

**UNIVERSITI TEKNOLOGI MARA**

**MOVIE RECOMMENDATION SYSTEM**

**NAJWA SYAMIMIE BINTI HASNU**

**BACHELOR OF COMPUTER SCIENCE (Hons.)  
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## **ABSTRACT**

Movie Recommendation System is essentially developed for the purpose of producing a movie recommendation list therefore, it is paired with algorithm to provide the desired functionalities and features in the system. As known, users prefer to use system that recommend suitable items according to their preferences so that they will not have to go through hundreds of movie list to find something that they may like. It was difficult enough to look for list of movies on the Internet, moreover to browse through the long list to find what they have been looking for. Therefore, it is essentially needed for the user to use a recommendation system that can help them get through with this process. As a result, the objectives for this project are to study the most suitable algorithms used for a movie recommender system, to implement Collaborative Filtering algorithm on a movie recommender system prototype and to test the functionality of the movie recommender system. In this project, a movie recommendation system with the use of Collaborative Filtering is proposed to produce a set list of movies for the users. This process will be done with the process of calculation the similarity of the movies rated by the users and a recommendation list will be produced through it. PHPMyAdmin is used to store the dataset and also acts as a database for user information. The algorithm chosen was implemented using Java Programming language and was tested using Root Means Square Error (RMSE) formula.

# CHAPTER 1

## INTRODUCTION

This project is created to find a suitable algorithm that can be used for a movie recommender system. Multiple researches have been done in order to find suitable algorithms that can be used for a movie recommender system. Methods that are recognized as approaches for movie recommendation systems including Collaborative Filtering (CF), Content-Based Filtering (CBF), Hybrid Filtering and Demographic Filtering.

### 1.1 Background of study

A recommender system is a system that makes predictions or filtration preferences according to the user's choices. Using its users' likes and dislikes, a Recommender System(RS) generates suggested items for users and searches things online in rather quite a short time (Katarya and Verma, 2017). There are various areas that can implement the use of recommender systems such as movies, music, news, book, research articles, search queries, social tags and products. According to Devi and Parthasarathy (2018), Collaborative Filtering, Content-Based Filtering, Hybrid Filtering and Demographic Filtering are the four approaches that mainly are used in building a recommendation system. (Devi and Parthasarathy, 2018).

Collaborative Filtering has two common ways it can be implemented in which are User Based Collaborative Filtering and Item Based Collaborative Filtering (Devi and Parthasarathy, 2018). User Based Collaborative Filtering takes the similar taste between different users who rated the same items into consideration, then based on the assumption, it recommends the items that have not been seen yet to the active user. Meanwhile, Item Based Collaborative Filtering recommends the items that have highest correlation.