CSCI585 Assignment 01

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1.Components of the ERM

Entity	Relationship	Connectivity	Entity
USER	has	M:N	USER
USER	has	1:M	GROUP
USER	send	M:N	MESSAGE
USER	has	1:M	CHANNEL
USER	comment	M:N	VIDEO
USER	download	M:N	VIDEO
USER	share	M:N	VIDEO
USER	favor	M:N	VIDEO
CHANNEL	include	M:N	VIDEO
GROUP	contain	M:N	USER
GROUP	access to	M:N	CHANNEL

2. Design Specification

In the diagram below, the solid line represents strong relationship, and the dash line represents week relationship.

In the class USER, the attribute DoB can be composite attribute, because date of birth can be subdivided into year, month and day.

In the class USER, the attribute USER_EMAIL can be Multivalued attribute.

In the class FRIEND, the attribute STATUS is used to tell whether any other user accept the request to be mutual friend.

BELONGTO

PK, FK1	GROUP_TITLE
PK, FK2	USER_ID

is contained

contain

FRIEND

PK	FRIEND
FK1	USER_ID
FK2	USER_ID
	STATUS

send

MESSAGE_DISTRIBUTOR

PK, FK1	MESSAGE_ID
PK, FK2	USER_ID

is sent

hashas

GROUP

PK	GROUP_TITLE
	GROUP_TYPE
	GROUP_SIZE
	GROUP_PRIVACY
FK1	USER_ID

has

MESSAGE

PK	MESSAGE_ID
	SUBJECT
	BODY
	CREAT_DATE
FK1	USER_ID
	CREATION_TIME

access to

USER

PK	USER_ID
	USER_NAME
	USER_PASSWORD
	DEFAULT_PIC
	NAME
	DOB
	GENDER
	TIME_ZONE
	SIGNUP_DATE
	LAST_DATE_ACCESS
	USER_EMAIL
	USER_ADDRESS
	USER_CITY
	USER_STATE
	USER_COUNTRY

create

ACCESSTO

PK, FK1	GROUP_TITLE
PK, FK2	CHANNEL_NAME

access by

FAVORITE

PK, FK1	VIDEO_ID
PK, FK2	USER_ID

favor

CHANNEL

PK	CHANNEL_NAME
	CREATE_DATE
	CHANNEL_STATUS
FK1	USER_ID

has

download

DOWNLOAD

PK	DOWNLOAD
PK, FK1	USER_ID
PK, FK2	VIDEO_ID
	DL_TIME
	DL_DATE

is favored

is downloaded

include

COMMENT

PK, FK1	USER_ID
PK, FK2	VIDEO_ID

share

comment

is commented

VIDEO

PK	VIDEO_ID
	LANGUAGE
	TYPE
	ARTIST
	UPLOAD_DATE
	VIEW_COUNT
	TITLE
	LANGUAGE
	LOCATION
	DATE
	TYPE

SHARE

PK, FK1	USER_ID
PK, FK2	VIDEO_ID

is shared

INCLUDE

PK, FK1	CHANNEL_NAME
PK, FK2	VIDEO_TITLE

is included