

Software Engineering

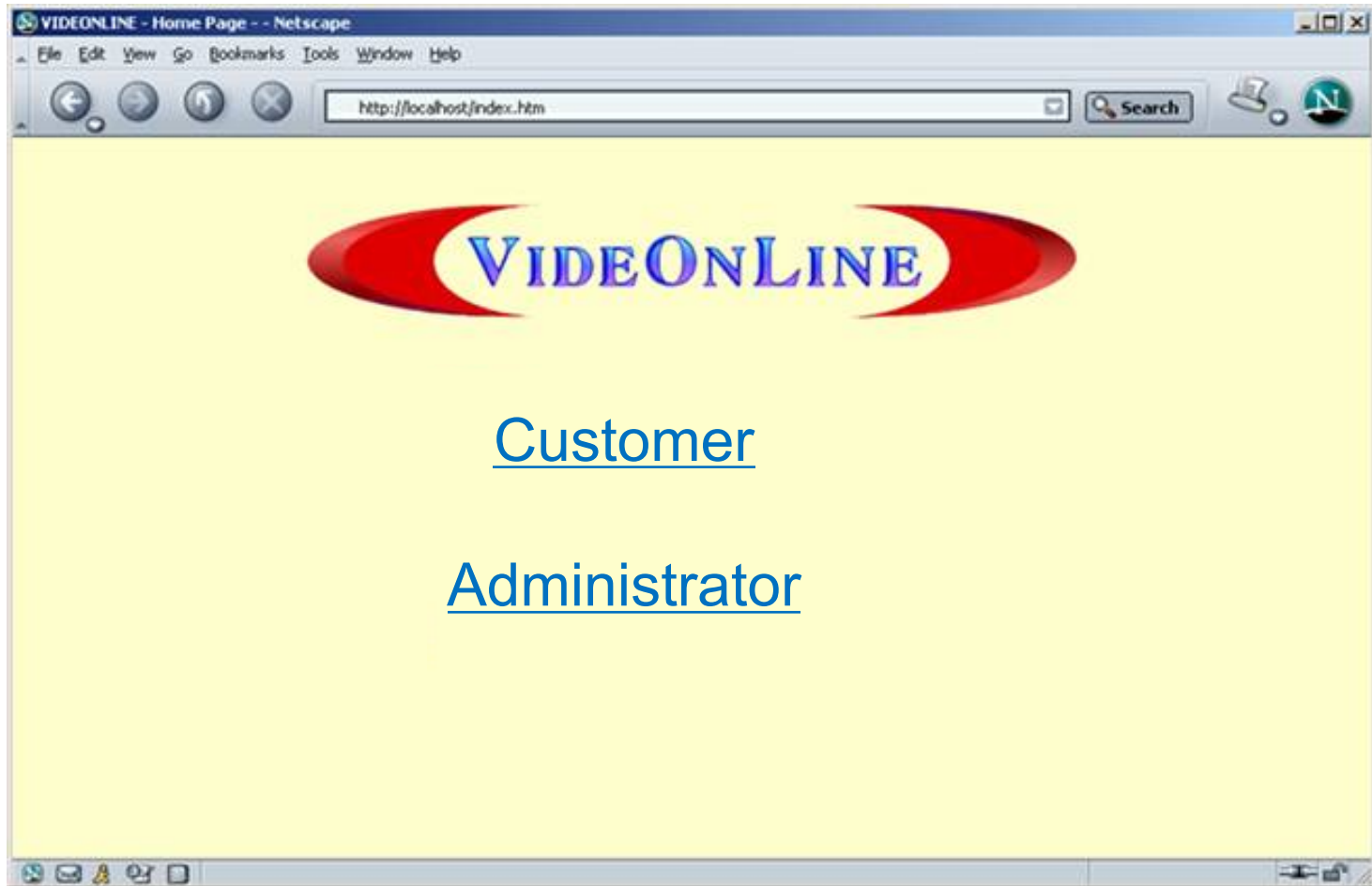
Video on line

Requirements

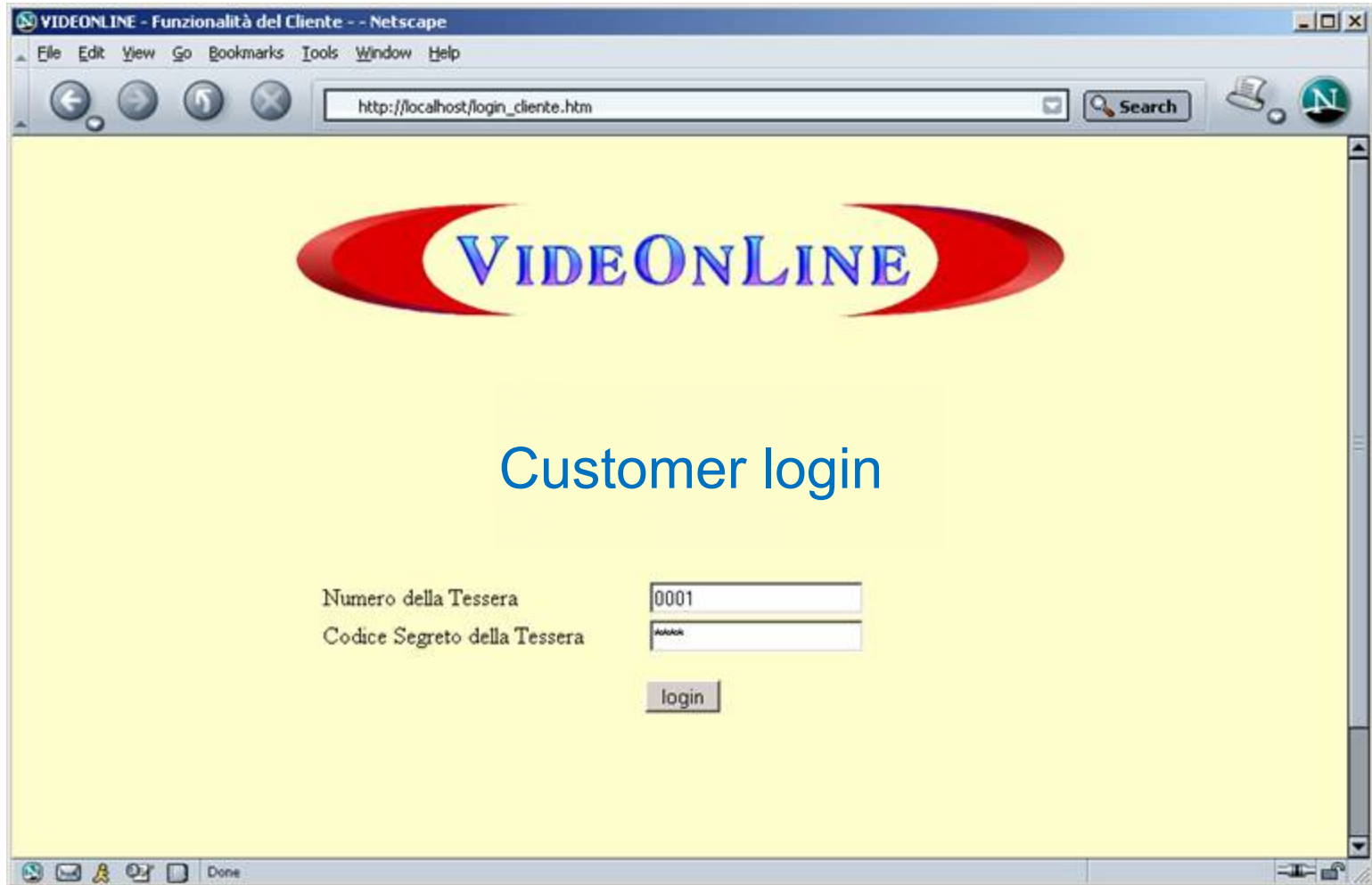
- The company VIDEONLINE wants to buy a Web application to manage the rental of its movie media (VHS , DVD, Blue ray, Violet ray...)
- The rental of products is allowed only to registered users that are provided with a prepaid magnetic card
- For each rented media the magnetic card value it is reduced by the amount corresponding to a hourly rate
- The system allow the customer to make reservations of media on the Web through authentication with ID and password and to collect the media within 45 minutes

Prototype

Home page



Login utente



The screenshot shows a Netscape browser window titled "VIDEONLINE - Funzionalità del Cliente - - Netscape". The address bar displays "http://localhost/login_cliente.htm". The page has a yellow background and features the "VIDEONLINE" logo at the top. Below the logo, the text "Customer login" is displayed. The login form consists of two input fields: "Numero della Tessera" with the value "0001" and "Codice Segreto della Tessera" with the value "XXXX". A "login" button is positioned below the second field. The browser's status bar at the bottom shows "Done".

