DS PROJECT PROPOSAL
SPRING 2019

PROJECT'S ID

PJ01

PROJECT'S TITLE

Movie Storage Application using BST **Primary Data Structure: Binary Search Tree (Linked Implementation)**

GROUP MEMBERS

Jaweria Asif	**9442**	**100818**
Javeria Hassan	**9517**	
Mahzeb Sher	**9510**	

BRIEF DESCRIPTION OF THE PROJECT

It is a ***Movie storage application*** containing information about movies. All the records with movie information will be stored in a ***Binary Search Tree (BST)*** container class.

The insertion of each movie record will be based on the movie title. For simplicityassume movie titles consisting of either one word, or multiple words separated by a dash .
For example:Platoon, Alien, Titanic, Jaws-3.

Each node will not have simply the movie title, but a record that has the following *information*:

1. Movie Title
2. Movie year of release
3. Duration of the movie (minutes)
4. Rating of the movie (must be one of NR, G, PG, PG-12, R, NC-17)
5. Linked List with the name of the actors

We will ***Implement*** the ***following operationsfor the movie storage application:***

1. ***Add movie***– add a new movie record to the movie storage (BST).
2. ***Delete movie***– deletes a movie record from the movie storage (BST).
3. ***Add cast***– adds a new cast member name to a movie
4. ***Delete cast***– deletes a cast member name (if present) from a movie
5. ***Find movie***– finds the information record for a movie
6. ***Find movies by actor name*** – finds all movies by a given actor. Returns a linked list with them.
7. ***Find movies by rating*** – finds all movies with a given rating. Returns a new sorted doublylinked list with them.
8. ***Find movies by year***– find all movies made in a given year. Returns a new sorted doubly linkedlist with them.
9. ***Find movies by time period***– finds all movies in a time period (e.g. 1980 - 1985). Returns anew sorted doubly linked list with them.
10. ***Print movies in order***– prints all the movies in the BST sorted order (in-order).