
Case Study

User Interfaces

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WEB USER INTERFACE

The web user interface designed is a prototype containing generic information about cinemas and films. The whole description of the web site is detailed below.

The main objective of this user interface is facilitating the way in which users find movies, cinemas and information regarding them; in order to do this, we provided a web site divided in 4 sections:

- **Home:** in this section recently added movies are displayed, making the user able to easily select between them without performing any search.
- **Film:** in this one all the available movies in data base are listed. We created a dropdown menu in order to refine and filtering the search. The search can be sorted by genre (Action, drama or comedy), by director (director1 or director2) and by cinema (cinema1 or cernema2). The movies are displayed in a grid in which the cover of each one of them is visible. When clicking in a specific movie a new section pop ups with the respective information of the movie selected. In each individual movie, the user is able to posting comments.
- **Cinemas:** in this section a list of all the cinemas in data base is showed via a dropdown menu. The cinemas are listed by their name and when selecting one of them the basic information of it is display. The information showed includes: location (using maps), address, telephone, price of tickets, services and the way to arrive to the cinema.
- **Buy tickets:** the process of buying tickets is divided in 3 steps; in the first step the user selects the film, the cinema, the date, the section, the row, the seat and the number of tickets that she/he wants to buy. In the second one the basic information of the customer is collected and in the third one a summary of the purchase is displayed before performing it.

This web user interface targets to a user that enjoys going to the cinema and does not have time to carry out complicated search, looking for tickets and cinemas. This web site provides an easy way to find the movies that the user wants to watch and where to watch them.

WEB GUI PATTERNS

The following web GUI patterns were taken into account in the design of the final product:

- **Home link:** we considered useful to have permanent link to the home page available for the user, which is also a web design standard nowadays. The link is expected to be easy to detect given that the destination page name "home" is directly shown in order to avoid some confusion that may be produced by using a logo instead.
- **Carrousel:** in the main page the attention is focused in new films, which are most likely promoted given their novelty. A carrousel was used to give all the items the same importance and provide the user with direct access to such elements, as well as a form of navigation (the side arrows) among these selected items.
- **Navigation tabs:** the core design of the web page was done using tab system for the four independent main sections shown in the navigation bar (home page, film catalog, available cinemas and ticket buy). A tab pattern was also used in the "buy tickets" section in order to show the remaining steps and the information provided in each of them (see also "Steps left" pattern). In both cases the selected tab was designed to be visually distinguishable from the inactive ones.
- **Search filters:** since the number of films is expected to be relatively large, filters were implemented according to the product requirements (filter by director, cinema and genre). This pattern allows the user to focus in particular content rather than in an overwhelming amount of items.
- **Lazy registration:** we wanted any user to be able to browse the web page without being registered as a way to access the database independently forms the ticket purchase platform.
- **Account registration:** user information is necessary to perform delicate actions like purchases, hence registration is required. Having a persistent user is also useful to keep track of user actions and minimize user interaction regarding information that can be stored and filled automatically in the purchase process in particular.
- **Steps left:** this pattern provides the user information on the steps needed to fulfill a particular action. Since the ticket purchase is a sensitive task, tabs are shown to inform the user of the remaining steps and allow him or her to review and modify the provided information.

NIELSEN'S HEURISTIC EVALUATION

When trying to find appropriate and effective criteria to determine how good our designed interface, we can observe the ten key points of Nielsen's heuristic evaluation. Taking into account these points and applying them, we can observe the following about the designed and developed webpage:

- **Visibility of system status:** the main and most remarkable element in our webpage's interface is the usage of navigation tabs for the menu. We wanted to keep the user informed in a visible and easy way where exactly he was at each point in time while making use of the site. Not only by providing a title as a reference to where the user is located inside the webpage's structure, but also by providing easy and fast access to each of the main elements of the site.
- **Match between system and the real world:** there has to be a point half-way between what can be considered a design based on natural language and a design in which information is offered in a schematic way in order to provide fast access to it. With this in mind, we have tried to maintain the webpage as intuitive as possible. You can not only guess what kind of information you will access at each section of the webpage, but you can also navigate through the web without getting lost. This is thanks to the fact that we have tried to both provide step-by-step information through the navigation process in the web and the fact that we have tried to provide the information in a way as visually simple as possible. We make use of easy and schematic language and navigation elements widely used on almost every page in the Internet.
- **User control and freedom:** our webpage is mainly focused in two key functions: providing information and providing a service. The user can choose freely without fear of getting lost in the site where he wants to navigate at every moment thanks to the simple design and the easily accessible and visible navigation elements (big links, visible navigation buttons and menus and simple drop-down menus). Also, the user can clearly see in real time the interactions he is making with the webpage and the information he is providing us. This way, he will be able to keep the control at every step in the navigation process, without having to go through unwanted steps if he doesn't want to.
- **Consistency and standards:** our webpage makes use of elements widely used all along the Internet. This way, each and every navigation system will be intuitive, standardized and easy to use. And if the user wants to go further, everything is just a few clicks away.
- **Error prevention:** there is one thing that is true in this exercise, and it is the fact that the webpage being developed is static. This allows us to focus on designing a functional interface. By keeping simplicity as a main goal, all the main usage patterns could be simulated and evaluated. By doing so, bug detection and correction could be achieved in an affordable way.
- **Recognition rather than recall:** at every step through the navigation of the page, we have wanted to let the user know where he exactly is. There are boxes, titles and

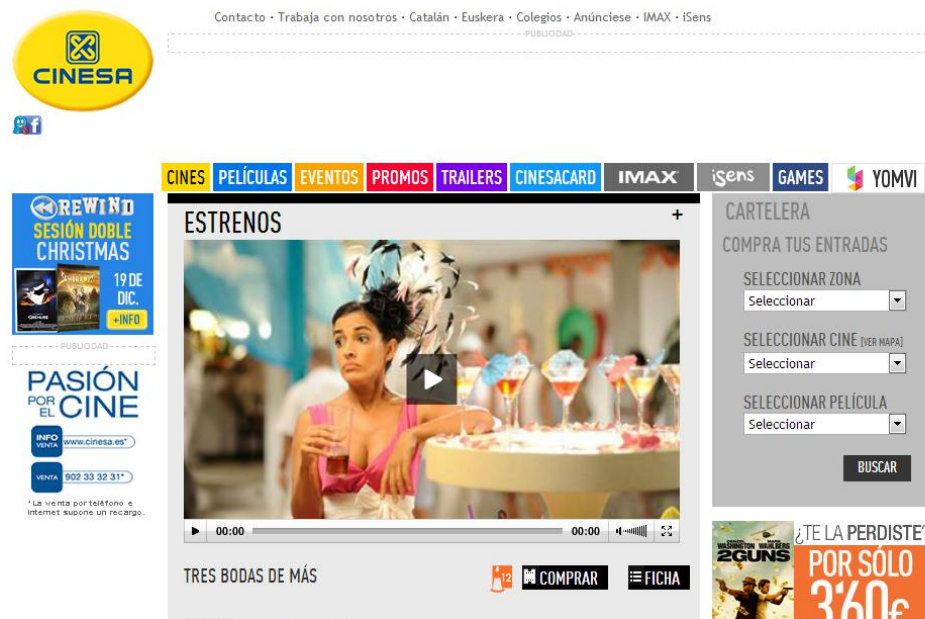
menus that indicate to the user where he is at every moment. And in the most intricate interaction with the site –this is, the form, which requires a lot of information to be given by the user-, we have decided to provide a brief summary of all the key data that the user has to re-check at every moment to be sure that the interaction with the service provided by the site is appropriate and efficient.

