CIT Complex IT Systems
Section 1
CITP Portfolio subproject 1
Introduction

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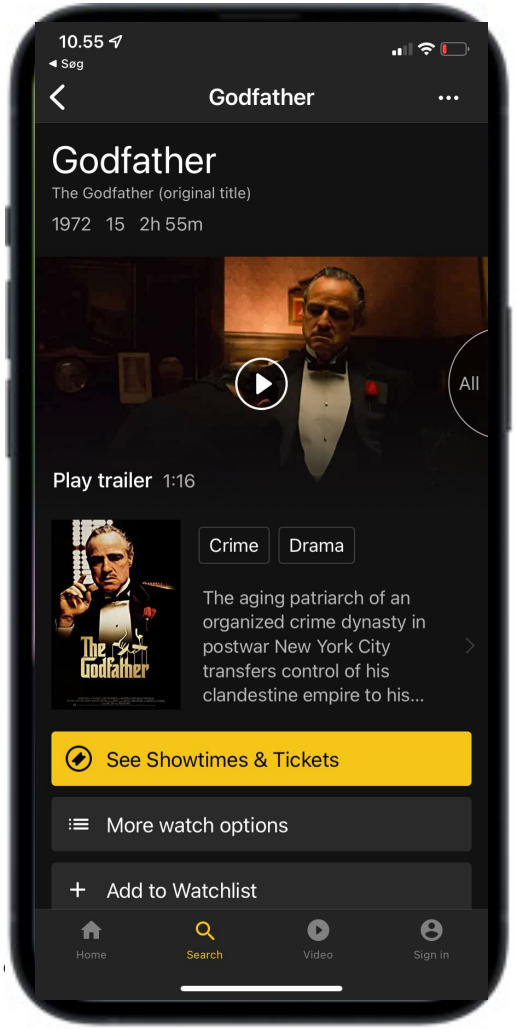
The CITP Project Portfolio



- **Project Portfolio – Problem & Domain**
  - build a movie database and provide a tool for searching and browsing the data

- **Source of data**
  - the Internet Movie Database **IMDb**
  - we will use
    - IMDb's publicly available data with some additions from
    - OMDB The Open Movie Database

- **What is IMDb?**
  - an online database of information related to mainly movies other type of material such as games and documentaries
  - the largest and most comprehensive movie database on the web
  - includes close to 20 million titles and more that 13.6 million personalities.
  - IMDb was launched in 1990 and is now owned by Amazon.com
  - We will only consider a smaller excerpt of around 130.000 movies and 470.000 personalities

What is IMDb?


IMDb
Menu
All
Search IMDb
IMDbPro
Watchlist
Sign In
EN
Cast & crew · User reviews · Trivia · FAQ
IMDbPro
All topics
The Godfather
1972 · 15 · 2h 55m
IMDb RATING
9.2/10
2M
YOUR RATING
Rate
POPULARITY
73 ▲5
Play trailer 1:16
255
171
9 VIDEOS
99+ PHOTOS
Epic
Gangster
Tragedy
Crime
Drama
Don Vito Corleone, head of a mafia family, decides to hand over his empire to his youngest son, Michael. However, his decision unintentionally puts the lives of his loved ones in grave danger.
Director Francis Ford Coppola
Writers Mario Puzo · Francis Ford Coppola
Stars Marlon Brando · Al Pacino · James Caan
IMDbPro See production info at IMDbPro
Add to Watchlist
Added by 1.3M users
5.7K User reviews
215 Critic reviews
100 Metascore

