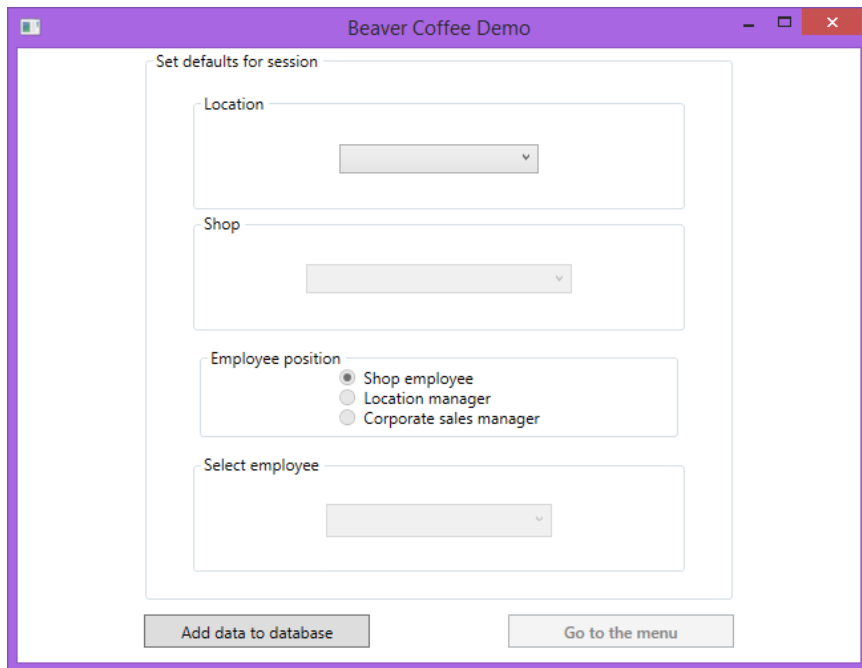


## Installation instructions

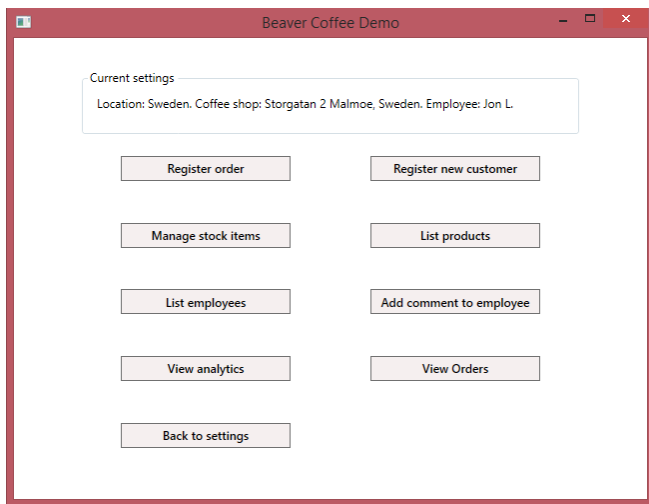
The demo is a desktop application written in C#, with a graphical user interface. It works under Windows operating systems and requires a MongoDB instance running on start-up, with default settings (localhost, port: 27017). The database created by the application with the test data is called “coffeeshop”.

## Start screen



The screenshot shows the 'Beaver Coffee Demo' application window. The title bar is purple. The main content area is white and contains a form titled 'Set defaults for session'. The form has four sections: 'Location' with a dropdown menu, 'Shop' with a dropdown menu, 'Employee position' with three radio buttons (Shop employee, Location manager, Corporate sales manager), and 'Select employee' with a dropdown menu. At the bottom of the form are two buttons: 'Add data to database' and 'Go to the menu'.