VIDEONLINE

Customer login

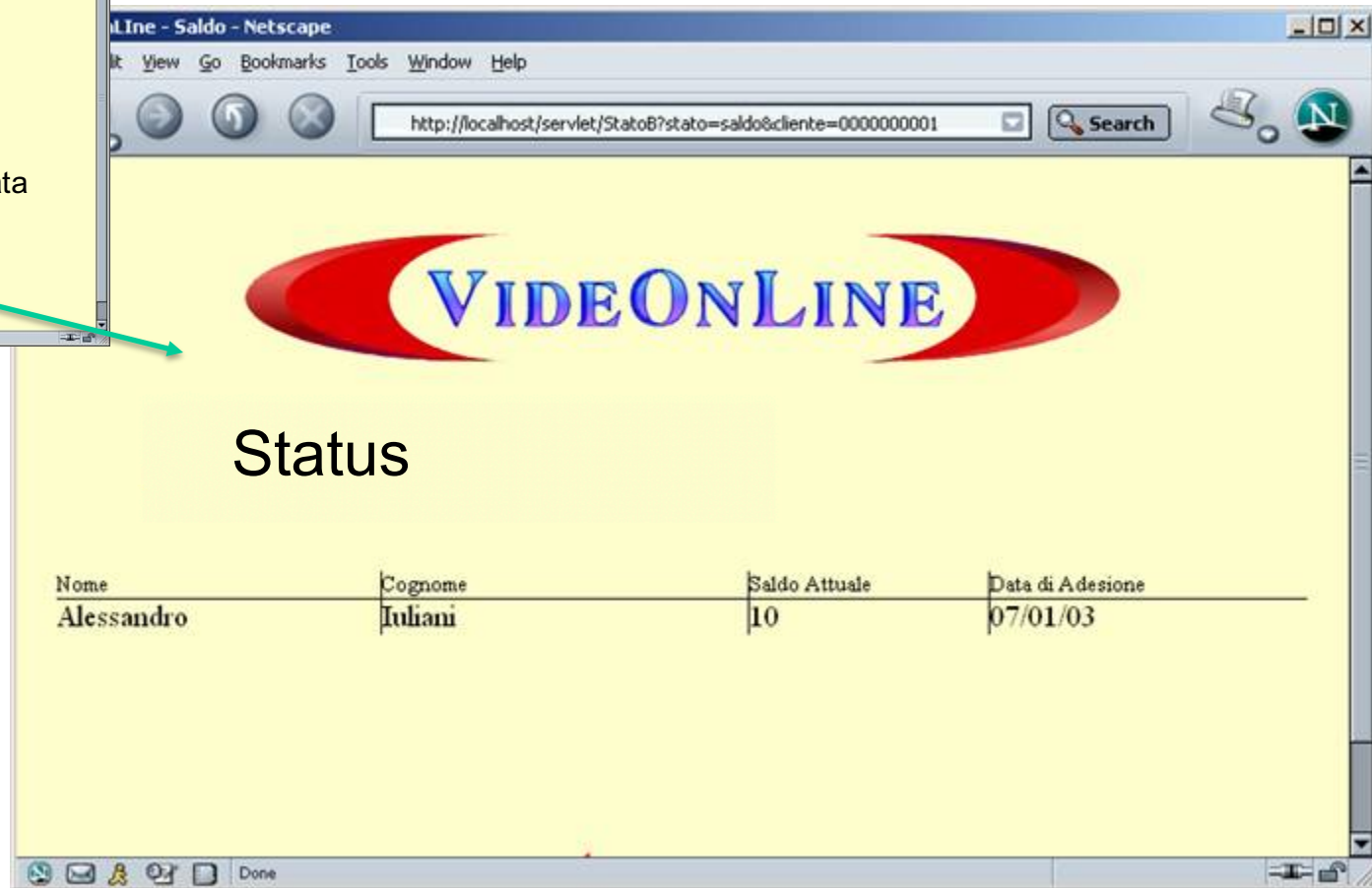
Numero della Tessera

Codice Segreto della Tessera

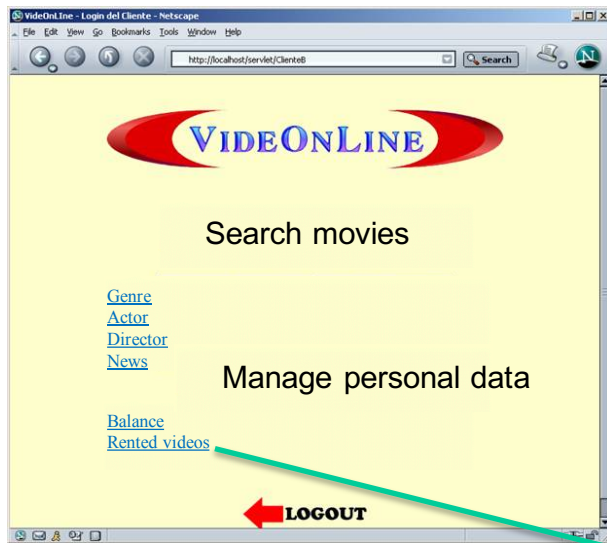
Customer functionalities



Customer status



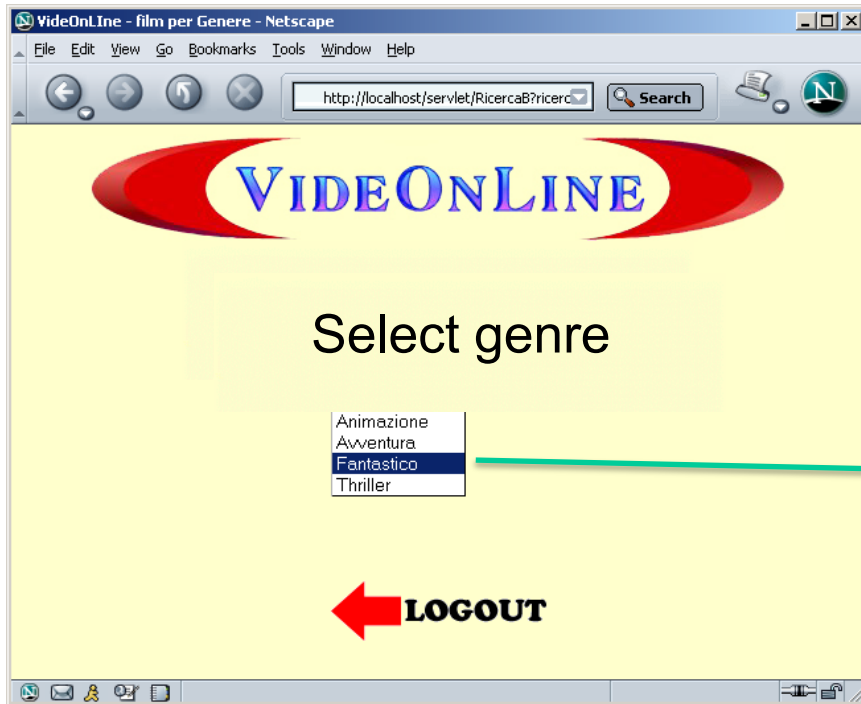
Rented media



Search for genre, actor, or director



Search from genre, actor, or director



News

The image shows two overlapping browser windows from the Netscape era. The background window, titled 'VideOnLine - Film attualmente noleggiati - Netscape', displays the main interface with the 'VIDEONLINE' logo and a search bar. Below the logo, there are links for 'Genre', 'Actor', 'Director', 'News', 'Balance', and 'Rented videos'. A red arrow points from the 'News' link to a smaller, foreground window. This foreground window, titled 'VideOnLine - Login del Cliente - Netscape', shows a 'Search movies' input field and a 'Manage personal data' link. A red arrow points from this link back to the main window. The main window also features a table of movies with columns for Genre, Director, and Title. A red arrow points from the 'Logout' button in the foreground window to the 'Logout' button in the main window.

VIDEONLINE

Search movies

[Genre](#)
[Actor](#)
[Director](#)
[News](#)
[Balance](#)
[Rented videos](#)

