

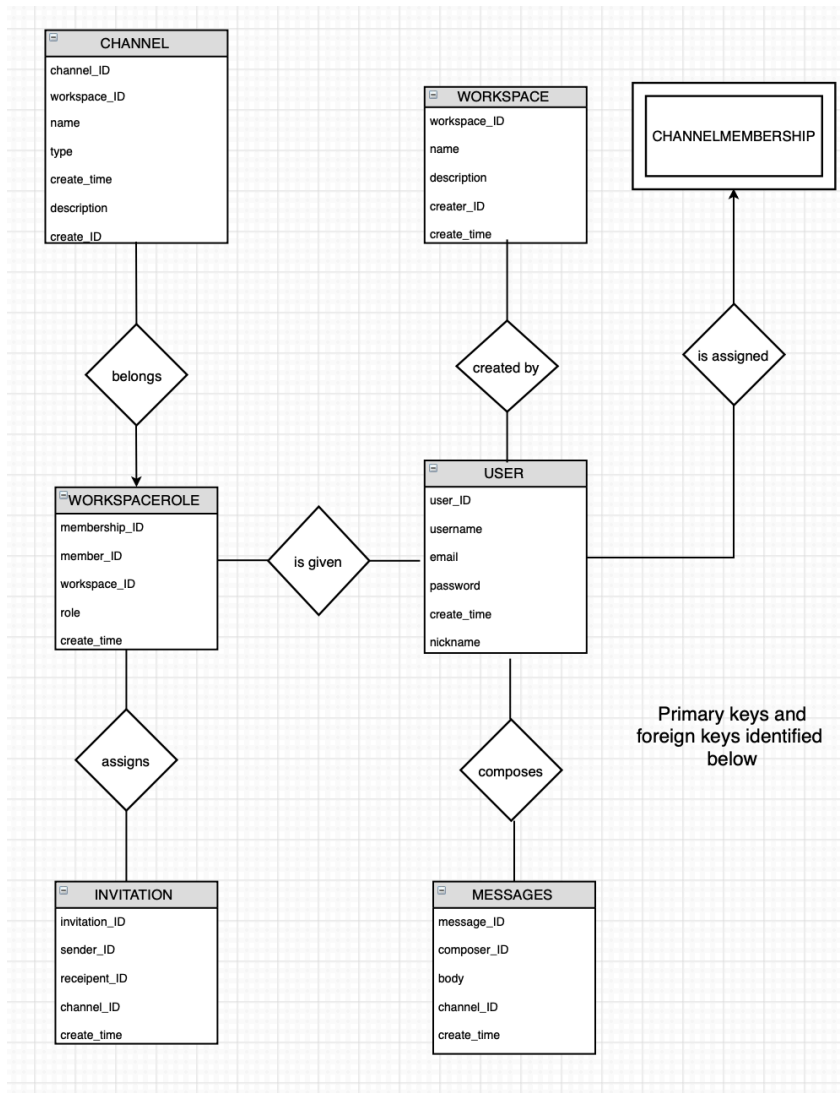
# Snickr

BY  
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# Project Description

The goal in this semester's course project is to build a web-based collaboration system called *snickr*, similar to Slack, that allows members of a team to build workspaces, create channels within these workspaces, and then communicate within these channels. I have used MySQL to design the database schema of the project and later on I will use PHP and other possible web technologies to design the front end of the project.

# Entity Relation Diagram



# Relational Schema

**USER (user\_ID, username, email, password, create\_time, nickname)**

- Stores the user records
- Along with the time the user was created
- PRIMARY KEY: user\_ID

**CHANNEL (channel\_ID, workspace\_ID, name, type, create\_time, description, creator\_ID)**

- Stores the data related to channel
- PRIMARY KEY: channel\_ID
- FOREIGN KEY: creator\_ID (references user\_ID in user) workspace\_ID (references workspace\_ID in workspace),

**CHANNELMEMBERSHIP (user\_ID, channel\_ID, create\_time)**

- Weak entity
- FOREIGN KEY:
  - user\_ID references user\_ID in USER
  - channel\_ID references channel\_ID in CHANNEL

**INVITATION (invitation\_id, sender\_ID, receipt\_ID, channel\_ID, create\_time)**

- Stores all the invitations to channels
- PRIMARY KEY: invitation\_id
- FOREIGN KEY:
  - sender\_ID references user\_ID in USER
  - receipt\_ID references user\_ID in user
  - channel\_ID references channel\_ID in CHANNEL

**MESSAGE (message\_ID, composer\_ID, body, channel\_ID, create\_time)**

- stores messages
- PRIMARY KEY: message\_ID
- FOREIGN KEY:
  - composer\_ID references user\_ID in USER
  - channel\_ID references channel\_ID from CHANNEL