- **Flexibility and efficiency of use:** again, the simplicity with which we tried to design the interface of the webpage allowed us to develop usage patterns in which everything is only a few clicks away. There is no need to bypass almost any of the usage patterns because they simply cannot be faster or easier. Maybe the integration of some database-powered functionalities (search engines, queries...) could help in the optimization in this aspect even more.
- **Aesthetic and minimalist design:** simplicity. We have tried to develop at every moment a site that is functional but that doesn't forget about one key and simple point: beauty. And thanks to the simple interface and the even simpler color and form schemes we have tried to develop a minimalistic yet uniform interface for our website.
- **Help users recognize, diagnose, and recover from errors:** in this case, it is true that little could be done in this aspect, as the implementation of these systems require generally of a dynamic system. However, we have tried to develop an error-free application to compensate.
- **Help and documentation:** through labels, titles, menus and easily noticeable text elements in general, we have tried to provide the user with an application through he could be able to navigate. The webpage helps the user at every moment by saying where he is at every point in time, with a natural, simple, visual and schematic interface.

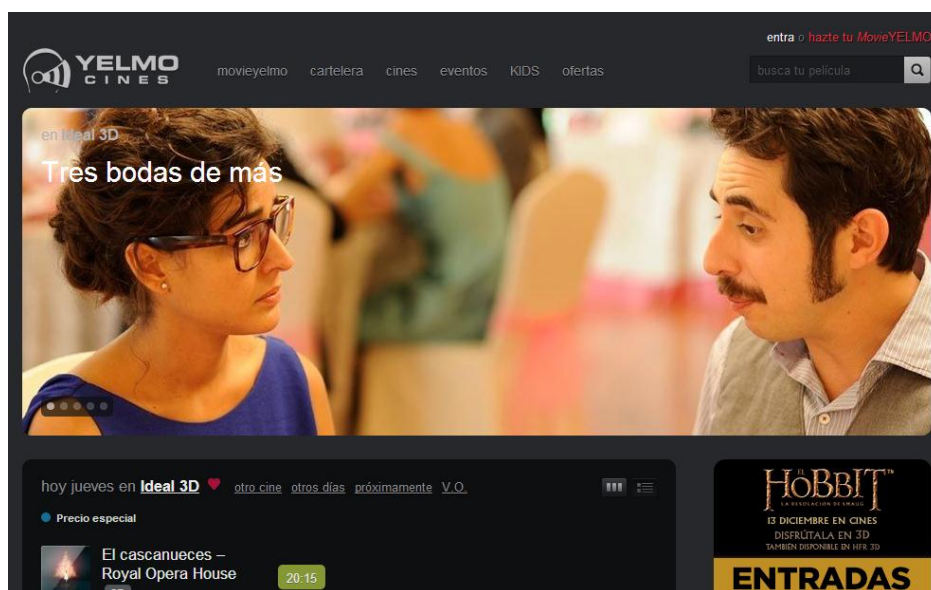
GOOD AND BAD DESIGN PRACTICES

When surfing internet in order to get ideas for our website we found example of good and bad design:

A bad design home page can be <http://www.cinesa.es/>



Our first impression was that it was saturated with too many images and full of advertising making it confusing at the first sight. We can compare it with <http://www.yelmocines.es/> which is a clearer web site in which the monochromatic environment makes it easier to read.



A common bad design that we found is that the information was hidden or was too difficult to reach in some cases, making the user to get lost during the navigation.