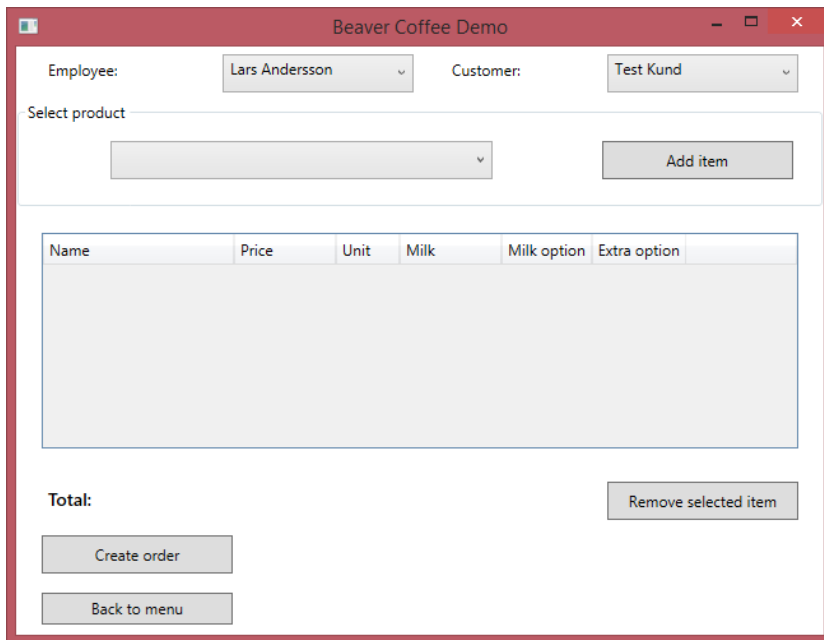
1. Click “Add data to database” to insert test data. Do this first when starting the application for the first time. Later this option can be used to clear the database and reload the initial test data. The test data includes all necessary data to test the application, except for orders (these can be registered using the appropriate functionality of the application).
2. Next, you need to choose the default settings for the session. First select your location under “Location” (Sweden or US).
3. A default coffee shop selection will appear for the location under “Shop”. Any orders processed in the session will be associated with that shop.
4. Select your employee status. A shop employee can only register orders or customers. A location manager will have access to all the functionalities, but some of these will be restricted to their location. A corporate sales manager will be able to access all functionalities across all locations.  
Managers are not expected to take customer orders. For demonstration purposes, orders can be still processed as managers, but these will be registered to an employee of the selected shop
5. In the combobox under “Select employee”, the available employees with the above specifications are shown. Shop choice only restricts the list of shop employees, while location choice restricts location managers as well.
6. Click “Go to the menu” to continue.



Press a button to test the associated functionality. In the followings, functionalities will be grouped and numbered according the requirements. For each requirement, the associated menu name will be given.

### Requirement 1-3: Enter and edit an order from a customer for one or more products

Menu point: Register order



Select the customer in the top right corner. “Unregistered” means that the customer is not a BeaverCoffee club customer. The selection in the combobox corresponds to scanning the barcode of the club customer.

Next, select a product and click Add item. The product will appear in the data grid below and the order total will be automatically updated with its price, shown in the bottom left corner.

The order item can now be edited in the data grid (requirement 3), including the number of products, the type of milk used (if applicable) and extras added.

The number of items can be updated in the Unit column, by clicking on the cell, entering a new number and hitting enter. The type of milk a beverage is served with is shown under the Milk column. This can be changed using the combobox in the *Milk option* column as shown in the figure below. The combobox appears when the user double-clicks the cell.

Name	Price	Unit	Milk	Milk option	Extra option	
Caffe Latte	30	2	mjök	▼		

An extra option, such as flavoring or whipped cream for hot chocolate, can be added similarly, under the Extra option column. The extra option gets listed as a separate order item but its association with another product is preserved in the Order document saved in the database.

An arbitrary number of further products can be added to an order in the same way. Order items can also be removed from the order (requirement 3) by highlighting the appropriate row and clicking the button “Remove selected item”.

Name	Price	Unit	Milk	Milk option	Extra option	
Caffe Latte	30	2	mjök			

Total: 60 SEK

Remove selected item

The order is finalized and saved to the database when the user clicks “Create order” in the bottom left corner.

### Requirement 5: register customer in BeaverCoffee club

Menu point: Register new customer

Beaver Coffee Demo

Name

✖ Field cannot be empty

Personal identification

✖ Correct id format is: 10 digits

Address: street

✖ Field cannot be empty

Zip

✖ Field cannot be empty

City

Country

Occupation

Student ▼

Back to menu

Save customer

A new club customer can be registered by filling in the form above and pressing Save customer. Compulsory fields are indicated.

Personal identification format is enforced based on the location set for the current session (the US format is arbitrary, for demonstration purposes). Format specifications are retrieved from the database, from the document representing the current location.

The customer will be associated with the location of the current session (Sweden or US). When entering an order, only those club customers are listed for the customer choice that have registered at the location of the session (irrespective of the specific registering coffee shop).

**Requirement 8: keep track of employee information and employment positions**

Menu point: List employees

For demonstration purposes, all locations are available here, regardless of the location of the session.

