

SHRR

Q1. StreamNest is an online video streaming platform that delivers on-demand movies and shows to users around the world. Each user is represented by a **User** class, which holds attributes like user ID, name, email, phone, and password, and includes actions such as logging in, logging out, and updating account details. Users can either be **Viewers**, who watch content and manage their watchlist, or **Admins**, who have a roles attribute and can add or remove content, monitor reports, and manage platform operations. **Viewers** have a subscription plan and can browse shows, watch videos, rate content, and track their viewing history. Each **movie** or **show** is represented as a **Content** with attributes like content ID, title, genre, release year, duration, and content type. Content is associated with multiple **Episodes** in the case of a series. An Episode includes episode ID, title, episode number, and duration. Each Viewer can create multiple Profiles within their account. A **Profile** has a profile ID, name, language preference, maturity setting, and maintains a **WatchHistory**, which stores details of recently watched content, including timestamp and viewing progress. Profiles are arranged under a User account, allowing for multiple profiles per user. After watching a show, users can leave **feedback**, which stores the feedback ID, score, comment, and date. The system guarantees secure handling of account data and payment methods using encryption protocols, meeting critical security requirements. To handle large numbers of simultaneous viewers without lag, StreamNest ensures high video playback performance and fast content delivery, fulfilling its performance goal. Lastly, the platform must maintain 99.95% availability across all regions to meet its availability commitment, ensuring users can stream anytime, anywhere without interruption.

- a. **Design** a class diagram. Add multiplicity according to your preference. [12]
- b. Find three functional and three non-functional requirements **from the above scenario**. [3]

Non-functional requirements

Class name

Check the next page for the solution.