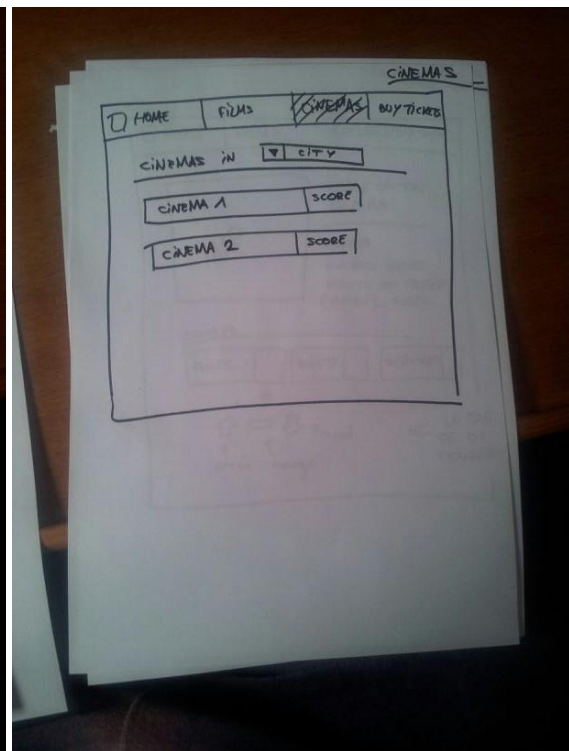
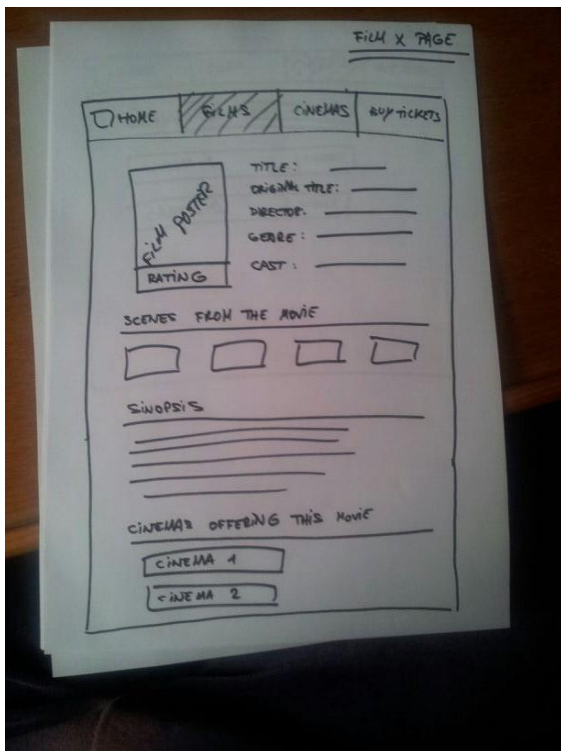
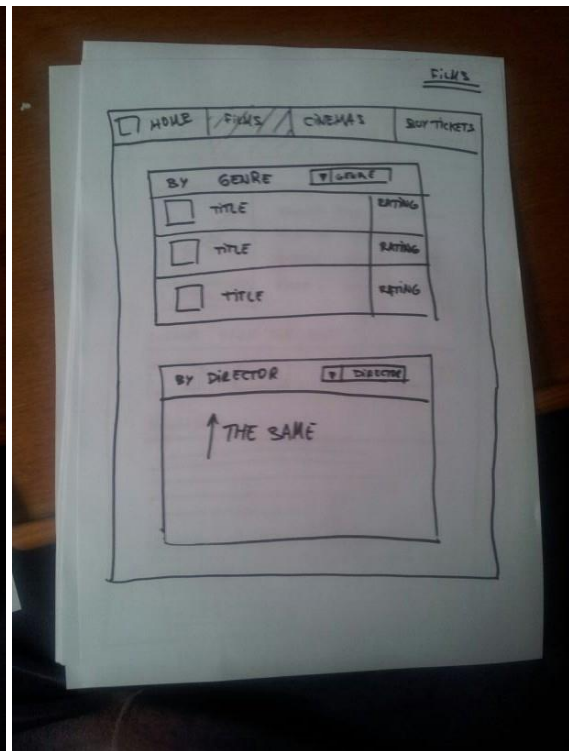
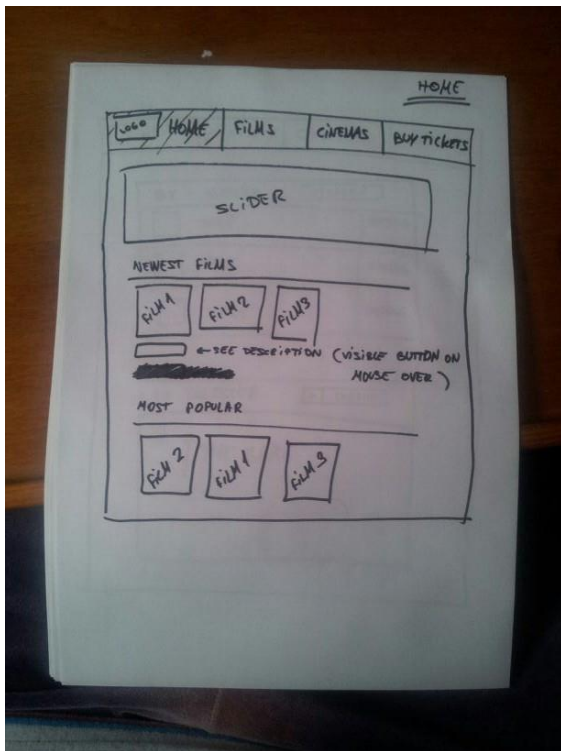
DOCUMENTATION OF THE SOURCE CODE

