sections

sections
- id ✔
- course_id ↗
- name t

courses
- id ✔
- instructor_id ↗
- title t
- introduce t
- price #

course_student
- course_id ↗
- student_id ↗
- section_checkpoint ↗
- rate #

section_student
- section_id ↗
- student_id ↗
- lesson_checkpoint
- highest_point #

lessons

lessons
- id ✔
- section_id t
- name t
- estimate_time #
- video_url t
- content t

live_lessons
- id ✔
- section_id t
- name t
- schedule_time #

questions
- id ✔
- section_id t
- question t
- type #

student_lesson
- student_id ↗
- lesson_id ↗
- is_touch b
- touch_value t

answers
- id #
- question_id ↗
- content t
- is_true b

topics

topics
- id ✔
- name t
- request_id #
- commit_id #
- parent_id #

course_topic
- course_id ↗
- topic_id ↗

user_topic
- user_id ↗
- topic_id ↗

users
- id ✔
- username t
- email t
- name t
- password t
- confirmation_code #
- email_verify_at d
- avatar t
- role #

assets

assets
- id ✔
- owner_id ↗
- name t
- url t
- update_at d
- is_public b

asset_lesson
- asset_id ↗
- lesson_id ↗

asset_message
- asset_id ↗
- message_id ↗

settings

instructors
- user_id ↗
- introduce t
- receive_mail t
- receive_bought_notify b
- receive_report b

students
- user_id ↗
- receive_mail t
- receive_flower_new_course b
- receive_notificate b
- receive_course_change b

message

rooms
- id ✔
- name t
- room_code t
- roomable_type t
- roomable_id ↗

messages
- id ✔
- sender_id #
- room_id t
- content t
- create_at d

user_room
- user_id ↗
- room_id ↗
- status #

mentions
- id #
- message_id ↗
- user_id ↗

Default Layout

Table answers

* Pk	id	int
*	question_id	int
	content	varchar(250)
	is_true	boolean
Indexes		
Pk	pk_answer_id	id
Foreign Keys		
	fk_answer_learn_unit (question_id) ref questions (id)	
Options		
engine=InnoDB		

Table asset_lesson

	asset_id	int
	lesson_id	int
Foreign Keys		
	fk_asset_lesson_assets (asset_id) ref assets (id)	
	fk_asset_lesson_lessons (lesson_id) ref lessons (id)	
Options		
engine=InnoDB		

Table asset_message

	asset_id	int
	message_id	int
Foreign Keys		
	fk_asset_message_assets (asset_id) ref assets (id)	
	fk_asset_message_messages (message_id) ref messages (id)	
Options		
engine=InnoDB		

Table assets

* Pk	id	int
	owner_id	int
	name	varchar(100)
	url	varchar(100)
	update_at	date
	is_public	boolean
Indexes		
Pk	pk_assets_id	id
Foreign Keys		
	fk_assets_users (owner_id) ref users (id)	
Options		
engine=InnoDB		

Table course_student

* Pk	course_id	int
* Pk	student_id	int
	section_checkpoint	int
	rate	int
Indexes		
Pk	pk_course_student	student_id, course_id

Table course_student

Foreign Keys		
	fk_course_student_courses (course_id) ref courses (id)	
	fk_course_student_users (student_id) ref users (id)	
	fk_course_student_sections (section_checkpoint) ref sections (id)	
	fk_course_student_section_student (section_checkpoint) ref section_student (section_id)	
Options		
engine=InnoDB		

Table course_topic

* Pk	course_id	int
* Pk	topic_id	int
Indexes		
Pk	pk_course_topic	course_id, topic_id
Foreign Keys		
	fk_course_topic_courses (course_id) ref courses (id)	
	fk_course_topic_topics (topic_id) ref topics (id)	
Options		
engine=InnoDB		

Table courses

* Pk	id	int
	instructor_id	int
	title	varchar(125)
	introduce	varchar(125)
	price	int
Indexes		
Pk	pk_courses_id	id
Foreign Keys		
	fk_courses_instructor (instructor_id) ref users (id)	
Options		
engine=InnoDB		

Table instructors

* Pk	user_id	int
	introduce	varchar(1000)
	receive_mail	varchar(250)
	receive_bought_notify	boolean
	receive_report	boolean
Indexes		
Pk	pk_instructors_user_id	user_id
Foreign Keys		
	fk_instructors_users (user_id) ref users (id)	
Options		
engine=InnoDB		

Table lessons

* Pk	id	int
*	section_id	int
	name	varchar(100)
	estimate_time	bigint
	video_url	varchar(100)
	content	varchar(1000)
Indexes		

Table lessons

Pk	pk_lessons_id	id
Foreign Keys		
	fk_lessons_sections (section_id) ref sections (id)	
Options		
engine=InnoDB		

