Account (**UserName**, Password, OnlineState)

Profile (**Username**, Email, Telephone, ImageLink, NickName, Visible)

Message (MessageID, Message, TimeStamp, Read)

Group(GroupName, FounderName, Description, ImageLink)

Contact(ContactID, This UserName, Contact UserName)

ContactRequest(RequestID, From UserName, To UserName)

SendingSinge(SingleID, Account Sender, Account Receiver, MessageID)

SendingGroup(GroupID, Account UserName, GroupName, MessageID)

MemberOf(<u>MemberID</u>, Account_<u>UserName</u>, <u>GroupName</u>)

Profile [Username](PK) \subseteq Account[UserName](PK)

Contact [This_UserName](FK) \subseteq Account[UserName](PK)

Contact [Contact_UserName](FK) \subseteq Account[UserName](PK)

ContactRequest [From_UserName](FK) \subseteq Account[UserName](PK)

ContactRequest [To_UserName](FK) \subseteq Account[UserName](PK)

Group [FounderName](FK) \subseteq Account[UserName](PK)

SendingSinge[Account Sender](FK) \subseteq Account[UserName](PK)

SendingSinge[Account_Receiver](FK) \subseteq Account[UserName](PK)

SendingSinge[MessageID](FK) \subseteq Message[MessageID](PK)

SendingGroup[Account UserName](FK) \subseteq Account[UserName](PK)

SendingGroup[MessageID](FK) \subseteq Message[MessageID](PK)

SendingGroup[Group Name](FK) \subseteq Group[GroupName](PK)

 $MemberOf[Account_UserName](FK) \subseteq Account[UserName](PK)$

MemberOf[GroupName](FK) \subseteq Group [GroupName](PK)