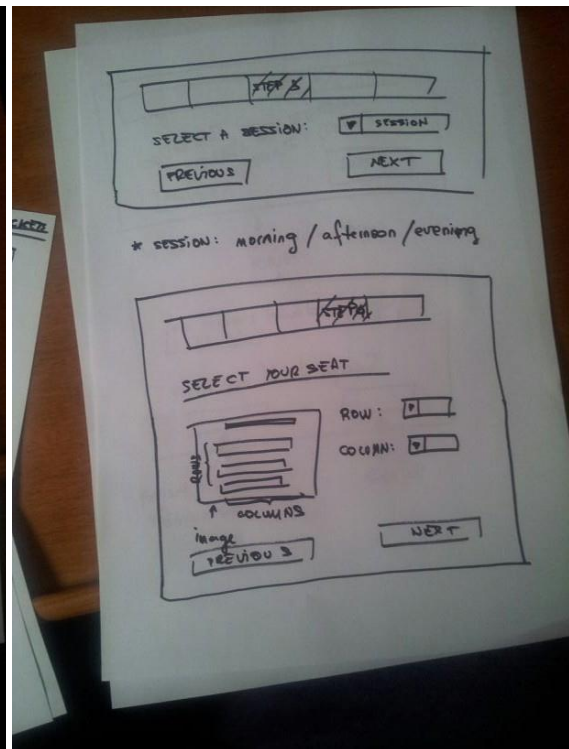
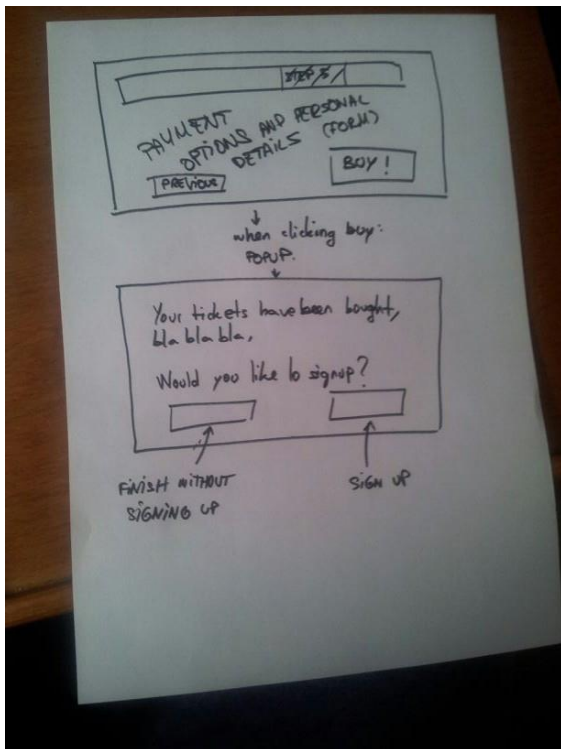
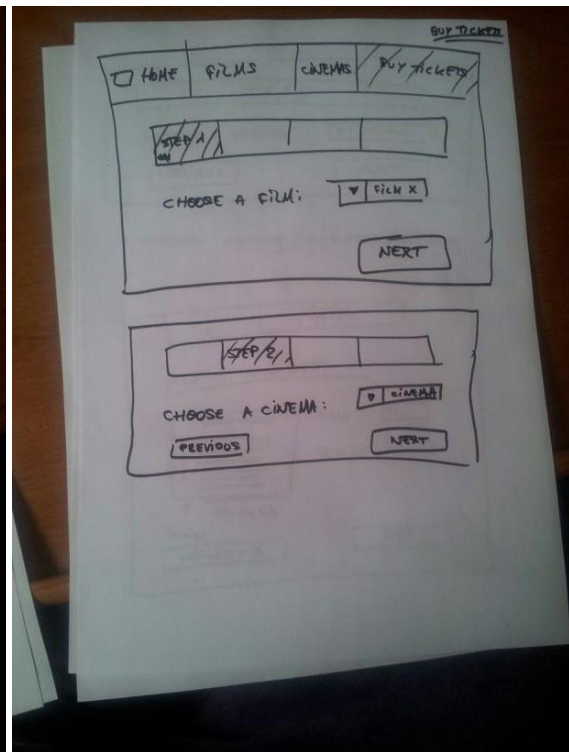
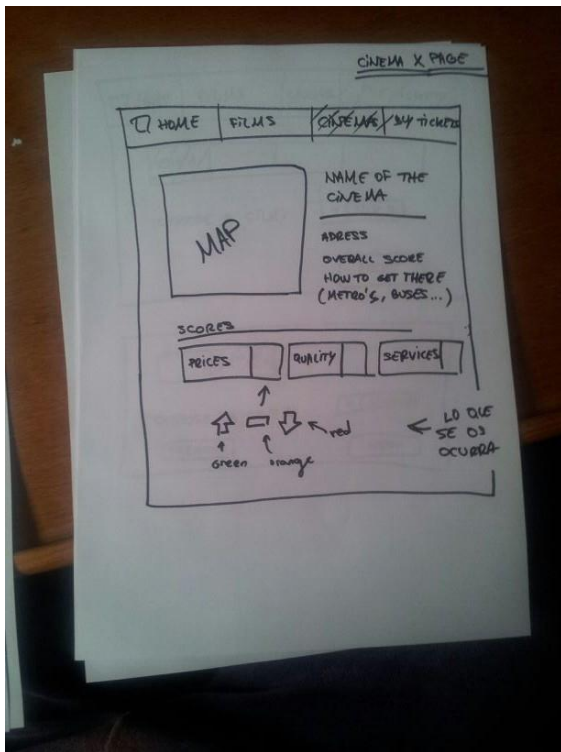
The main html files are:

- *Home.html*
- *Film.html* in which all the other files containing the film name are auxiliary views in order to simulate a dynamic web page.
- *Cinemas.html* in this case also all the files containing the cinema name are auxiliary.
- *BuyTickets.html*

The folder style contains all the css code used in the html, the folder script contains all the java script code used and the folder images all the multimedia content used. All other folders are support for jquery plugins.

LOW-LEVEL PROTOTYPE





References

- <http://ui-patterns.com/patterns/HomeLink>
- <http://ui-patterns.com/patterns/Carousel>
- <http://ui-patterns.com/patterns/NavigationTabs>
- <http://ui-patterns.com/patterns/LiveFilter>
- <http://ui-patterns.com/patterns/LazyRegistration>
- <http://ui-patterns.com/patterns/AccountRegistration>
- <http://ui-patterns.com/patterns/StepsLeft>