## WORKSPACE ( workspace\_ID, name, description, creator\_ID, create\_time)

- data related to workspaces
- PRIMARY KEY: workspace\_ID
- FOREIGN KEY:
  - creator\_ID references user\_ID from USER

## WORKSPACEROLE (membership\_ID, member\_ID, workspace\_ID, role, create\_time)

- It handles the information about members of a workspace and if they are the administrators of that workspace.
- PRIMARY KEY: membership\_ID
- FOREIGN KEY:
  - member\_ID references user\_ID from user
  - workspace\_ID references workspace\_ID from workspace

## TEST DATA

### CHANNEL

channel_ID	workspace_ID	name	type	create_time	description	creator_ID
1	1	channel 1	PUBLIC	2019-05-13 13:55:44		6
2	1	channel 2	PUBLIC	2019-05-13 16:17:41		6
3	2	channel 3	PUBLIC	2019-05-13 16:18:29		7
4	2	channel 4	PUBLIC	2019-05-13 16:18:29		7
5	1	channel 5	PRIVATE	2019-05-16 10:06:10		1
18	1	channel 6	PUBLIC	2019-05-16 11:48:28		6
19	2	channel 7	PUBLIC	2019-05-16 12:05:25		7
20	1	channel 8	PUBLIC	2019-05-16 12:14:59		8
26	2	asdca	PUBLIC	2019-05-17 11:03:41	axcadc	6
32	2	CHANNEL 10	PUBLIC	2019-05-17 11:20:42	hello	6
33	7	Channel 11	PUBLIC	2019-05-17 11:40:14	desc	6
51	7	hfxhg	PRIVATE	2019-05-17 12:14:44	jfyfvjk	0

## USER

user_ID	username	email	password	create_time	nickname
1	rohit	rohit@abc.com	wqe	2019-05-08 17:51:31	fad
6	rajeev	abc@gmail.com	202cb962ac59075b964b07152d234b70	2019-05-11 00:03:06	rj
7	avaiyang	av@gmail.com	202cb962ac59075b964b07152d234b70	2019-05-11 00:08:02	av
8	ilyas	abc@saxdxs	xasxas	2019-05-16 00:18:10	elias
9	harshit	qwedwd	wdwaqd	2019-05-16 12:14:14	hs
10	kushan	acd@gmail.com	202cb962ac59075b964b07152d234b70	2019-05-17 14:07:56	kush
11	rajeev	abc@gmail.com	202cb962ac59075b964b07152d234b70	2019-05-17 14:54:01	rj
12	minchen	adc@gmail.com	202cb962ac59075b964b07152d234b70	2019-05-17 14:54:59	minchen

## WORKSPACE

workspace_ID	name	description	creator_ID	create_time
1	Workspace 1	test	6	2019-05-11 23:49:40
2	Workspace 2	test 2	6	2019-05-12 00:30:03
3	workspace 3	sample	8	2019-05-16 09:24:16
4	test	Testing	7	2019-05-17 02:56:11
5	hello	new ws	7	2019-05-17 03:20:42
6	new ws	ioheflw	7	2019-05-17 03:23:37
7	Workspace 7	test 4	6	2019-05-17 10:07:14
8	DEMO	demo new workspace	12	2019-05-17 14:55:31
9	DEMO 1	demo 1	12	2019-05-17 14:56:44

## WORKSPACEROLE

membership_ID	member_ID	workspace_ID	role	create_time
1	6	1	ADMIN	2019-05-11 23:49:40
2	6	2	ADMIN	2019-05-12 00:30:03
5	7	2	MEMBER	2019-05-13 18:04:18
7	8	3	ADMIN	2019-05-16 09:24:16
11	1	2	ADMIN	2019-05-16 17:01:36
19	9	1	MEMBER	2019-05-16 23:56:27
20	7	1	MEMBER	2019-05-17 02:28:48
21	7	4	ADMIN	2019-05-17 02:56:11
22	7	5	ADMIN	2019-05-17 03:20:42
23	7	6	ADMIN	2019-05-17 03:23:37
24	6	7	ADMIN	2019-05-17 10:07:14