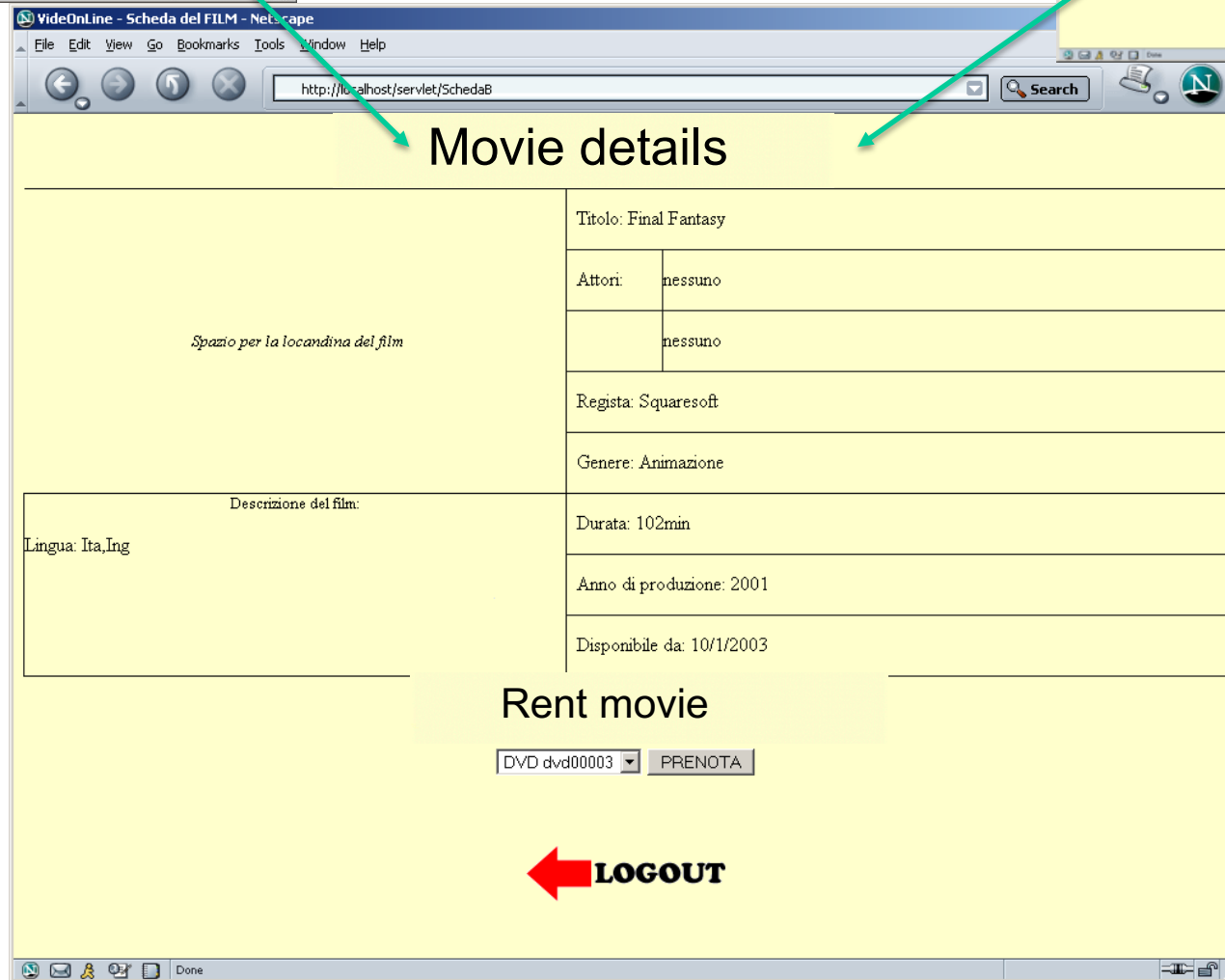
Manage personal data

LOGOUT

Genre	Director	Title
Commedia	Woody Allen	Io e Annie
Commedia	Mel Brooks	L'ultima follia di Mel Brooks

LOGOUT

Movie details



Booking

Movie details

Spazio per la locandina del film	Titolo: Final Fantasy
	Attori: nessuno
	nessuno
	Regista: Square:ff
	Genere: Animazione
Descrizione del film:	Durata: 102min
Language: Ita_Ita	Anno di produzione: 2001
	Disponibile da: 10/1/2003

Rent movie

DVD dvd00003 PRENOTA

← LOGOUT

Netscape

Tools Window Help

http://localhost/servlet/PrenotazioneB

Search

VIDEONLINE

The video has been reserved

You have 45 minutes to get it

← LOGOUT

Done

Admin login



The screenshot shows a Netscape browser window with the title "VIDEONLINE - Funzionalità del Gestore -- Netscape". The address bar displays "http://localhost/login_gestore.htm". The main content area has an orange background and features the "VIDEONLINE" logo in blue text with a red swoosh. Below the logo, the text "Administrator login" is centered. There are two input fields: "Id" with the value "0001" and "Password" with masked characters "xoxoxox". A "login" button is positioned below the password field. The browser's status bar at the bottom shows "Done" and various icons.