Beaver Coffee Demo

Select location

US

Name	Id	Hired	Street	City	Zip	Country
Tom Smith	TSSFDR23	4/28/2016 10:	Test avenue 3	San Francisco	23445	US
Anna L	ALDTRE75	4/28/2017 10:	Test stret 1	Oakland	45634	US
Kate M	KMDRET28	12/31/2016 1	Test street 23:	San Francisco	98756	US

< >

Position	StartDate	EndDate	Full time %	Location	Shop id

Delete selected employee

Delete selected position

Back to menu

Associate coffee shop with position

Add shop to position

After selection of a location (Sweden or US), all employees holding one or more employment positions at the location will be listed in the upper grid. When selecting a row in this upper grid, all employment positions associated with the employee are displayed in the lower grid, forming an employment history (even past positions are listed).

Beaver Coffee Demo

Select location

US

Name	Id	Hired	Street	City	Zip	Country
Tom Smith	TSSFDR23	4/28/2016 10:	Test avenue 3	San Francisco	23445	US
Anna L	ALDTRE75	4/28/2017 10:	Test stret 1	Oakland	45634	US
Kate M	KMDRET28	12/31/2016 1	Test street 23:	San Francisco	98756	US

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Position	StartDate	EndDate	Full time %	Location	Shop id
1	4/28/2016 10:	5/29/2017 10:	100	US	5b76ea10e61:
1	5/31/2017 10:	1/1/0001 12:0	100	US	5b76ea10e61:

Delete selected employee

Delete selected position

Back to menu

Associate coffee shop with position

Current coffee shop = Main square 4 SF, US

Add shop to position

It is possible to edit employee information of the upper grid, as well as to add new employees and associate new positions with them by filling in the cells of a new row in the appropriate grid.

To demonstrate the way appropriate personal identification formats are enforced, editing the Id field in the upper grid (when selected location is Sweden or US) results in an error message if the format is incorrect (ids cannot be edited under the “All” locations setting). The error is indicated by an exclamation mark in a red circle in front of the row. By pointing at the exclamation mark, the error specification is shown.

Select location

US

	Name	Id	Hired	Street	City	Zip	Country
!	Tom Smith	6548675	4/28/2016 10:	Test avenue 3	San Francisco	23445	US
	Kate M	KMDRET23	12/31/2016 1	Test street 23	San Francisco	98756	US

**Requirement 9: employer should be able to add comments about employees**

Menu point: Add comment to employee

In the demo version, users can leave comments about their employees. The list of employees of a given person is specified by Id under the “BossOver” field of the employment position document. In the demo data, each location managers can leave comments about shop employees at their specific location, and the corporate sales manager can leave comments about location managers.

By selecting the name of an employee in the top combobox, all previous comments associated with that employee are displayed. Dates displayed are in UTC time.

Beaver Coffee Demo

Employee: Tom Smith

Date	Employer	Text
7/28/2017 9:43:00 AM	Kate M	This is a comment about an employee written by an employe
7/28/2017 3:24:58 PM	Kate M	This is a new comment

Add

Back to menu

A new comment can be entered in the text field below the list, which is saved after clicking the Add button as long as the length of the text does not exceed 300 characters.

[illegible]

**✖ Comment cannot be longer than 300 characters**

Add

**Requirement 10: keep track of available quantity in stock**

Quantities are updated automatically as orders are processed.

It is also possible to update the quantity of any item, by simply entering the new amount under the Total column. Negative values are not accepted.

Each update (due to order or manual update) in the quantity of a stock item is saved in the database as a stock transaction, which is then can be used to create reports for stock quantities of a product per requirement 13.4 (see below).

**Requirement 11: list of products in Swedish and English**

Menu point: List products

The user can view all the products offered at the location that was specified at session start. Local name, price and product category is displayed here. Ingredients not sold separately or as add-ons to products cost 0.

Beaver Coffee Demo

Name	Price	Category	
Caffe Latte	30	beverage_coffee	
Capuccino	25	beverage_coffee	
Varm Choklad	25	beverage_noncoffee	
lättmjölk	0	milk_type	
soja mjölk	0	milk_type	
mjölk	0	milk_type	
mellanmjölk	0	milk_type	
whole bean french roast	35	bagged_coffee	
whole light french roast	35	bagged_coffee	
espresso roast	35	bagged_coffee	
vanilj	5	flavouring	
irländsk kräm	5	flavouring	
karamell	5	flavouring	
grädde	4	other_innovations	

