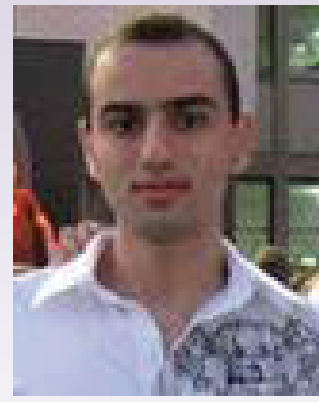




Software Engineering Program Cinema World

Domain: Web Services

Student: Daniel Kashi

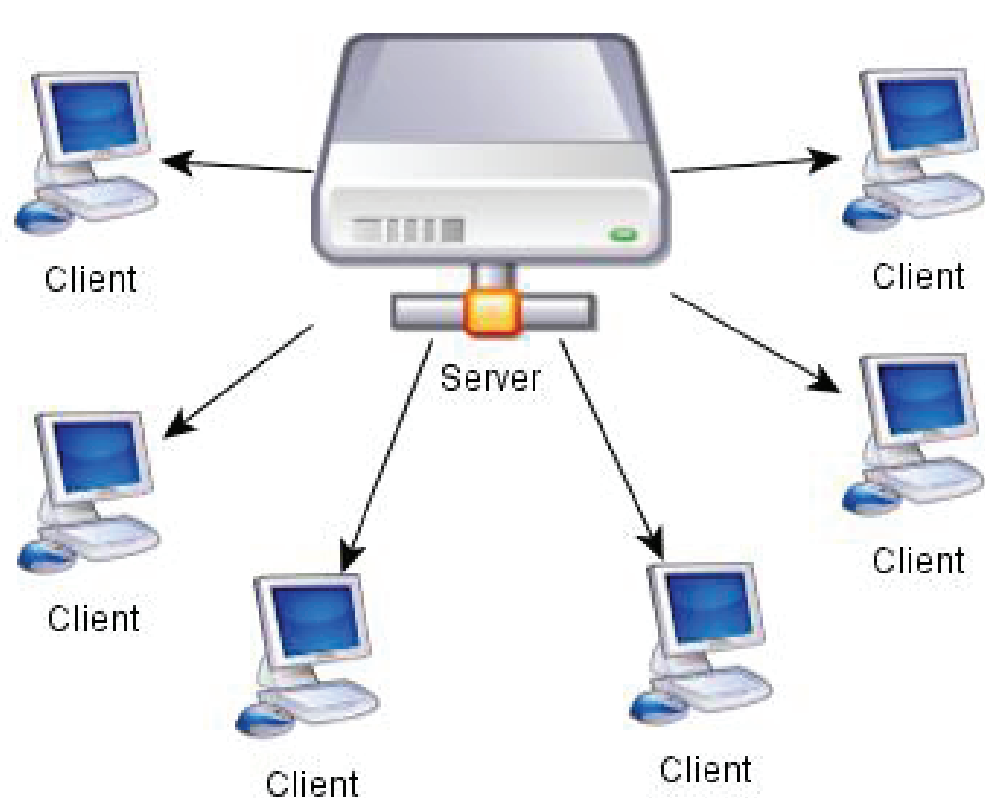
Ohel - Shem, Ramat-Gan

Teacher and mentor: Zur Bargury Iris

The Problem

CLIENT-SERVER INTERACTION

The main problem is the combination between the server-side concept, on which most of the application is based, in order to be able to use the server located database, and the required client-side functionality of choosing seats. The application should enable user to quickly set or unset the desired seats, without going every time to the server.