VIDEONLINE - Funzionalità del Gestore -- Netscape

File Edit View Go Bookmarks Tools Window Help

http://localhost/login_gestore.htm Search

VIDEONLINE

Administrator login

Id

Password

login

Done

Administrator functionalities

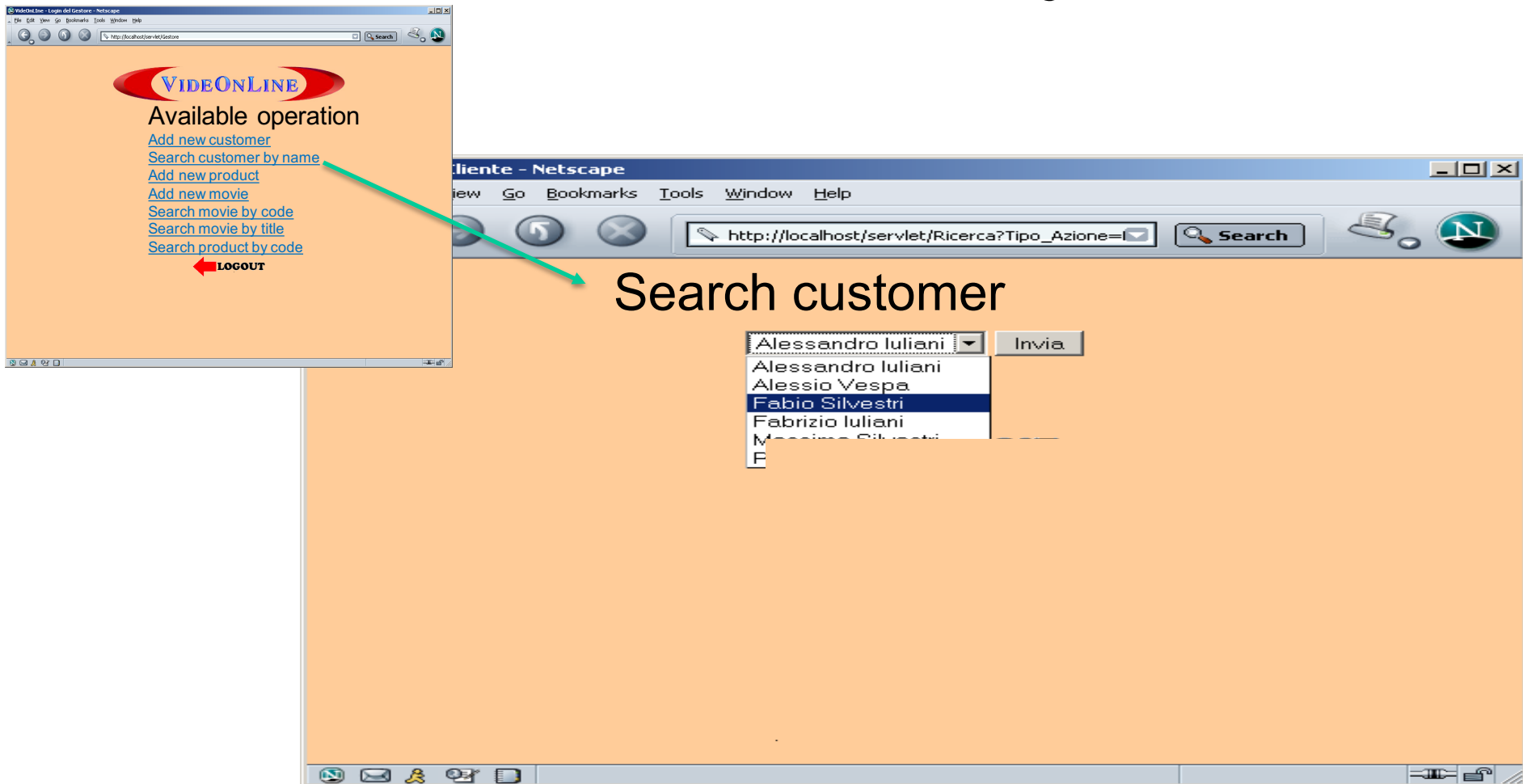


Add new customer



A screenshot of a Netscape browser window titled "Scheda Cliente - Netscape". The address bar shows "http://localhost/servlet/Ricerca?Tipo_Azione=". The page has an orange background and displays the title "Customer details" in large black font. Below the title is a button labeled "Inserisci". The form contains two columns of input fields. The left column includes: "Id_Contratto:" with a text box containing "0000000007", "Nome Cliente:", "Data di Nascita:", "Telefono:", "Documento:", "CAP:", and "Codice segreto:". The right column includes: "Cognome Cliente:", "Indirizzo:", "Data adesione:", "Citta:", "Numero Tessera:", and "Credito:". A red arrow points from the "Add new customer" link in the previous screenshot to the "Inserisci" button. At the bottom of the page, there is a red arrow pointing left and the word "LOGOUT" in bold.

Search customer by name



FP

2 ILF

Film

- Code
 - Title
 - Director
 - Actors
 - Year
 - Duration
 - Description
 - Genre
 - Image
-
- Registration date (for each media)
 - Type
 - Number of items

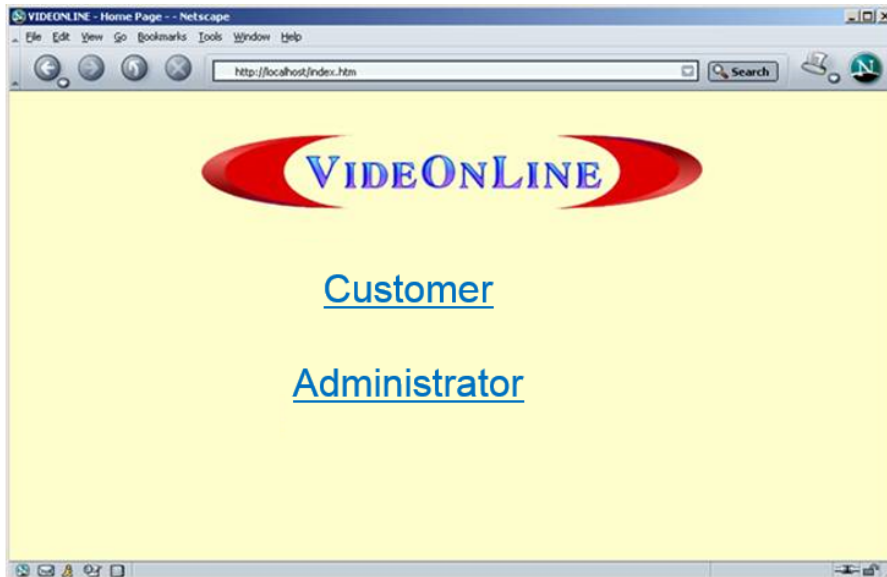
12 DET 2 RET: ILF (low)

Customer

- Name
 - Surname
 - Birth date
 - Address
 - Phone
 - City
 - Zip code
 - ID document
-
- Contract number
 - Registration date
 - Card #
 - Code
 - Balance
 - Rented media
 - Booked media

