Movie-Search Website Application

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Motivation and Goals

- Our **main motivation** to choose this project was to build something that would help us learning **middleware technologies** and **distributed computing** concepts. Accordingly, we focused on a particular domain that we are all familiar with: Web applications.

- Owing to this, our **goal** was to develop a **Web application** for searching movies given a title and quickly retrieving a list of movie results including important information related to them. Additionally, for each movie we have added information regarding the book on which the movie might be based (or a book which is closely related to).

- Besides, we believed that this topic was **effective** and **feasible** to be implemented in the given period of time and, at the same time, closely connected with middleware. In the end, this was indeed true.

Related Work

- E-commerce 101: A Guide to Successful Selling on the Web
http://www.findwhitepapers.com/content29321#sthash.vbGEKwG9.dpuf

- SOAP Web Service: http://www.w3.org/TR/soap/

- SOA: Service-Oriented Computing: State of the Art and Research Challenges
http://www.msit2005.mut.ac.th/msit_media/1_2555/NETE4631/Materials/20120619144835tU.pdf

- Towards Testing Future Web Applications : http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6006859

System Design Specifics

- We have developed a **Web application** consisting of a front-end and a back-end (pictures are shown in the next two slides).

  - The **front-end** is a web page built using HTML and CSS Material Design. The most relevant parts of it are a search box for the title of the movie and a search button to allow the user input their query.

  - The **back-end** uses JavaScript with JQuery along with Ajax in order to make the required calls for the movie and book databases and retrieve the results, which are parsed and displayed on the web page at the end.

- The **databases** we have used are those of *Rotten Tomatoes* for the movies and *Google Books* for the books. On account of this, we have studied their APIs to learn how to obtain and process their data.

Movie Title

Harry Potter

SEARCH 🔍

RESULTS

Harry Potter and the Deathly Hallows - Part 2 (2011)
Harry Potter and the Deathly Hallows - Part 2, is the final adventure in the Harry Potter film series. The much-anticipated motion picture event is the second of two full-length parts. In the epic finale, the battle between the good and evil forces of the wizarding world escalates into an all-out war. The stakes have never been higher and no one is safe. But it is Harry Potter who may be called upon to make the ultimate sacrifice as he draws closer to the climactic showdown with Lord Voldemort. It all ends here. – (C) Warner Bros

This movie could be based (or has a connection with) this book: **Harry Potter and the Deathly Hallows** (2013) by J. K. Rowling

Harry Potter and the Goblet of Fire (2005)

This movie could be based (or has a connection with) this book: **Harry Potter and the Goblet of Fire** (2013-08-27) by J. K. Rowling, Mary GrandPré

Harry Potter and the Order of the Phoenix (2007)

This movie could be based (or has a connection with) this book: **Harry Potter and the Order of the Phoenix** (2013) by J. K. Rowling

Harry Potter and the Half-Blood Prince (2009)

This movie could be based (or has a connection with) this book: **Harry Potter and the Half-Blood Prince** (2013-08-27) by J. K. Rowling, Mary GrandPré

Testing and Evaluation Plan

- The **evaluation** is done by inputting a set of movie titles, one at a time, in the search box of the web page, then clicking on the search button and checking the accuracy of the results as well as the time to get those results.
- Such movie titles are aimed at checking different possibly conflicting situations: movies based on books split in several parts, movies not based on books, etc.
- The result of a query is said to be **successful** if:
  1. All the movies retrieved contain the input title.
  2. The book provided for each movie (if any) is indeed connected with that movie (either the movie is based on the book, or the book is related to the movie by any other means). Similarly, if no book is provided is because the movie is not based on/related to any books.
  3. The results are retrieved in a reasonable time.

Results

- Following the aforementioned testing plan, we obtained the following **results**:
  1. The retrieval of movies based on the title works in all the cases.
  2. The linking of a movie and a book is not perfect, since there are certain situations that cannot be handled due to the nature of the project and the fact that the movie and book databases are unlinked themselves.
- Specifically, the results obtained were **valid** in fairly 90% of the test cases we undertook, which is a high figure, being the 10% rest those unhandleable situations we mentioned.
- In terms of performance, the results were retrieved within 1 second in the best case and in around 2 seconds in the worst case.
- In conclusion, our testing was **successful** as all the handleable cases were managed well and within a reasonable range of time.