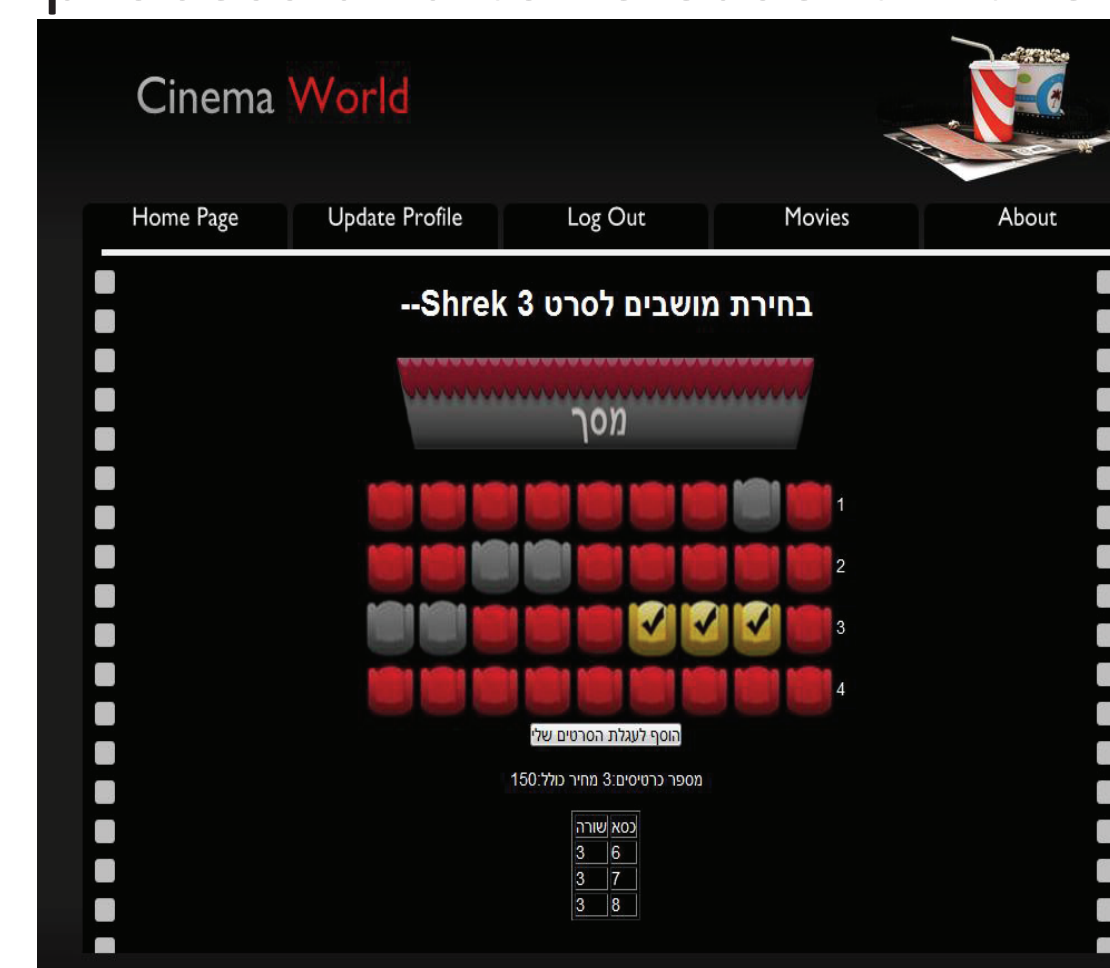


ASYNCHRONOUS MODE

During this client-side process it is possible that another user already have occupied the seat, so the cinema map becomes irrelevant, and we have to be able to notify the user about this change, and give him an opportunity to re-choose the seat.

Challenges

My main challenge was to find a way to represent the chairs in the cinema and to indicate whether each seat is occupied or vacant in each specific screening. As in other cinema sites I needed to mark chair as occupied while the reservation is in process and to release it if the reservation is canceled.

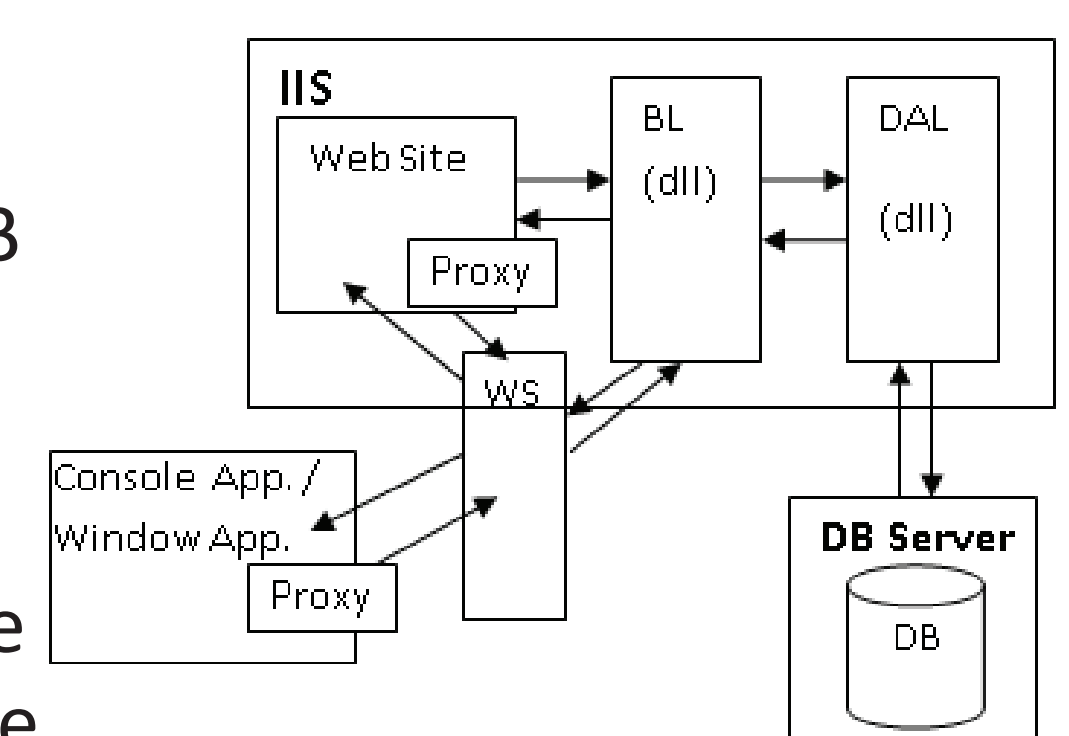


At first I kept the customer cart in a session, but since this solution has allowed other customers to book seats that are already booked, their order was not completed, I decided to use the connected approach and to update the DB in each act.