## CHANNELMEMBERSHIP

user_ID	channel_ID	create_time
1	2	2019-05-13 18:04:18
7	1	2019-05-13 18:04:18
7	2	2019-05-13 18:04:18
7	3	2019-05-13 18:04:18
7	4	2019-05-13 18:04:18
1	5	2019-05-16 10:06:10
6	18	2019-05-16 11:48:28
6	18	2019-05-16 11:48:28
6	18	2019-05-16 11:48:28
7	18	2019-05-16 11:48:28
8	18	2019-05-16 11:48:28
7	19	2019-05-16 12:05:25
8	19	2019-05-16 12:05:25
1	20	2019-05-16 12:14:59
8	20	2019-05-16 12:14:59
9	20	2019-05-16 12:14:59

## MESSAGE

message_ID	composer_ID	body	channel_ID	create_time
1	1	message 1	1	2019-05-13 18:40:27
2	7	message 2	1	2019-05-13 18:40:27
3	6	message 3	1	2019-05-13 18:40:27
4	6	message 4	2	2019-05-13 18:40:27
5	7	message 5	2	2019-05-13 18:40:27
6	6	message 6	2	2019-05-13 18:40:27
7	6	message 7	3	2019-05-13 18:40:27
8	7	message 8	3	2019-05-13 18:40:27
9	6	before message	1	2019-05-12 00:00:00
10	6	after message	1	2019-05-14 00:00:00
12	6	hi	18	2019-05-17 02:00:28
13	6	hello	18	2019-05-17 02:00:46



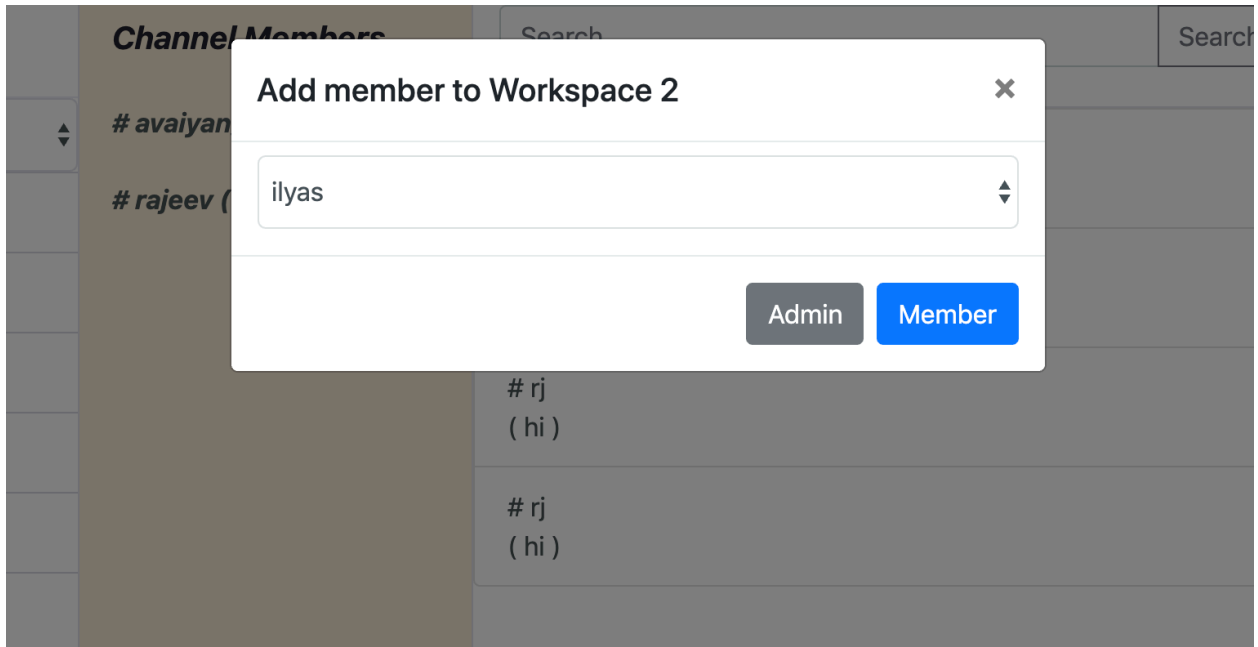
## FRONT END

rajeev	<b>Channel Members</b>	<input type="text" value="Search"/>	<input type="button" value="Search"/>	<a href="#">Logout</a>	<a href="#">Make Admin</a>
Workspace 2					
channel 3					
channel 4					
asdca					
CHANNEL 10					
CHANNEL 12					
test					
tetsth					
iugwf					
Invite Member					
Delete A Member					
Create a Workspace					
Create a Channel					
		<input type="text" value="Message"/>			