Table live_lessons

* Pk	id	int	
	section_id	int	
	name	varchar(100)	
	schedule_time	bigint	timestamp
Indexes			
Pk	pk_live_lessons_id	id	
Foreign Keys			
	fk_live_lessons_sections (section_id) ref sections (id)		
Options			
engine=InnoDB			

Table mentions

* Pk	id	int
	message_id	int
	user_id	int
Indexes		
Pk	pk_mentions_id	id
Foreign Keys		
	fk_mentions_messages (message_id) ref messages (id)	
	fk_mentions_users (user_id) ref users (id)	
Options		
engine=InnoDB		

Table messages

* Pk	id	int
	sender_id	int
	room_id	int
	content	long varchar
	create_at	datetime
Indexes		
Pk	pk_messages_id	id
Foreign Keys		
	fk_messages_rooms (room_id) ref rooms (id)	
Options		
engine=InnoDB		

Table questions

+ type:
 - 1: lesson
 - 2: question
 - 3: live section
+ estimate_time:
 - lesson, question: estimate length
 - live section: establish time

* Pk	id	int	
*	section_id	int	
	question	varchar(100)	

Table questions

*	type	int	
Indexes			
Pk	pk_learn_unit_id	id	
Foreign Keys			
	fk_learn_unit_sections (section_id) ref sections (id)		
Options			
engine=InnoDB			

Table rooms

type:
- 0: course_comment,
- 1: lession chat
- 2: live chat
- 3: private chat - refer null
- 4: group chat - refer null

* Pk	id	int	
	name	varchar(100)	
	room_code	varchar(200)	
	roomable_type	varchar(100)	
	roomable_id	int	
Indexes			
Pk	pk_rooms_id	id	
Foreign Keys			
	fk_rooms_courses (roomable_id) ref courses (id)		
	fk_rooms_lessons (roomable_id) ref lessons (id)		
	fk_rooms_live_lessons (roomable_id) ref live_lessons (id)		
Options			
engine=InnoDB			

Table section_student

* Pk	section_id	int	
* Pk	student_id	int	
	lesson_checkpoint	int	
	highest_point	int	
Indexes			
Pk	pk_section_student	section_id, student_id	
Unq	unq_section_student_section_id	section_id	
Foreign Keys			
	fk_section_student_sections (section_id) ref sections (id)		
	fk_section_student_users (student_id) ref users (id)		
	fk_section_student_lessons (lesson_checkpoint) ref lessons (id)		
Options			
engine=InnoDB			

Table sections

* Pk	id	int	
*	course_id	int	
	name	varchar(100)	
Indexes			
Pk	pk_sections_id	id	
Foreign Keys			
	fk_sections_courses (course_id) ref courses (id)		
Options			
engine=InnoDB			

Table student_lesson

check if student watch video or answer question, time stamp watching and score

*	student_id	int	
*	lesson_id	int	
*	is_touch	boolean	
	touch_value	varchar(125)	
Foreign Keys			
	fk_student_lesson_users (student_id) ref users (id)		
	fk_student_lessons (lesson_id) ref lessons (id)		
Options			
engine=InnoDB			

Table students

* Pk	user_id	int
	receive_mail	varchar(250)
	receive_flower_new_course	boolean
	receive_notificate	boolean
	receive_course_change	boolean
Indexes		
Pk	pk_students_user_id	user_id
Foreign Keys		
	fk_students_users (user_id) ref users (id)	

Table topics

* Pk	id	int
	name	varchar(100)
	request_id	int
	commit_id	int
	parent_id	int
Indexes		
Pk	pk_topics_id	id
Foreign Keys		
	fk_topics_parent (parent_id) ref topics (id)	
Options		
engine=InnoDB		

Table user_room

* Pk	user_id	int	
* Pk	room_id	int	
	status	int	1- normal 0- mute
Indexes			
Pk	pk_user_room	user_id, room_id	
Foreign Keys			
	fk_user_room_rooms (room_id) ref rooms (id)		
	fk_user_room_users (user_id) ref users (id)		
Options			
engine=InnoDB			

Table user_topic

* Pk	user_id	int
* Pk	topic_id	int
Indexes		
Pk	pk_user_topic	user_id, topic_id

Table user_topic

Foreign Keys		
	fk_user_topic_users (user_id) ref users (id)	
	fk_user_topic_topics (topic_id) ref topics (id)	
Options		
engine=InnoDB		

Table users

* Pk	id	int
	username	varchar(100)
	email	varchar(100)
	name	varchar(100)
	password	varchar(100)
	confirmation_code	int
	email_verify_at	date
	avatar	varchar(300)
	role	tinyint
Indexes		
Pk	pk_users_id	id
Options		
engine=InnoDB		