 'Inköpsslista', 'Profil' (highlighted in blue), 'Logga ut', and 'Checka u'. The main content area has a light gray background. On the left, there's a sidebar with sections for 'Märken' (with links to 'Vävda' and 'Broderade') and 'Tillbehör' (with links to 'Dragkedjor', 'Karbonhakar', and 'Capshanddukar'). The main content on the right displays user profile information: 'Namn: Some User', 'Personnummer: non-' (with a red annotation '← Filled in profile'), 'Adress:' (empty), 'E-post: test@mail.com', and 'Telefonnummer:' (empty). Below this, there are three buttons: 'Ändra användarinformation.' (with a red annotation '← Change profile'), 'Se tidigare beställningar.' (with a red annotation '← view orders'), and 'Välj kundkorg.' (with a red annotation '← Choose cart').

Figure 11: Profile page

Patches-N-Stuff

Inköplista Profil Logga ut Checka u

## Editing Customer

**Name**  
Some User

**P nr**  
123456-7890

**Adress**  
somewhere

**Zip**  
12312

**City**  
nowhere

**Email**  
test@mail.com

**Phone nr**

**Password**

**Password confirmation**

**Picture**

**Update Customer**

Tillbaka

[https://d0018e-nikeli.c9users.io/customers/6/edit < \[1/1\]](https://d0018e-nikeli.c9users.io/customers/6/edit < [1/1])

Figure 12: Edit profile

Märken | Patches-N-Stuff X +

# Patches-N-Stuff

Inköpsslista Profil Logga ut Checka u

Märken ← Chose a parent category and all children →

» Vävda will render as well →

» Broderade

Tillbehör

» Dragkedjor

» Karbinhakar

» Capshanddukar

Marken



Sjöslaget '15 - SUS KM

Pris: 10.4:-

[Buy](#)



Musikhjälpen '16

Pris: 30.0:-

[Buy](#)



Snorlax

Pris: 5.0:-

[Buy](#)



Datamärke

Pris: 21.0:-

[Buy](#)

[https://d0018e-nikeli.c9users.io/category/2 < \[1/1\]](https://d0018e-nikeli.c9users.io/category/2 < [1/1])

Figure 13: Category page

The screenshot shows a product page for a Carlsberg patch. At the top, there's a navigation bar with links for 'Inköplista', 'Profil', 'Logga ut', and 'Checka u...'. On the left, there's a sidebar with categories like 'Märken' (Vävda, Broderade) and 'Tillbehör' (Dragkedjor, Karbinhakar, Capshanddukar). The main content area features the product image, which is a green Carlsberg logo patch. The price is listed as 'Pris: 60.00kr'. The 'Lagerstatus' is '13st'. Below the image, the average rating is shown as 'Snittbetyg: ★ ★ ★ ★ ★' and 'Antal betyg: 12'. A descriptive text below the patch says: 'Har du spillt en Calle? Ingen fara, med denna capshandduk är det bara att torka upp och hälla tillbaks i glaset.' Below this, there's a review section titled 'Lämna omdömme' with fields for 'Grade' (dropdown menu), 'Review' (text area), and a 'Create Rating' button. Two reviews are visible: one by 'Nick' (5 stars, 6 days ago) and one by 'nikalas' (4 stars, 6 days ago).

**Carlsberg**

Pris: 60.00kr

Lagerstatus: 13st

Snittbetyg: ★ ★ ★ ★ ★  
Antal betyg: 12

Har du spillt en Calle? Ingen fara, med denna capshandduk är det bara att torka upp och hälla tillbaks i glaset.

**Lämna omdömme**

**Grade**

**Review**

**Create Rating**

**★★★★★** 6 days ago  
By: Nick  
re you so desperate to fight criminals that you lock yourself in to take them on one at a time ? Look around you. You'll see two councilmen, a union official, couple off-duty cops and a judge. I wouldn't have a second's hesitation of blowing your head off in front of them. Now, that's power you can't buy. That's the power of fear.