CIT Project Portfolio

- **The CIT Project portfolio**
  - **Subprojects 1, 2 and 3**

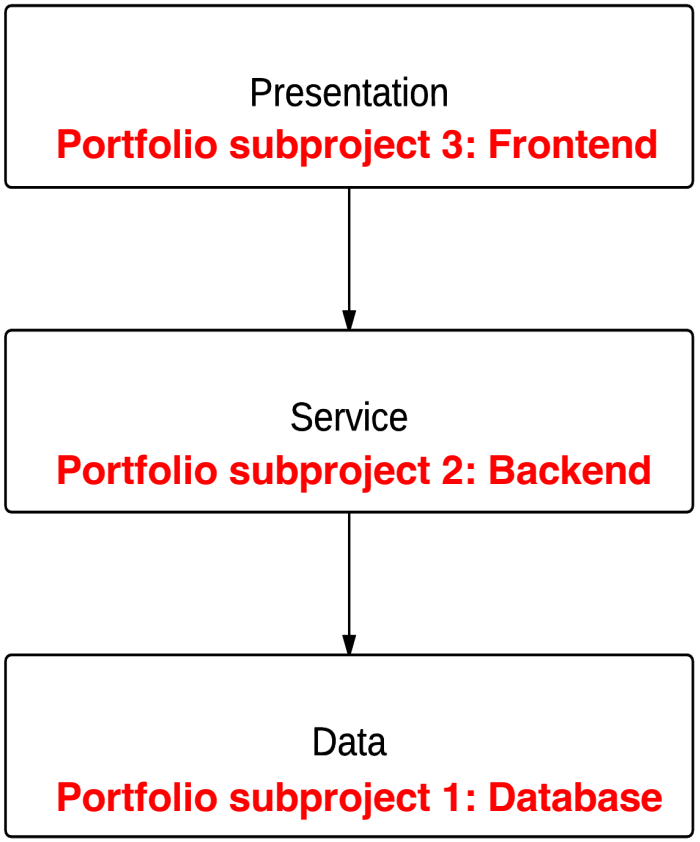
- **Portfolio subproject 1: Database**
  - design and implement a database.
  - extend the database with requested functionality
  - provide API to be applied from the service layer

- **Portfolio subproject 2: Backend**
  - design and implement web services to access and manipulate data in databases implemented in Portfolio subproject 1
  - provide API to be applied from the frontend

- **Portfolio subproject 3: Frontend**
  - development of single-page web applications that build on web services developed in Portfolio subproject 2

A multilayer architecture
3 subprojects – one for each layer

- **The presentation layer**
  - single-page web applications
- **The service layer**
  - defines the application logic.
  - provides an interface to the presentation layer through web services.
- **The data layer**
  - encapsulates storage and retrieval of data
  - provides an interface to the service layer by a set of functions and procedures