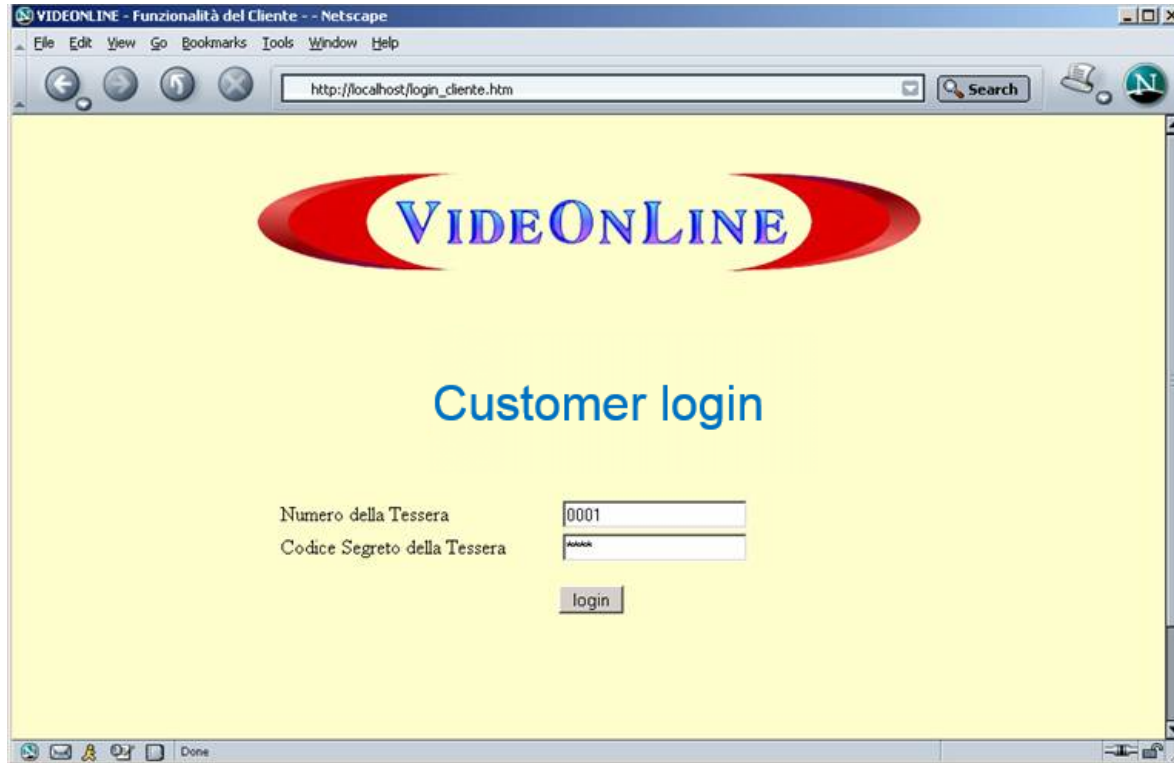
15 DET 2 RET: ILF (low)

Home screen



- 2 navigation links
- No exchanged data between user and system
- 0 FP

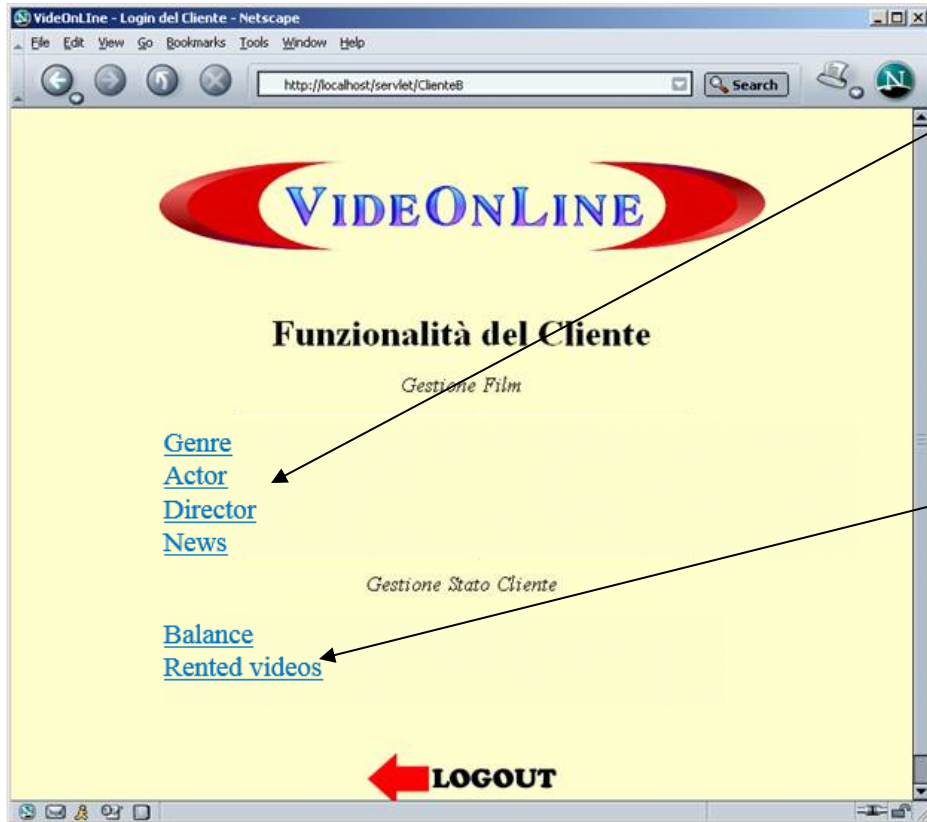
+ 1 EI: Customer login



The screenshot shows a Netscape browser window titled "VIDEONLINE - Funzionalità del Cliente". The address bar displays "http://localhost/login_cliente.htm". The page has a yellow background and features the "VIDEONLINE" logo at the top. Below the logo, the text "Customer login" is displayed. There are two input fields: "Numero della Tessera" with the value "0001" and "Codice Segreto della Tessera" with the value "XXXX". A "login" button is located below the input fields. The browser's status bar at the bottom shows "Done".

- User input with primary goal of sending control information
- 1 FTR (customer)
- 2 Det
- 1 EI₁ (low)

+6 EQ: customer functionalities



- 4 links that correspond to 4 EQ with the primary goal of showing data (list of genres, list of actors, list of directors, news) on which start a new query
- 2 links that start 2 EQ with the primary goal of showing data
- 4 EQ_{1,2,3,4} (low: 1 FTR (film) 1 det)
- 2 EQ_{5,6} (low: 2 FTR (customer, film) 1,4 det)

EQ : 1) does not compute new data 2) does not update ILF
3) does not alter the status of the system

+3 EQ: Search for $X=\{\text{genre, actor, director}\}$

(Input side)

1 FTR (film)

1 DET (X)

(Output side)

1 FTR (film)

3 DET : X, director, title



3 EQ_{7,8,9} low

+ 1 EQ: Movie details


- EQ (shared by EQ_{7..9}, so it must be considered only once)
- 9 DET
 - 1 input : title
 - 9 output
- 1 FTR (film)
- 1 EQ₁₀ (low)

The screenshot shows a Netscape browser window titled 'VideOnline - Scheda del FILM'. The address bar shows 'http://localhost:8080/scheda8'. The page content is titled 'Scheda Del Film' and displays details for the movie 'Final Fantasy'. The details are organized into a table-like structure with a large placeholder for a poster on the left and a list of attributes on the right. Below the details is a 'Prenota il film' section with a dropdown menu set to 'DVD dvd00003' and a 'PRENOTA' button. At the bottom, there is a red arrow pointing left and the text 'LOGOUT'.

