

SUPSI

Educational project

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Corso di laurea	Modulo / Codice Progetto	Anno
Ingegneria informatica	Software Engineering I	2024/2025
Committente	Data	
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Problem

- Leggere una lista di film da un file CSV (fonte: IMDb)
- Scrivere le statistiche in un file CSV
- Calcolare alcune statistiche
- Prendere i percorsi di input/output da un file preferenze

Series Title	Released	Certificate	Runtime	Genre	IMDB_Rating	Overview	Meta_score	Director
The Shawshank Redemption	1994	A	142 min	Drama	9.3	Two imprison	80	Frank Darabont
The Godfather	1972	A	175 min	Crime, Drama	9.2	An organized	100	Francis Ford Coppola
The Dark Knight	2008	UA	152 min	Action, Crime, Drama	9	When the me	84	Christopher Nolan
The Godfather: Part II	1974	A	202 min	Crime, Drama	9	The early life	90	Francis Ford Coppola
12 Angry Men	1957	U	96 min	Crime, Drama	9	A jury holdout	96	Sidney Lumet
The Lord of the Rings: The Return of	2003	U	201 min	Action, Adventure, Drama	8.9	Gandalf and A	94	Peter Jackson
Pulp Fiction	1994	A	154 min	Crime, Drama	8.9	The lives of tw	94	Quentin Tarantino
Schindler's List	1993	A	195 min	Biography, Drama, History	8.9	In German-oc	94	Steven Spielberg
Inception	2010	UA	148 min	Action, Adventure, Sci-Fi	8.8	A thief who st	74	Christopher Nolan
Fight Club	1999	A	139 min	Drama	8.8	An insomniac	66	David Fincher
The Lord of the Rings: The Fellowship	2001	U	178 min	Action, Adventure, Drama	8.8	A meek Hobb	92	Peter Jackson
Forrest Gump	1994	UA	142 min	Drama, Romance	8.8	The president	82	Robert Zemeckis
Il buono, il brutto, il cattivo	1966	A	161 min	Western	8.8	A bounty hunt	90	Sergio Leone
The Lord of the Rings: The Two Towe	2002	UA	179 min	Action, Adventure, Drama	8.7	While Frodo a	87	Peter Jackson
The Matrix	1999	A	136 min	Action, Sci-Fi	8.7	When a beaut	73	Lana Wachowski
Goodfellas	1990	A	146 min	Biography, Crime, Drama	8.7	The story of H	90	Martin Scorsese
Star Wars: Episode V - The Empire S	1980	UA	124 min	Action, Adventure, Fantasy	8.7	After the Rebe	82	Irvin Kershner
One Flew Over the Cuckoo's Nest	1975	A	133 min	Drama	8.7	A criminal ple	83	Milos Forman
Hamilton	2020	PG-13	160 min	Biography, Drama, History	8.6	The real life of	90	Thomas Kail

Approach

- Analisi requisiti
- Individuazione task
- Organizzazione
- Struttura

FileUtils	
FileUtils()	
readMoviesFromCSV(String)	List<Movie>
readPreferencesFile(String, String)	String
writeStatisticsToCSV(StatisticsCalculator, String)	void

Movie	
Movie(String, int, int, String, List<String>, double)	
runtime	int
director	String
actors	List<String>
title	String
year	int
rating	double
getActors()	List<String>
getYear()	int
getRuntime()	int
getRating()	double
getDirector()	String

StatisticsCalculator	
StatisticsCalculator(List<Movie>)	
avgRuntime	double
bestDirectorAvg	double
maxActorCount	int
maxYearCount	int
totalMovies	int
productiveYear	int
bestDirector	String
mostPresentActor	String
getMostPresentActor()	String
getProductiveYear()	int
getMaxYearCount()	int
getMaxActorCount()	int
getTotalMovies()	int
getAvgRuntime()	double
calculateStatistics(List<Movie>)	void
getBestDirector()	String
getBestDirectorAvg()	double

Dependency

```
<dependencies>
  <dependency>
    <groupId>com.opencsv</groupId>
    <artifactId>opencsv</artifactId>
    <version>5.10</version>
  </dependency>
</dependencies>
```

```
public static List<Movie> readMoviesFromCSV(String filePath) { 1 usage
    List<Movie> movies = new ArrayList<>();
    try (CSVReader csvReader = new CSVReader(new FileReader(filePath))) {
        String[] column_names = csvReader.readNext();
```

Results & Demo

Risultati ottenuti:

- Lettura file CSV
- Calcolo statistiche
- Stampa statistiche
- Gestione errori
- Esecuzione da linea di comando
- Compatibilità con Windows, Mac e Linux

Conclusions

- **Difficoltà riscontrate**
- **Lavoro in team**
- **Utilizzo Maven**
- **Esperienza**