The Project Portfolio goal: Building a movie app

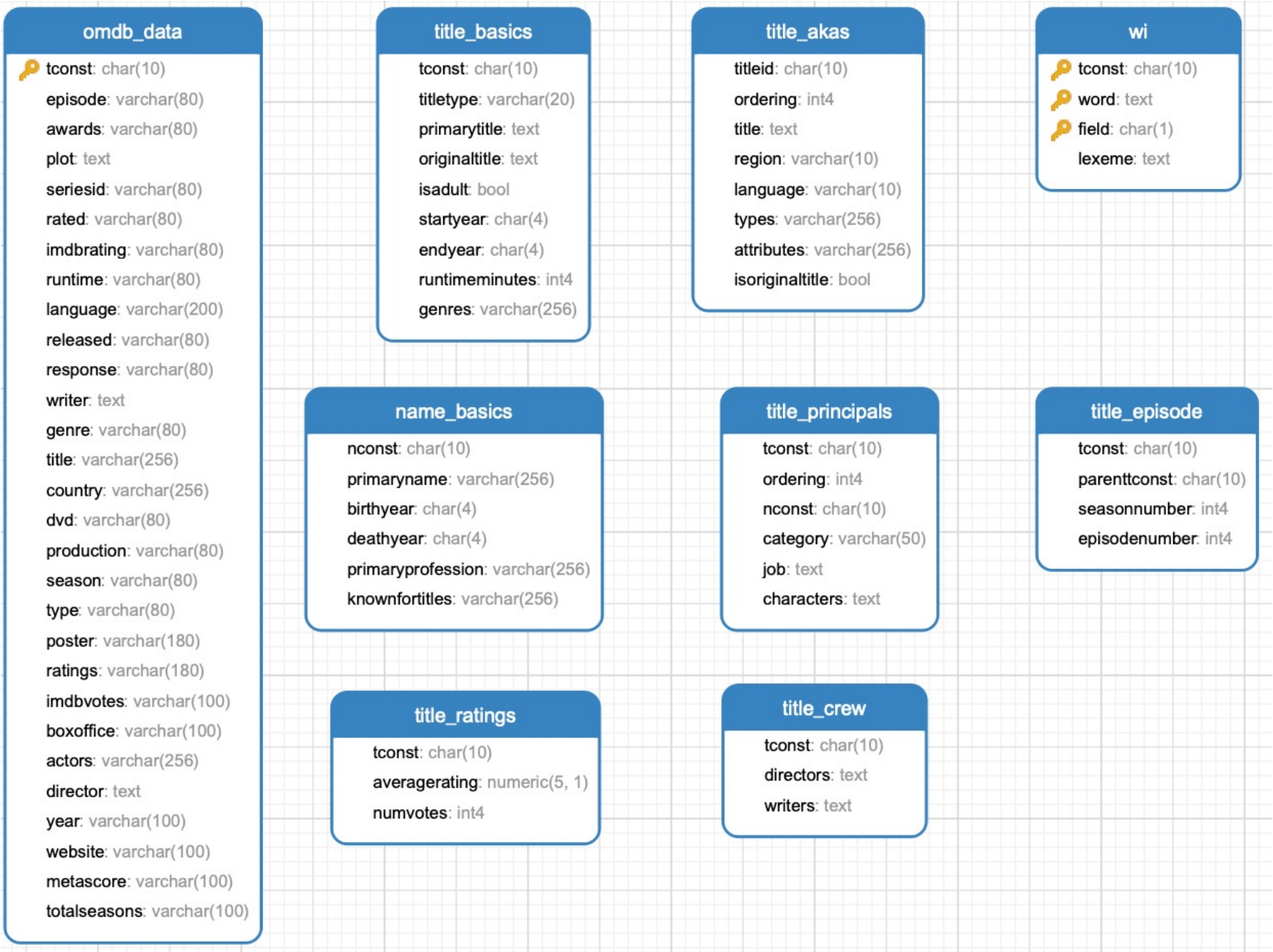
- **Basic requirements**
  - **Search** for **movies and actors**
  - **Provide** search **results** as (ranked) lists
  - Support **rating** (updating local data only)
  - Keep track of **search history**
  - Provide a **bookmarking** option for items of special interest and allow optional **annotation** to marked posts.

- **Your own extensions / ideas**
  - adding features developed based on own ideas or inspirations

- **Details describing the Portfolio Subproject 1:**
  - CITP Subproject 1 requirements.pdf

Starting point: some data

- **Data sources: imdb.backup, omdb_data.backup, wi.backup**
  Detailed description in: CITP Project Portfolio Source data



What to do

- **A. Application design**
  - Sketch a preliminary design of your application
- **B. The Movie data model**
  - Develop a good design so that
    - all data from the source provided sources can be represented
    - your own preferences regarding design and functionality are met
- **C. Framework model**
  - Design a (complementary) model to meet
    - the basic requirements of the users, history, marking, annotation
- **D. Functionality**
  - Design and implement key functions to be exposed as API from the data to the service layer
- **E. Improving performance by indexing**
  - Create database indexing to provide faster query answers
- **F. Testing**
  - Demonstrate by examples that the results of D work as intended. (More elaborate testing in later subprojects)

The project report

- **Hand-in (by one member from each group)**
  - one Portfolio subproject 1 report with appendices
  - a selection of SQL scripts to redo, what you have done
  - a product, including the database and the developed functionality, re-implemented in your database on cit.ruc.dk
- **The report**
  - size around 6-12 normal-pages (2400 characters per page) excluding appendices
  - your Portfolio subproject 1 report is not supposed to be revised later
  - however, your product may be subject to revision later if documented in report 2 or 3
- **The submission deadline**
  - for the report as well as the product is 7/10-2024.