

IT-643 Software Design and Testing

Class Diagram

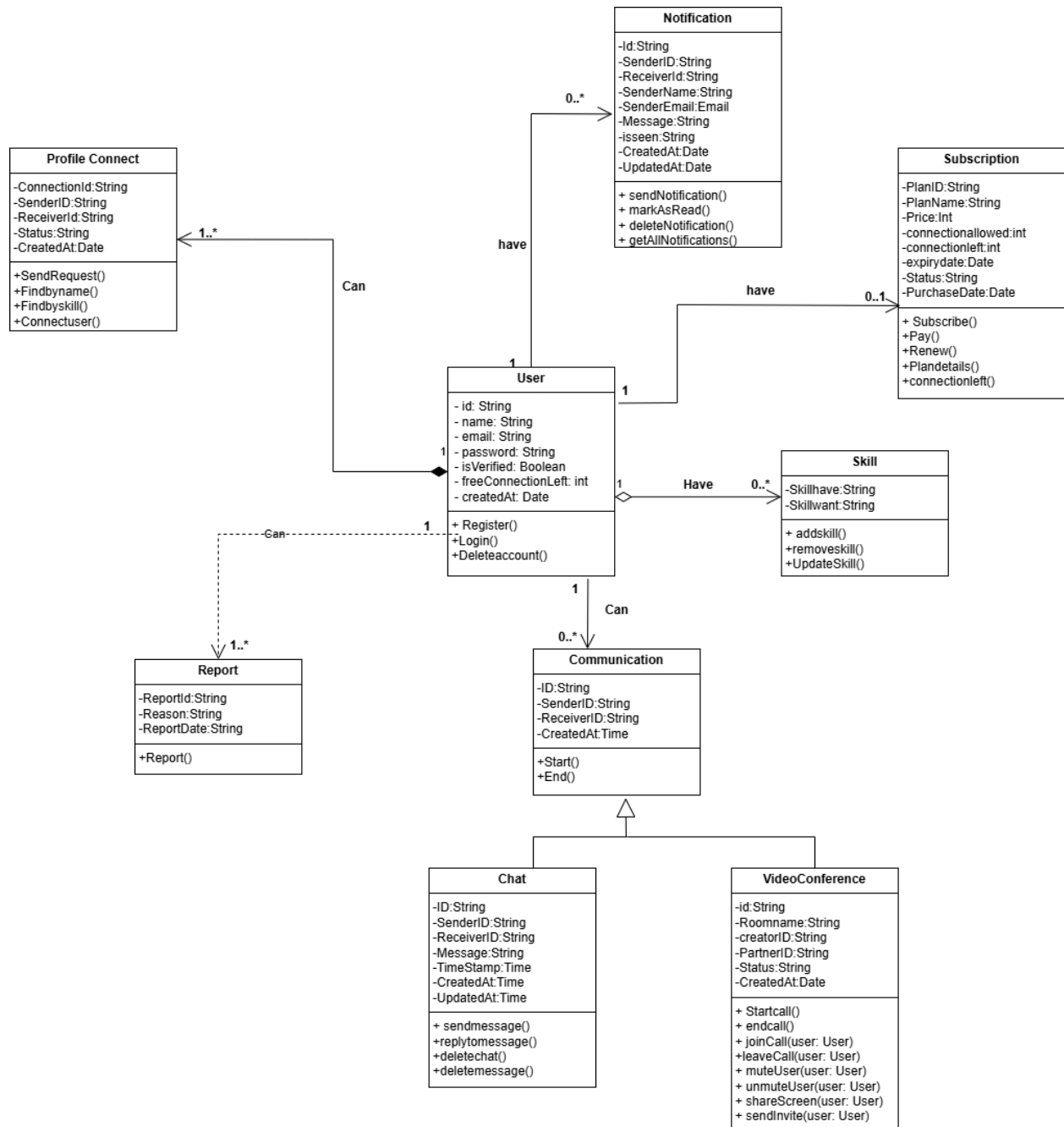
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Class Diagram Image



Entities, Attributes, and Behaviors

This section lists each class (entity) from the diagram, detailing its specific attributes (data) and behaviors (methods) in a bullet-point format.

