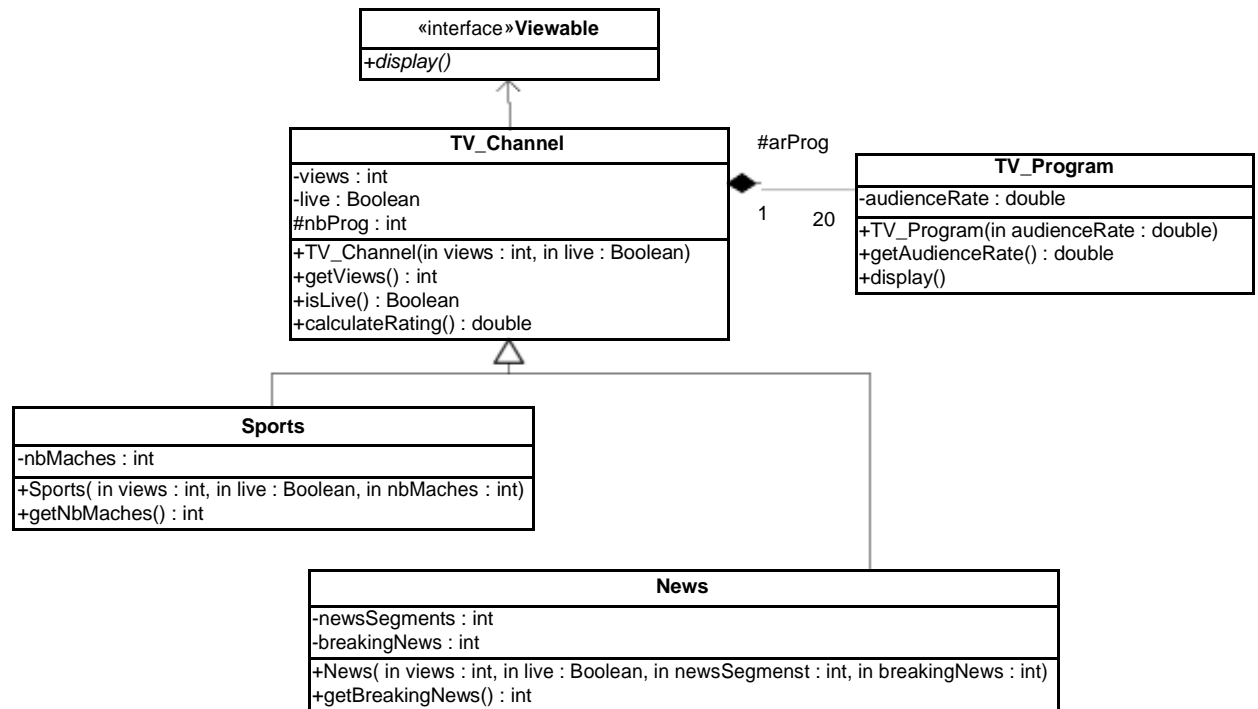




Lab: **Abstract Methods and Interface**



Interface **Viewable**:

- **display()** : display all attribute of the class.

class **TV_Program**:

- Attributes:

audienceRate: the audience rate of the TV program.

- Methods:

- **TV_Program (audienceRate: double)**: constructor
- **getAudienceRate()**: this method returns the audience rate of the TV program.
- **display()**: displays all attribute of the class

Class **TV_Channel**:

Attributes:

- **views** : number of views of the channel.
- **live**: true if channel is live. False otherwise.
- **nbProg**: number of TV programs of the channel

Methods:

- **TV_Channel(views: int, live: boolean)** : Constructor
- **getViews()**: returns the number of views of the channel.
- **isLive()** : returns the value of the attribute **live**.
- **CalculateRating()** : this method calculates and returns the rating of the channel as follows:

Sports : $views / no. matches * 1.5$

News: $(views / breakingNews) + \sum \text{audience rate of all Tv programs of the channel} / \text{number of programs}$

Class **Sports**:

Attributes:

- **nbMatches** : number of matches of the channel.

Methods:

- **Sports (views: int, live: boolean, nbMatches: int)** : Constructor
- **getNbMatches()** : returns the number matches of the channel.

Class **News**:

Attributes:

- **newSegments**: number of news segments of the channel.
- **breakingNews** : average occurrence of breaking news.

Methods:

- **News (views: int, live: Boolean, newsSegments: int, breakingNews: int)** : Constructor
- **getNewsSegments ()** : returns the number of news segments of the channel.
- **getBreakingNews ()** : average occurrence of breaking news.

Question 1: Translate into java the Interface **Viewable**, class **TV_Program**, class **TV_Channel** , class **News** and class **Sports**.