Modules

My project was build based on five layers:

(1) Database layer: The App. DB is stored on a DB Server
(2) Data Access Layer (DAL): A dll project that connects the App. To the Database. These are the only classes approaching the DB.



(3) Business Logic Layer (BLL): Takes the data provided by the DAL and manipulate it.
(4) Client: All kinds of client (Web \ Window \ Console) derives its information from the BLL.
(5) Web Service: Clients can ask for information that is providing by another application via web services.

Insights

Working on this computer science project I learned a lot about my capabilities, about the need to get help from the teacher and the ability to solve problems by myself.

Bibliography

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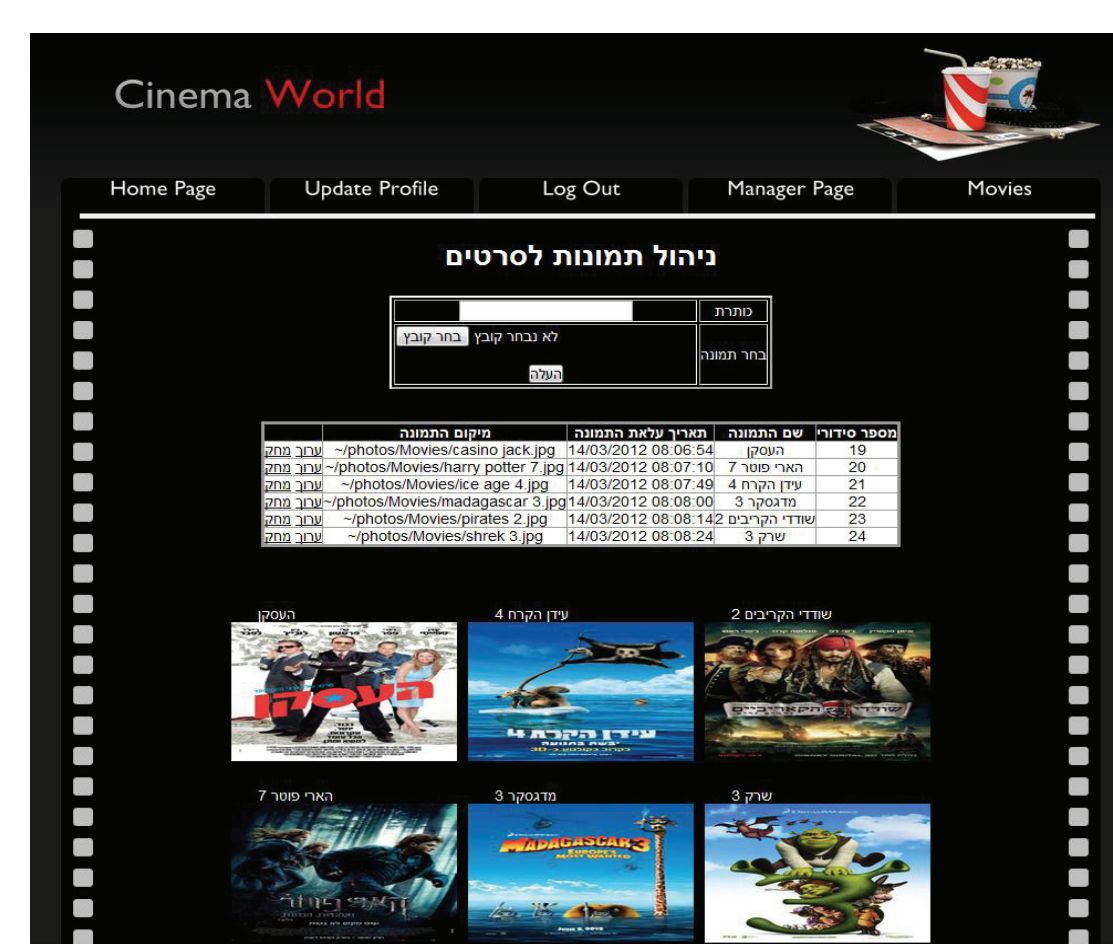
Methods and Solution

1. Server-accessible hidden field

```
<asp:HiddenField ID=" hiddenOrdere  
dSeats " runat = "server" />
```

2. ASPX – JavaScript manipulates the user choices and stores them locally – in the hidden field

3. ASPX.CS – C# retrieves the choice from the hidden field and submits it to the database DBFunctions.OrderSeats (hiddenOrderSeats.Value);



```
var map = "";  
for ( var i = 0;  
i < <%= rows %>; i++) {  
for (var j = 0;  
j < <%= columns %>; j++) {  
var img = document.  
getElementById('seat_'+i+'_'+j);  
if(img.src.indexOf  
('SelectedSeat.png')>-1)  
map += i + " " + j + " " + "<br>";  
}
```