User

- **Attributes:** id: String, name: String, email: String, password: String, freeConnectionLeft: Int, createdAt: Date, isVerified: Boolean
- **Behaviors:** Register(), Login(), DeleteAccount()

Profile Connect

- **Attributes:** connectId: String, senderId: String, receiverId: String, status: String, updatedAt: Date
- **Behaviors:** SendRequest(), Findbyname(), Findbyskill(), Connectuser()

Report

- **Attributes:** reportId: String, reason: String, reportDate: String
- **Behaviors:** Report()

Notification

- **Attributes:** id: String, receiverId: String, senderId: String, senderName: String, message: String, createdAt: Date, updatedAt: Date, status: String, senderEmail: String, isSeen: Boolean
- **Behaviors:** sendNotification(), markAsRead(), deleteNotification(), getAllNotifications()

Subscription

- **Attributes:** planId: String, planName: String, price: Int, connectionAllowed: Int, connectionLeft: Int, expiryDate: Date, purchaseDate: Date, Status: String
- **Behaviors:** Subscribe(), Pay(), Renew(), PlanDetail(), connectionLeft()

Skill

- **Attributes:** skillHave: String, skillWant: String
- **Behaviors:** addSkill(), removeSkill(), UpdateSkill()

Communication

- **Attributes:** id: String, senderId: String, receiverId: String, createdAt: Time
- **Behaviors:** Start(), End()

Chat

- **Attributes:** id: String, senderId: String, receiverId: String, message: String, timeStamp: Time, createdAt: Date, updatedAt: Date
- **Behaviors:** sendmessage(), replytomessage(), deletemessage(), deleteChat()

VideoConference

- **Attributes:** id: String, roomName: String, creatorId: String, partnerID: String, status: String,

createdAt: Date

- **Behaviors:** Startcall(), endcall(), joinCall(User: User), shareScreen(User: User), muteUser(User: User), unmuteUser(User: User), sendinvite(User: User), leaveCall(User: User),

Relationships and Cardinality

This section outlines how the classes are connected, including the type of relationship and the cardinality.

- **User and Profile Connect:** A **User** can have 1..* (one or more) **Profile Connects**, while a **Profile Connect** is associated with 1 (exactly one) **User**.
 - **Cardinality:** One-to-Many
 - **Relationship:** Composition
- **User and Report:** A **User** can have 0..* (zero or more) **Reports**, while a **Report** is associated with 1 (exactly one) **User**.
 - **Cardinality:** One-to-Many
 - **Relationship:** Dependency
- **User and Notification:** A **User** can have 0..* (zero or more) **Notifications**, while a **Notification** is associated with 1 (exactly one) **User**.
 - **Cardinality:** One-to-Many
 - **Relationship:** Association
- **User and Subscription:** A **User** can have 0..1 (zero or one) **Subscription**, while a **Subscription** is associated with 1 (exactly one) **User**.
 - **Cardinality:** One-to-One
 - **Relationship:** Association
- **User and Skill:** A **User** can have 0..* (zero or more) **Skills**, while a **Skill** is associated with 1 (exactly one) **User**.
 - **Cardinality:** One-to-Many
 - **Relationship:** Aggregation
- **User and Communication:** A **User** can have 0..* (zero or more) **Communications**, while a **Communication** is associated with 1 (exactly one) **User**.
 - **Cardinality:** One-to-Many
 - **Relationship:** Association
- **Chat and VideoConference Inheritance:** **Chat** and **VideoConference** are both specialized types of **Communication**, inheriting its attributes and behaviors.
 - **Cardinality:** Generalization/Inheritance
 - **Relationship:** Generalization