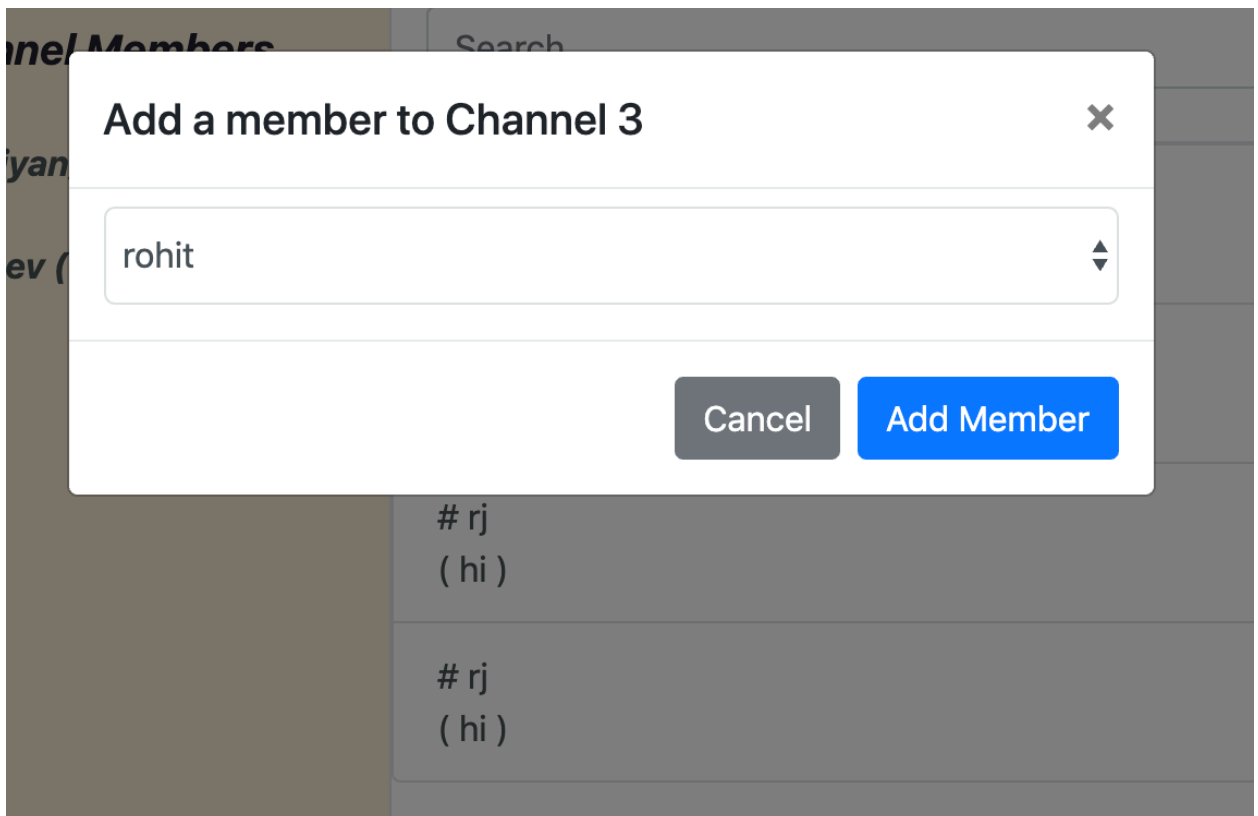
- Workspace can selected which then displays the available channels.
- Invite member adds member to the current workspace

<b>Channel Members</b>	<input type="text" value="Search"/>	<input type="button" value="Search"/>	<a href="#">Logout</a>	<a href="#">Make Admin</a>
# avaiyang ( av )	# rj ( message 7 )			
# rajeev ( rj )	# av ( message 8 )			
	# rj ( hi )			
	# rj ( hi )			
Add A Member				
Delete A Member	<input type="text" value="Message"/>			

- Selecting a channel displays the messages of the channel.



- Can add members of SNICKR into workspaces through invitations



- Can add members of the workspace into a private channel.
- Members can be given administration role to the workspace.

- Members of workspace are added directly into public channel, whenever they are created.

**Create a Channel** ×

Name

Description

☐ Private ☐ Public ☐ Direct

Close Save changes

- Three types of channels can be created PRIVATE, PUBLIC and DIRECT.

**Channel Members**

#rajeev ( rj )

#avaiyang ( av )

Search  Search [Logout](#) [Make Admin](#)

Message

- Direct channel involve only 2 members so no longer the add member option will be available.

## EXTRA FEATURES

- Members can be deleted, admins cannot be deleted.
- Live channel members can be viewed.

## Further Improvements

- Can introduce a notification-based system, where rather than adding the members directly into a workspace, the member can choose to join the workspace.
- SQL injections were handled through data sanitation, better methods can be implemented.
- Couldn't implement a socket connection to implement a live chatting system.