**★★★★★** 6 days ago  
By: nikalas  
Let me get this straight. You think that your client, one of the wealthiest, most powerful men in the world is secretly a vigilante who spends his nights beating criminals to a pulp with his bare hands and your plan is to blackmail this person? Good luck. You can swapnot sleeping in a penthouse... for not sleeping in a

[https://d0018e-nikeli.c9users.io/product/8 < \[1/1\]](https://d0018e-nikeli.c9users.io/product/8 < [1/1])

Figure 14: Product page

The screenshot shows a shopping cart interface for 'Patches-N-Stuff'. At the top, there's a navigation bar with links for 'Inköpsslista', 'Profil', 'Logga ut', and 'Checka ut'. On the left, there are category links: 'Märken' (with '» Vävda' and '» Broderade'), 'Tillbehör' (with '» Dragkedjor', '» Karbinhakar', and '» Capshanddukar'), and a 'Totalt: 100.66kr' summary. The main area displays a table of items:

	Produkt	Antal	Pris			
	Svart metall	2 (200)	40.0 (20.0)	Lägg till en	Ta bort en	Ta bort alla
	Billig stålhake	1 (299)	4.99 (4.99)	Lägg till en	Ta bort en	Ta bort alla
	Blå karbinhake	1 (100)	12.0 (12.0)	Lägg till en	Ta bort en	Ta bort alla
	Grön karbinhake	3 (100)	36.0 (12.0)	Lägg till en	Ta bort en	Ta bort alla

At the bottom, there are 'Kassa' and 'Checkout' buttons.

Figure 15: Shopping cart

Lägg order | Patches-N-Stuff   X   +

# Patches-N-Stuff

Inköpsslista   Profil   Logga ut   Checka ut

Märken

- » Vävda
- » Broderade

Tillbehör

- » Dragkedjor
- » Karbinhakar
- » Capshanddukar

## Lägg bestälning

Produkt	Antal	Pris	Totalt
Svart metall	2	40.0	
Billig stålhake	1	4.99	
Blå karbinhake	1	12.0	
Grön karbinhake	3	36.0	
			100.66kr

## Fakturerings och leveransadress

Adress

Zip

City

Update Delivery

← Automatically sourced from user profile if provided, but can be changed if user so wishes for every order.

