

KIET Group of Institutions, Delhi-NCR, Gzb Department of Computer Applications (NBA Accredited)



(An ISO – 9001: 2015 Certified & 'A+' Grade accredited Institution by NAAC)

Session: 2023- 2024 SE-LAB KCA 325

Experiment-No.10

Objective: Identify the classes. Classify them as weak and strong classes and draw the class diagram for the specified Case Study.

Classes:

1.User Class (Strong Class):

Attributes: UserID, Username, Password, Email, etc. Methods: SignUp(), LogIn(), LogOut(), UpdateProfile()

2. ChatRoom Class (Strong Class):

Attributes: RoomID, RoomName, Participants, Messages, etc.

Methods: AddParticipant(), RemoveParticipant(), SendMessage(), GetMessages()

3. VideoRoom Class (Strong Class):

Attributes: RoomID, RoomName, Participants, VideoStream, etc.

Methods: AddParticipant(), RemoveParticipant(), StartVideoStream(),

StopVideoStream()

4. Message Class (Weak Class):

Attributes: MessageID, SenderID, ReceiverID, Content, Timestamp, etc.

5. Notification Class (Weak Class):

Attributes: NotificationID, UserID, Content, Timestamp, etc.

Relationships:

1.User-ChatRoom Relationship:

One user can participate in multiple chat rooms.

One chat room can have multiple participants.



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2.User-VideoRoom Relationship:

One user can participate in multiple video rooms. One video room can have multiple participants.

3. ChatRoom-Message Relationship: One chat room can have multiple messages. One message belongs to one chat room.

4. VideoRoom-Message Relationship:One video room can have multiple messages.One message belongs to one video room.

5. User-Message Relationship:One user can send/receive multiple messages.One message has one sender and one or more receivers.

6.User-Notification Relationship: One user can receive multiple notifications. One notification belongs to one user.



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++	++	++
User	ChatRoom	VideoRoom
++	++	++
- UserID	- RoomID	- RoomID
- Username	- RoomName	- RoomName
- Password	- Participants	- Participants
- Email	- Messages	- VideoStream
 + SignUp()	 + AddParticipant()	 + AddParticipant()
+ LogIn()	+ RemoveParticipant()	+ RemoveParticipant()
+ LogOut()	+ SendMessage()	+ StartVideoStream()
+ UpdateProfile()	+ GetMessages()	+ StopVideoStream()
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V	V	
++	++	
Message	Notification	
+	++	
- MessageID	- NotificationID	
- SenderID	- UserID	
- ReceiverID	- Content	
- Content	- Timestamp	
- Timestamp	++	
++		