Interdisciplinary Assignment
Web development Fall 2016

Boardgamesleeves.com

Arcane Tinmen is a company producing and distributing products related to collectable and trading cards games and board games. Their main product are protective sleeves for TCG like Magic the Gathering, Yu-Gi-Oh!, Pokemon etc.

Today Arcane Tinmen has a single webpage with all their products and brands, but they plan organize their webpage into several webpages each dedicated to a single brand or product.

Recently Arcane Tinmen has acquired the domain name boardgamesleeves.com. your assignment is to design and develop a web solution for this domain.

The web solution shall consist of two parts, an open part for persons interested in getting more information about the board game sleeves and a closed administration part to edit the content of the webpage.

Requirements descriptions

Different board games have different sizes of cards and require different sizes of sleeves. Today Arcane Tinmen have a webpage with a long list of board games and which size of sleeves they require. And another page with the different size sleeves and which board games they are suitable for.

This is not the most elegant solution; your task is to create a better solution for customers to find the right size sleeves for their board games. The solution must include the following six parts:

1. Design a product page showing the different products, with product information. Currently there are board game sleeves in eight different sizes, but this can change, new sizes might be introduced or current sizes might go out of production.

2. The product page showing the different products must support a *shopping basket* functionality.

3. Design a shopping cart page where users can maintain their shopping cart and add or remove products.

4. Design a Check out page with a registration form where users register necessary information, so they can order and receive products.

5. Construct an administration page, which is accessed through a unique url, where it is possible for the administrators to:

   a. Add, remove or edit products. Currently each product is represented with a name, picture and description. See http://www.arcanet-inmen.dk/products/board-game-sleeves.

6. You must choose and implement at *least one* of the following requirements:

   a. Inventory management for the administators.

   b. Transaction management for the webshop.

   c. Search function for users to find products.

   d. Login for the admin part.

   e. Register new board games and the sleeve sizes that fit.

Below are the specific requirements for each course. These requirements must be fulfilled to pass the interdisciplinary assignment.

Interface design

Design a website that provides customers with a fitting user experience.

Dedicate maximum 4 pages of the report to answering the following requirements.

1. Explain what User Experience is, in the context of interface design. Use the articles from lecture 1, 5, 10 and 11 in Interface design.

2. Then explain how you have worked with user experience in your project, by addressing these two sub-questions.

   a. Why: What experience do you want users to have, and why do you be-lieve this experience is the right experience for the company's cus-tomers? Use Allan Coopers Goal Directed Design process as a guide to answer this question.
   The question is related to the topic User Research.

   b. How: What did you design, and how does your design add quality to the experience? Answering this questions could include a description of your consideration concerning:
   - Aesthetic interaction qualities.
   - Priority of content and communication strategy.
   - Animations or elements that show feedback, signifiers, mapping.
   - Navigation patters fitting use situation.
   - Use of Metaphors or Idioms.

3. Briefly describe your design process from ideation to implementation. If you have used them, please include annotated pictures of sketches and screen dumps from wireframes and mock-ups etc.

Database

In the report there must be:

1. A logical model for the information in the system. This model can be a domain class diagram in UML or an E/R diagram. The model is shortly explained.

2. A transformation of the logical model into a number of tables including choice of keys and eventual further design decisions. Constraints must be added to the tables. The final tabledesign is commented in the report and the create tables and constraints are enclosed in appendix.

3. SQL-queries to show statistics for the following:

   a. Find the name of all customers, who have bought a certain product.

   b. For each size of sleeves, show the total turnover.

   c. Find the name of all customers, who have bought sleeves, that can be used for a specific game.

   d. Find the sizes, which do not have any relation to any board games.

4. A stored procedure which set a new price (0.8 of the old price) for all products, which haven't been sold in the last X months, where X is a parameter to the procedure

5. A trigger that prevents deletes on products, if the product has been sold in the last two years. If the product is deleted the order lines for the product must be deleted as well.

Backend

You must construct a redesigned ASP.NET MVC website for Board Game Sleeves. Content from the database must be an integral part of the solution. There must be database content on the site's public area, and there must be a non-public administration module with CRUD functionality, that allows registered users to maintain at least two tables.

In the report, you must describe and document how the following elements are part of the solution:

- Domain model

- Layout of views, partial views and child actions

- Model validation

- Entity Framework

Frontend

Design part: Make a style guide for the companies new site. The style guide must be an easy to read guide that clearly explains why you have chosen the composition, each color and the different fonts used. (Get inspiration from the style guides we saw in lecture 11)

Dedicate part of your report to explain what mood and what style you believe will work for the company and its customers. Then explain how your chosen layout supports this mood and style.

Technical Part: The frontend must support a responsive web design and must support at least three different sizes, phone, tablet and desktop.

For this assignment you are NOT allowed to use Bootstrap or any other CSS framework.

Organize your CSS styling by using SASS.

Group assignment:
The project is to be solved in groups of three or four members.

Hand out and official presentation:
A description of the assignment will be presented Friday 25. November. Each study group is required to prepare three questions for the assignment in advance of the official presentation.

The official presentation is on Monday, **28. November at 8:30** in Auditorium A. [Arcane Tinmen](#), will hold a presentation, describing their company and need for a new site. Expected duration: 45 minutes including questions. The presentation is in English.

Hand in, Show off and Feedback:
The assignment must be submitted on Wednesday, **14. December at 12:00**.

The Show off presentations will take place the same day, Wednesday, **14. December.** We will start out with the international class (B) **at 13:00**, and the Danish class (A) **at 14.00.** Each group is required to hold a five-minute show-off presentation of their solution to the assignment. [Arcane Tinmen](#) will attend the presentations.

The feedback session will take place on **19 and 20 December.** For the Feedback session, each group will give an 8-minute presentation of their solution. Including their own recommendation for improving their work. This is your chance to show the teachers that you covered all the requirements of the assignment, and have balanced you work effort in a professional and effective way. All teachers will be present and we expect feedback to take about 30 minutes for each group. The feedback schedule will be announced at a later date.

Number of pages:

Task report must contain five pages per group member + five pages. (A group of four members will hand in 25 pages in total)