Produkt Antal Pris

Figure 16: Order page

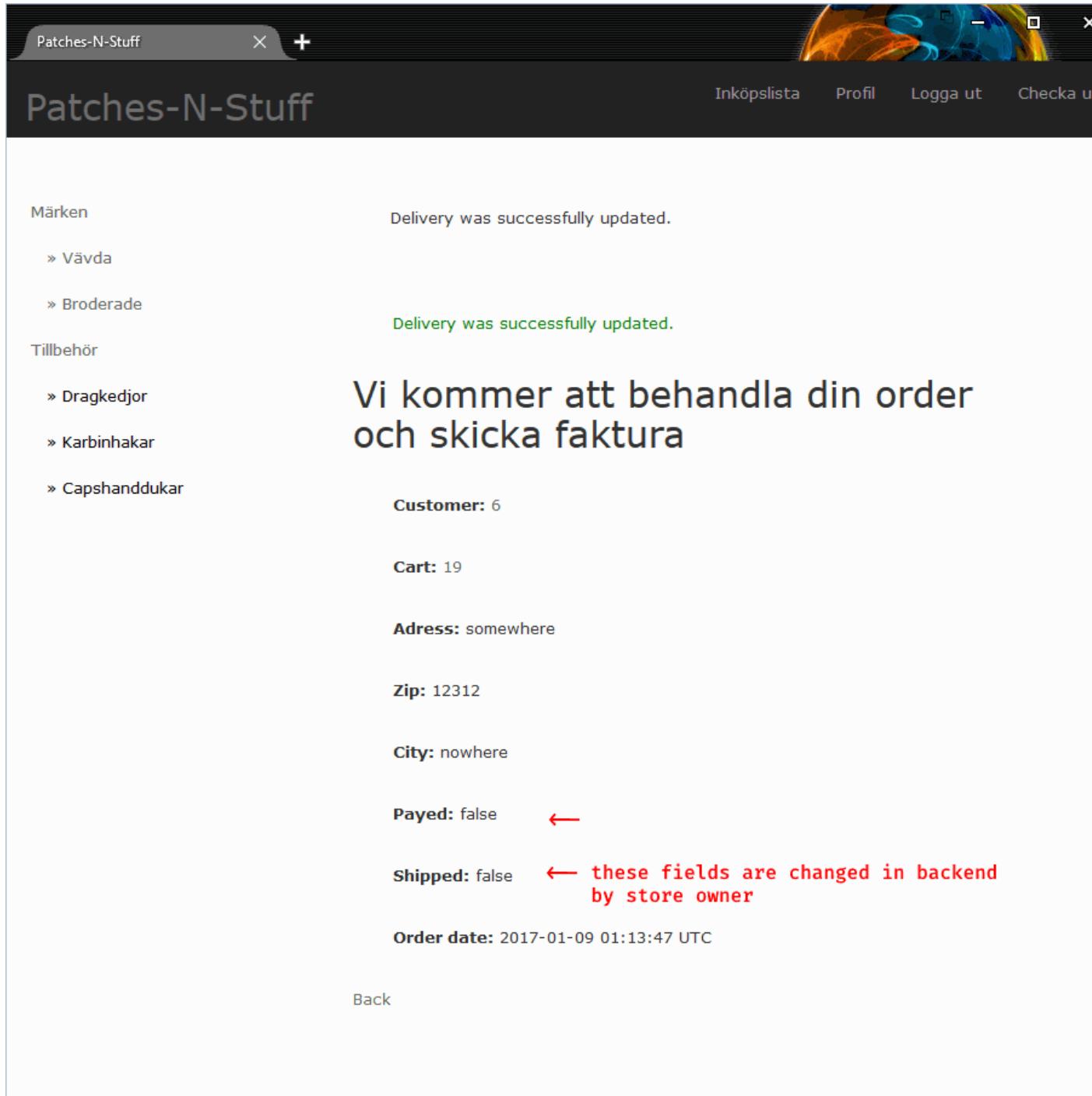


Figure 17: Order confirmation

	Ordernr	Datum	Summa	Betald	Skickad	Adress	
Tillbehör	17	2017-01-09	100.66	false	false	somewhere 12312 nowhere	Produkter
	18	2017-01-09	424.33	false	false	somewhere else 0 neverland	Produkter

Figure 18: Orders history

**Märken**

- » Vävda
- » Broderade

**Tillbehör**

- » Dragkedjor
- » Karbinhakar
- » Capshanddukar

# Carlsberg

Pris: 60.00kr

Lagerstatus: 13st

Snittbetyg: ★ ★ ★ ★ ★  
Antal betyg: 12

Har du spillt en Calle? Ingen fara, med denna capshandduk är det bara att torka upp och hälla tillbaks i glaset.

**Lämna omdömme**

**Grade**  
 ← Grade can be submitted without review, but not the other way around

**Review**

**Create Rating**

**★★★★★** 6 days ago  
By: Nick  
re you so desperate to fight criminals that you lock yourself in to take them on one at a time ? Look around you. You'll see two councilmen, a union official, couple off-duty cops and a judge. I wouldn't have a second's hesitation of blowing your head off in front of them. Now, that's power you can't buy. That's the power of fear.

**★★★★★** 6 days ago  
By: nikalas  
Let me get this straight. You think that your client, one of the wealthiest, most powerful men in the world is secretly a vigilante who spends his nights beating criminals to a pulp with his bare hands and your plan is to blackmail this person? Good luck. You can swapnot sleeping in a penthouse... for not sleeping in a

[https://d0018e-nikeli.c9users.io/product/8 < \[1/1\]](https://d0018e-nikeli.c9users.io/product/8 < [1/1])

**Only shows ratings that includes reviews →**

Figure 19: User reviews

The screenshot shows a user profile page for 'Carlsberg | Patches-N-Stuff'. On the left, there's a sidebar with categories like 'Märken' (Products) and 'Tillbehör' (Accessories), each with sub-options like 'Vävda', 'Broderade', etc. The main content area displays a comment by 'Nick' (6 days ago): 'side. Now I'm always smiling.' with a 5-star rating. Below it is another comment by 'nikalas' (5 days ago): 'gillar den fortfarande inte' with a 3-star rating. At the bottom, a red annotation says: 'User can change or remove their own reviews' with arrows pointing to edit and delete icons.

Figure 20: Edit comment

The screenshot shows the admin login screen for 'Patches-N-Stuff'. The URL is 'u-r-admin@ Patches-N-Stuff'. The main content area has a heading 'Admin' and a note: 'Det här är indexsidan för admins. Välkommen!'. To the right, there's a list of product categories: 'Products', 'Carts', 'Categories', 'Customers', 'Deliveries', and 'Sales'. A red annotation with arrows points to the 'Sales' item, stating: '← gives admin rights to edit ← not implemented'.

Figure 21: Admin interface