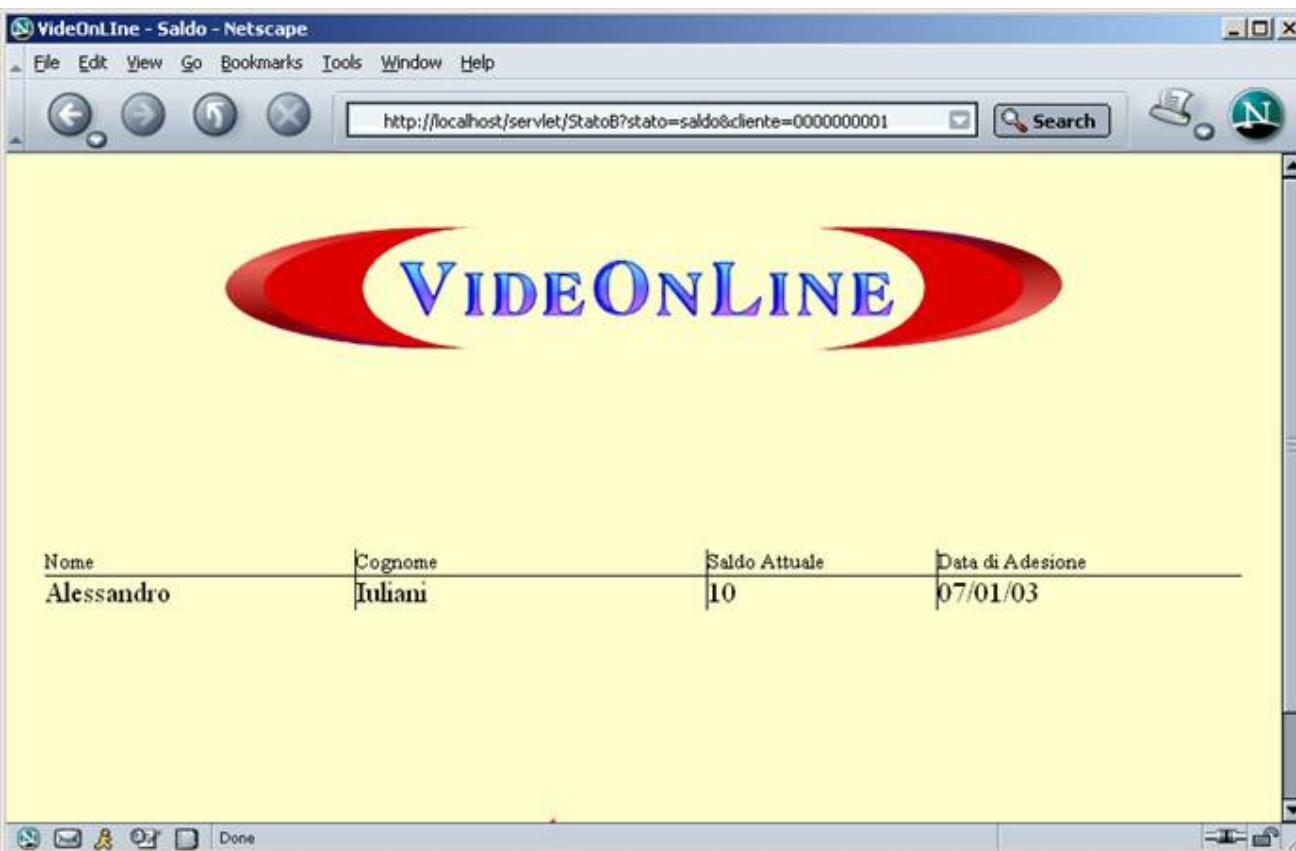
Scheda Del Film	
<i>Spazio per la locandina del film</i>	Titolo: Final Fantasy
	Attori: nessuno
	Regista: Squaresoft
	Genere: Animazione
Descrizione del film: Lingua: Ita, Ing	Durata: 102min
	Anno di produzione: 2001
	Disponibile da: 10/1/2003

Prenota il film

DVD dvd00003

 **LOGOUT**

+ 1 EQ Balance



VideOnline - Saldo - Netscape

File Edit View Go Bookmarks Tools Window Help

http://localhost/servlet/StatoB?stato=saldo&cliente=0000000001 Search

VIDEONLINE

Nome	Cognome	Saldo Attuale	Data di Adesione
Alessandro	Iuliani	10	07/01/03

Done

- 1 FTR (customer)
- 4 DET
- 1 EQ₁₁ (low)