Back to menu

Beaver Coffee Demo

Name	Price	Category	
Latte	3	beverage_coffee	
Capuccino	2.8	beverage_coffee	
Hot chocolate	2.5	beverage_noncoffee	
skim milk	0	milk_type	
soy milk	0	milk_type	
whole milk	0	milk_type	
2percent milk	0	milk_type	
whole bean french roast	3.5	bagged_coffee	
whole light french roast	3.5	bagged_coffee	
espresso roast	3.1	bagged_coffee	
vanilla	0.5	flavouring	
irish cream	0.5	flavouring	
caramel	0.5	flavouring	
irishcream	0.4	other_innovations	

Back to menu

**Requirement 13.1: create reports on sales for any specified time period**

Menu point: View analytics

In the top menu, select “1. Sales for time period” as an Action, specify a date range below (by entering the start and the end date, inclusive, of the period) and press Calculate. The name of the product, number of units sold in the time period and price in local currency (column Total) are shown.

Beaver Coffee Demo

Location: Sweden

Action: 1. Sales for time period

Start date: 2017-01-01

End date: 2017-08-08

Calculate/Refresh

Product	Units sold	Total
Capuccino	4	100
vanilj	1	5
Varm Choklad	2	50
whole bean french roast	1	35
bryggkaffe	3	60
grädde	1	4

Back to menu

Corporate sales manager can create reports that are calculated across all locations by selecting “All locations” as a Location in the top menu.

**Requirement 13.5: orders served by an employee for a specified time period**

Menu point: View orders

In the top menu, first select the location (there is only one option here for location managers, but corporate sales managers can view All locations). Next, select an employee from the list of shop employees at the specific location. Orders served by that employee will be displayed below, one row per order. Dates displayed are in UTC time.

Beaver Coffee Demo

Location: Sweden

Employee: Lars Andersson

Start date

Select a date

15

End date

Select a date

15

Filter by date

Date	Total	Products	Customer	
7/28/2017 10:21:48 AM	55 SEK	Capuccino, unit: 2, price: 25; vanilj, unit: 1, price: 5;	Unregistered customer	
7/28/2017 10:22:35 AM	25 SEK	Varm Choklad, unit: 1, price: 25;	Unregistered customer	
8/7/2017 1:45:24 PM	35 SEK	whole bean french roast, unit: 1, price: 35;	Unregistered customer	
8/7/2017 1:45:43 PM	50 SEK	Capuccino, unit: 2, price: 25;	Name: Test Kund, Occupation: Academy	
8/7/2017 1:46:03 PM	60 SEK	bryggkaffe, unit: 3, price: 20;	Name: Test Kund2, Occupation: Trades	
8/7/2017 1:46:25 PM	29 SEK	Varm Choklad, unit: 1, price: 25; grädde, unit: 1, price: 4;	Unregistered customer	

Back to menu

Delete selected order

By specifying a start and an end date (inclusive) of a time period, only orders served during that time period will be displayed after pressing the Filter by date button.

Beaver Coffee Demo

Location: Sweden

Employee: Lars Andersson

Start date

2017-08-01

15

End date

2017-08-08

15

Filter by date

Date	Total	Products	Customer	
8/7/2017 1:45:24 PM	35 SEK	whole bean french roast, unit: 1, price: 35;	Unregistered customer	
8/7/2017 1:45:43 PM	50 SEK	Capuccino, unit: 2, price: 25;	Name: Test Kund, Occupation: Academy	
8/7/2017 1:46:03 PM	60 SEK	bryggkaffe, unit: 3, price: 20;	Name: Test Kund2, Occupation: Trades	
8/7/2017 1:46:25 PM	29 SEK	Varm Choklad, unit: 1, price: 25; grädde, unit: 1, price: 4;	Unregistered customer	

Back to menu

Delete selected order

**Requirement 13.4: Stock quantities of a product for any specified time period**



Requirement implemented in demo under menu item View Analytics.

In the top menu, select ‘4. Stock quantities of a product’ as an action. Another combobox appears for selecting the specific stock item. Press the calculate button. Changes in quantities of a stock item, as well as the stock quantity at the beginning and the end of the given period is displayed.

This functionality is supported by registering a transaction (with timestamp and quantity change specification) in a StockTransaction document in the database each time the quantity of a stock item decreases or increases.

Beaver Coffee Demo

Location: All locations

Action: 4. Stock quantities of f

espresso

Start date 2017-01-01

End date 2017-08-09

Calculate/Refresh

Stock name	Starting amount	Units added	Units deduced	Final amount
stockSwe1	345	0	-4	341
stockUS1	289	162	-2	449

Back to menu