

Movie Database

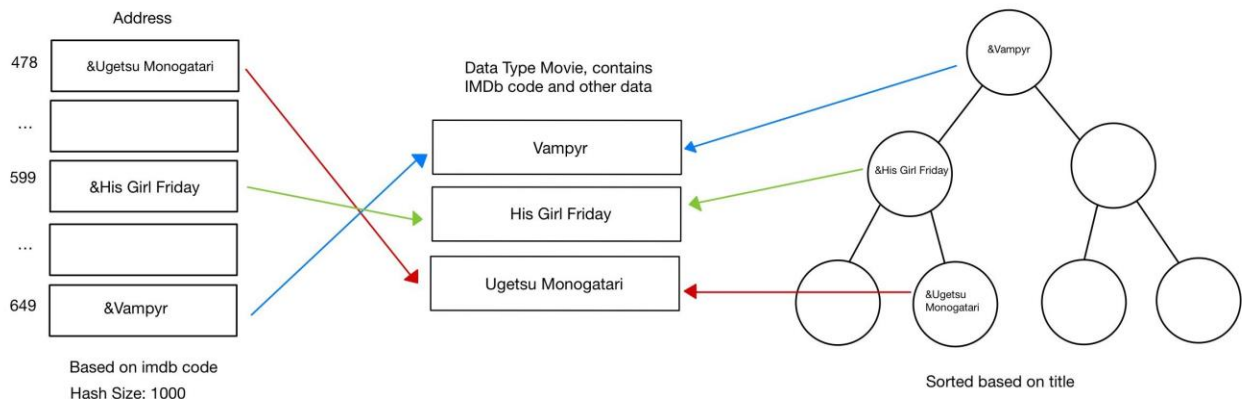
Team: 11

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Application Data: Movie.h -Contains variables (imdb code, Title, Year, Director, Rating, and Genre)

main.cpp, BinaryNode.h, BinarySearchTree.h, BinaryTree.h, HashNode.h, HashTable.h, StackADT.h, Movies.txt, Movies1.txt, MoviesTest.txt

Data Structure Diagram:



Sample Output:

```

This program searches for Movies in a Database.
Each movie utilizes variables: Title, Imdb Code, Year, Director, Genre, and Rating
To get started, enter an input file you would like to use.

Input file name: movies1.txt

Choose an option below
-----
1. Add Movie
2. Delete Movie
3. Undo Delete
4. Search for Movie (by Imdb code)
5. Search for Movie (by Title)
6. Display All Movies (in Order by Title)
7. Help
8. Write to File
9. Display Statistics
0. Quit
Enter your choice: 6
Display Options
-----
1. Display in Title Order.
1
-----
Title      Imdb      Year  Genre      Director      Rating
-----
Forrest Gump tt0109830  1994  Drama      Robert Zemeckis  8.8
Goodfellas  tt0099665  1990  Crime      Martin Scorsese  8.7
Toker       tt7286456  2019  Drama      Todd Phillips    8.4
Pulp Fiction tt0110912  1994  Crime      Quentin Tarantino 8.9
Seven Samurai tt0047478  1954  Action     Akira Kurosawa    8.6
The Godfather tt0060406  1972  Crime      Francis Ford Coppola 9.2
-----

Choose an option below
-----
1. Add Movie
2. Delete Movie
3. Undo Delete
4. Search for Movie (by Imdb code)
5. Search for Movie (by Title)
6. Display All Movies (in Order by Title)
7. Help
8. Write to File
9. Display Statistics
0. Quit
Enter your choice: 0

Process returned 0 (0x0)   execution time : 10.982 s
Press any key to continue.

```

Hash Function:

```

template<class ItemType>

int HashTable<ItemType>::_hash(string key) const

```

```

{

int sum = 0;

for (int i = 0; key[i]; i++)

    sum += key[i];

return sum % hashSize;

};

```

Structure Chart:

```

main calls the following functions:
  readFile
    insert
    insertHash
    getLoadFactor
    getSize
    getPrime
    rehash
  menu
  insertMovie
    imdbValidate
    titleValidate
    validateGenre
    validateDirector
    calculateLongest
    insert
    compare
    insertHash
  deleteManager
    setImdb
    deleteHash
    remove
    push
  undoDelete
    isEmpty
    pop
    insert
    insertHash
  searchManagerPrimary
    setImdb
    searchHash
    vDisplay
  searchManagerSecondary
    setTitle
    search
    vDisplay
  displayManager
    header
    inOrder
    printTail
    printTree
    iDisplay
  help
  writeFile
    writeToFile

```

Comments: Cooperation is the most important part of a group project.