«interface» MovieHistory

+saveToFile(in fileName : string, in m : Movie)
+loadFromFile(in fileName : string, in arrAdult : Adult[])

Restaurant

-name : String
-NbOfdishis : int

+Restaurant(name : String , NbOfDishis : int)
+getName() : String
+getNbOfDishis ( ) : int
+toString( ) : String

10   restaurants   1

Theater

-name : String
-Location : String
-NumberOfHalls : int

+Theater(name : String , Location : String
+NbOfHalls : int , size : int)
+AveragePriceAdults( ) : double
+AddMovie(m : Movie) : boolean
+addRestaurant(r : Restaurant) : boolean
+CountKidsMovie ( ) : int
+Releaseyear(int : Year) : int
+toString( ) : String

1   ArrMovie   *

Movie

-Duration : double
-Rating : double
-Year : int
-categotry : Category

+Movie (double : Duration , Rateing : double , Year : int , category : Category)
+ Price( ) : double
+ tostring( ) : String
+getYear ( ) : int
+getDuration() : double
+getRateing() : double
+getCategory() : Category

«enumaration» Category

Action
Comedy
Horror
Drama
Fantasy

Adult

-age : int

+Adult(Duration : double , Rateing : double , Year : int , category : Category, age : int)

Kids

+Kids(Duration : double , Rateing : double , Year : int , category : Category)
+BreakTime ( ) : double

CSC 113 Tutorial Project

MovieHistory :

- Methods:
  - *saveToFile(fileName:string, m: Movie)*:This method saves all the Movies into the object file fileName.

  - *loadFromFile(in fileName : string, in arrAdult : Adult[])* : This method reads the Theater objects from the file fileName and stores the Adult movies only in the array arrAdult.

Movie class:
- Attributes:
  - *Duration* : The duration of the movie in minutes.
  - *Rating* : the rating of the movie out of 10.
  - *Year* : the year the movie was released in.

- Methods:
  - *Movie (Duration : double , Rateing : double , Year : int , category : Category)* : Constructor
  - *Price()* : returns the price of the movie ticket. The price is calculated as follows:
  - ☐ Kids: Duration * 0.4
  - ☐ Adults: Duration * 0.6

  - *toString()*: this method returns a string representation of the Movie.
  - *Getters*

Adult class:
- Attributes:

    Age : the age allowed to enter the movie.

- Methods:

    - ***Adult(Duration : double, Rating : double , Year : int , category : Category , age : int)*** : constructor.

Kids class:

- Methods:

    - ***Kids(Duration : double , Rating : double , Year : int , category : Category)*** : constructor.
    - ***BreakTime()*** : returns the break time which is the Duration / 2.

Theater class:
- Attributes:
    - ***name*** : the name of the theater.
    - ***Location*** : where the theater is located.
    - ***NumberOfHalls*** : the number of halls in the theater.

- Methods:

    - ***Theater(name : String , Location : String , NbOfHalls : int , size : int):*** Constructor

    - ***AveragePriceAdults( )*** : returns the average ticket prices of adults. throws (ArithmeticException) when there're not any adults in the theater, since you will be dividing by zero.

    - ***AddMovie(m : Movie)*** : adds a movie to the theater if there's space and the movie wasn't added before.

    - ***AddRestaurant(r : Restaurant) :*** adds a movie to the theater if there's space and the restaurant wasn't added before.

- **CountKidsMovie ( )** : recursive method that returns the number of Kids movies in the cinema.

- **Releaseyear(int : Year)** : return the number of movies released after a certain year.

- **toString():** this method returns a string representation of the Theater.

Restaurant Class:

- Attributes:

    - **Name**: The name of the retaurant.
    - **NbOfDishis**: the number of the dishis in the menu.

- Methods:

    - **Restaurant**(name : String , NbOfDishis : int): Constructor.
    - **toString**()**:** this method returns a string representation of restaurant.
    - **Getters.**