+ 1 EQ Rented movies



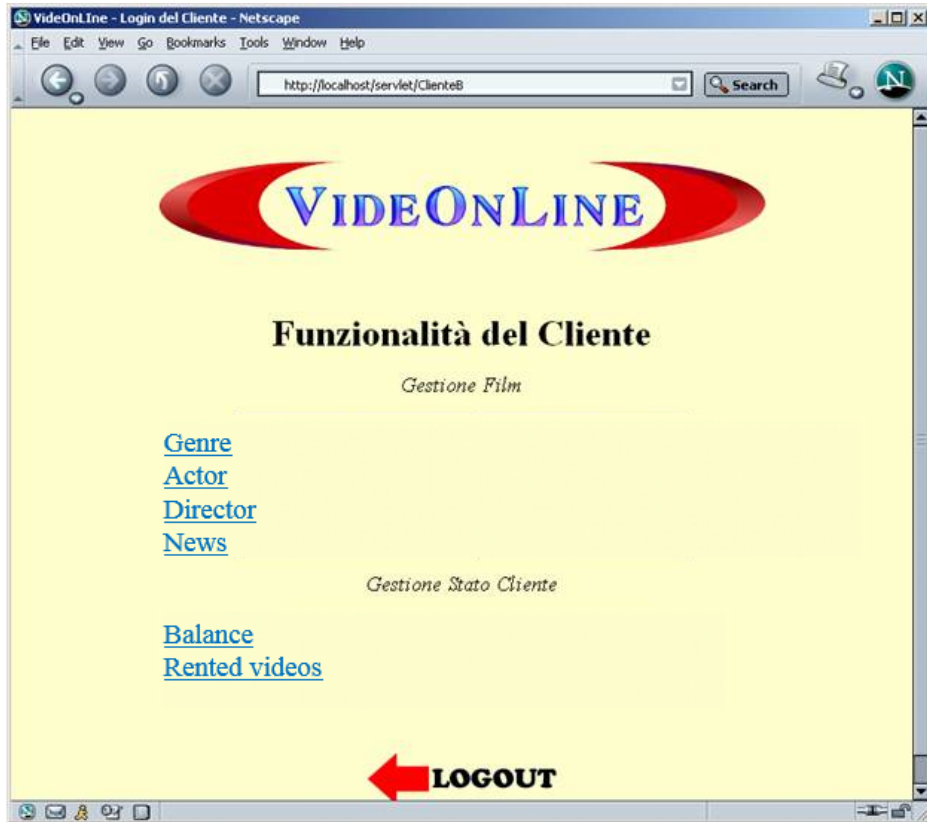
- 2 FTR (customer+ film)
- 4 DET
- 1 EQ₁₂ low

+ 1 EI Booking



- EI with the main goal of updating 2 ILF (customer and film)
- 1 DET(media)
- 2 FTR (film and customer)
- EI₂ low

Tot customer functionalities



- 6 EQ from the main page
- 3 EQ (genre, actor, director)
- 1 shared EQ for movie details
- 1 EQ balance
- 1 EQ rented movies
- 1 EI for booking
- 1 EI login

El: Administrator login



- User input with primary goal of sending control information
- 0 ILF
 - Id and password wired in the code...
- 2 Det
- 1 El_3 (low)

Administrator functionalities

- 3 Navigation links that trigger 3 $EI_{4,5,6,7}$

- No exchanged data

- 0 FP



- 4 Navigation links that corresponds to 4 EQ

$EQ_{13,14,15,16}$ low:
1FTR 1det

El: Add customer



The screenshot shows a Netscape browser window titled 'Scheda Cliente - Netscape'. The address bar displays 'http://localhost/servlet/Ricerca?Tipo_Azione=...'. The main content area has an orange background and is titled 'Scheda Cliente'. Below the title is an 'Inserisci' button. The form contains two columns of input fields: 'Id_Contratto' (pre-filled with '0000000007'), 'Nome Cliente', 'Data di Nascita', 'Telefono', 'Documento', 'CAP', 'Codice segreto' in the left column; and 'Cognome Cliente', 'Indirizzo', 'Data adesione', 'Citta', 'Numero Tessera', 'Credito' in the right column. At the bottom, there is a red arrow pointing left and the text 'LOGOUT'.

- 1 FTR (cliente)
- 13 DET
- 1 El₄ (low)

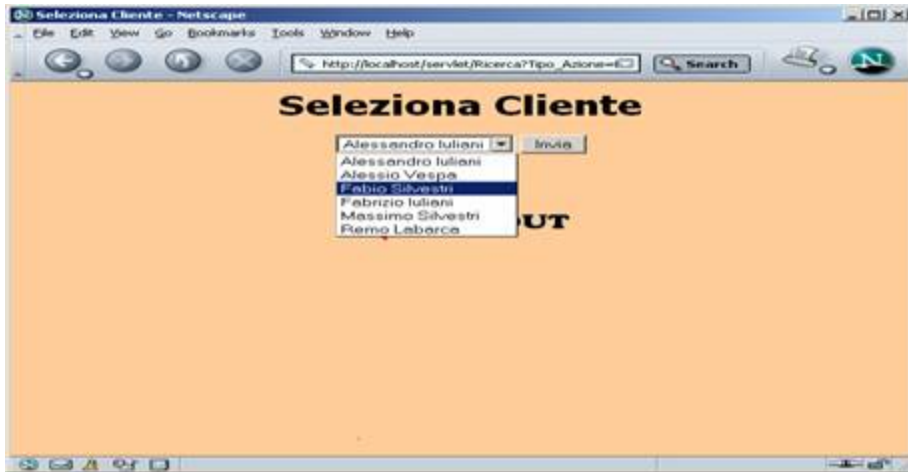
El: Add movie

- Not shown in the mock-up
- 1 FTR (film)
- 8 DET
- 1 El_5 (low)

El: Add media

- Not shown in the mock-up
- 1 FTR (film)
- 4 DET
- 1 El₆ (low)

EQ : Search customer by name



- 1 DET
- 1 FTR (customer)
- 1 EQ₁₃ (low)

2 EQ: Search movie by code or title

- Not shown in the mock-up
- 1 FTR (film)
- 1 DET
- 2 EQ_{14,15} (low)

EQ: Search media (by code)

- Not shown in the mock-up
- 1 FTR (film)
- 1 DET
- 1 EQ₁₆ (low)


EQ₁₀: Movie details

- Already computed

The screenshot shows a Netscape browser window titled "VideOnline - Scheda del FILM". The address bar shows "http://localhost:server/Scheda1". The page content is titled "Scheda Del Film" and displays details for the movie "Final Fantasy".

Spazio per la locandina del film	Titolo: Final Fantasy	
	Attori:	nessuno
		nessuno
	Regista: Squaresoft	
Descrizione del film: Lingua: Ita, Ing	Genere: Animazione	
	Durata: 102min	
	Anno di produzione: 2001	
	Disponibile da: 10/1/2003	

Prenota il film

 **LOGOUT**

The bill

- 2 ILF (low) 14
- 6 EI (low) 18
- 16 EQ (low) 48

80 UFP