

## Informazione

A video streaming service wants to create a database for managing its subscribers and its content.







- The contents available on the platform are identified by the name and year of production and are characterized by the upload date, user rating, and the list of actors. The contents can be movies or TV series. For movies, the duration and the list of Oscars won are known. For series, the number of episodes and the average duration per episode are known instead.
- The platform wants to store, for each content, the actors and the roles they had. For each actor, the surname and stage name are known.
- Subscribers to the platform are identified by their email address, and their name, surname, date of birth, and information of the credit card used for payment (owner, card number, and CVV) are known.
- To access streaming content, users must subscribe to subscriptions based on the content they are interested in. Subscriptions are identified by name (horror, thriller, children, etc.) and are described by cost, whether the subscription includes advertising, and the maximum resolution.
- It is desired to keep track of the periods of time (start date and end date) during which subscribers have subscribed to subscriptions. It is considered that a user can subscribe to multiple subscriptions even at the same time, and that a user can terminate and reactivate the same subscription multiple times at different times.
- The devices used by users are registered on the platform. Each device is characterized by the MAC address used to identify it, the maximum supported resolution, and the version of the operating system. Devices can be mobile or fixed. For mobile devices, it is also known whether the user wants to use data connection in addition to WiFi for content viewing, and whether they want to activate data saving. The dates on which the user has associated each device are to be stored.
- It is desired to keep track of the views made by users. Each view is characterized by the viewed content, the start date and time of viewing, the end time of viewing, the user who made it, and the device used. It is considered that each user can make multiple views at the same time using different devices.

1. Describe with an E-R diagram the conceptual schema of a database for this application.
2. Build a normalized relational logical schema for the same database.
3. Define referential integrity constraints for 3 relations chosen from those defined in the conceptual schema.

## Domanda 1

Punteggio max.: 1,00

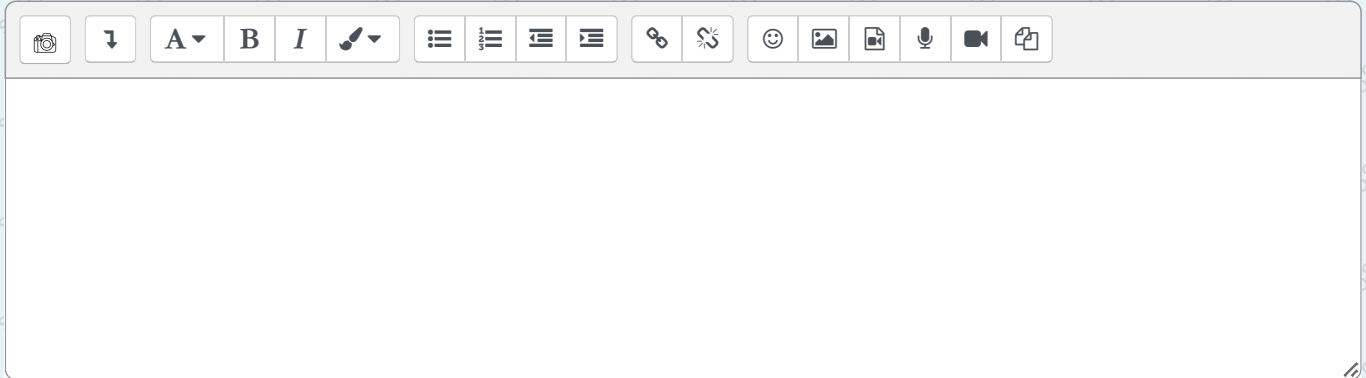
Describe with an E-R diagram the conceptual schema of a database for this application.

**Domanda 2**

Punteggio max.: 1,00

Build a normalized relational logical schema for the same database.

**Domanda 3**

Punteggio max.: 1,00

Define referential integrity constraints for 3 relations chosen from those defined in the conceptual schema.

