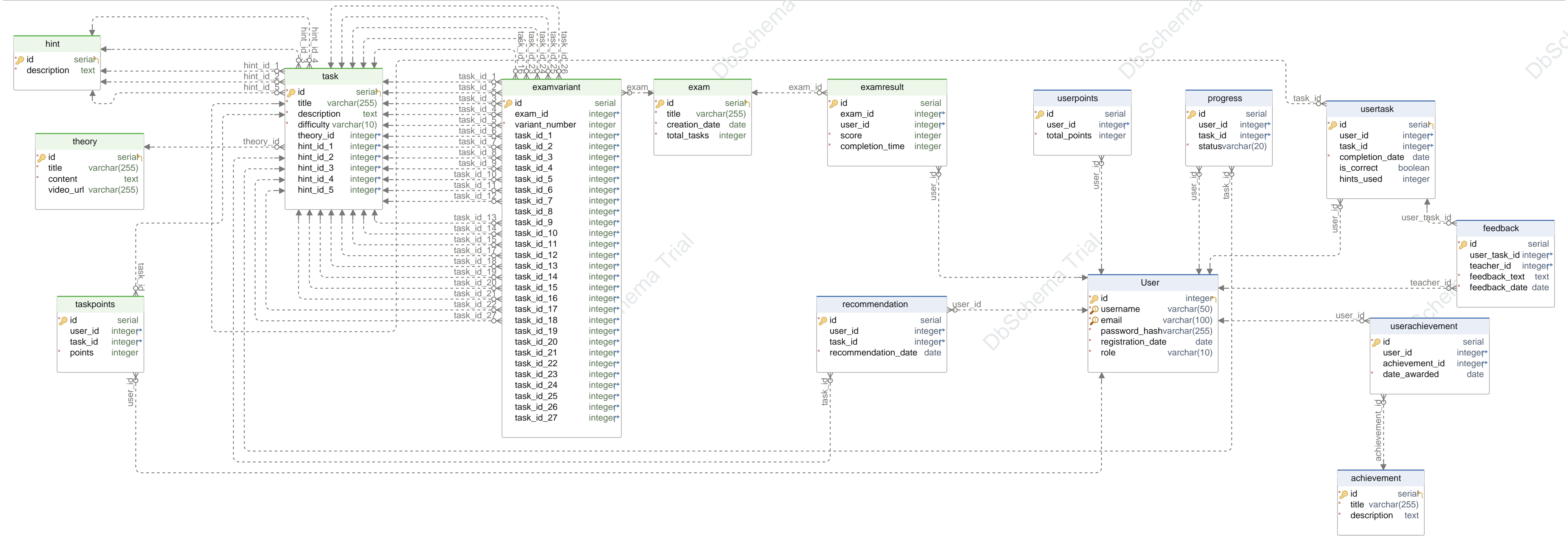


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~Layout with Sample Tools

Table User		
Idx	Name	Data Type
* Pk	id	integer DEFAULT nextval("User_id_seq"::regclass)
* Unq	username	varchar(50)
* Unq	email	varchar(100)
*	password_hash	varchar(255)
*	registration_date	date
*	role	varchar(10)
Indexes		
Type	Name	On
Pk	User_pkey	id
Unq	User_username_key	username
Unq	User_email_key	email
Constraints		
	Name	Definition
	User_role_check	((role)::text = ANY ((ARRAY['student'::character varying, 'teacher'::character varying, 'admin'::character varying])::text[]))

Table achievement		
Idx	Name	Data Type
* Pk	id	serial
*	title	varchar(255)
*	description	text
Indexes		
Type	Name	On
Pk	achievement_pkey	id

Table exam		
Idx	Name	Data Type
* Pk	id	serial
*	title	varchar(255)
*	creation_date	date
*	total_tasks	integer
Indexes		
Type	Name	On
Pk	exam_pkey	id

Table examresult		
Idx	Name	Data Type
* Pk	id	serial
	exam_id	integer
	user_id	integer
*	score	integer
*	completion_time	integer
Indexes		
Type	Name	On
Pk	examresult_pkey	id

## Table examresult

### Foreign Keys

Type	Name	On
------	------	----

	examresult_exam_id_fkey ( exam_id ) ref exam ( id )	
--	---	--

	examresult_user_id_fkey ( user_id ) ref User ( id )	
--	---	--

## Table examvariant

Idx	Name	Data Type
-----	------	-----------

* Pk	id	serial
------	----	--------

	exam_id	integer
--	---------	---------

*	variant_number	integer
---	----------------	---------

	task_id_1	integer
--	-----------	---------

	task_id_2	integer
--	-----------	---------

	task_id_3	integer
--	-----------	---------

	task_id_4	integer
--	-----------	---------

	task_id_5	integer
--	-----------	---------

	task_id_6	integer
--	-----------	---------

	task_id_7	integer
--	-----------	---------

	task_id_8	integer
--	-----------	---------

	task_id_9	integer
--	-----------	---------

	task_id_10	integer
--	------------	---------

	task_id_11	integer
--	------------	---------

	task_id_12	integer
--	------------	---------

	task_id_13	integer
--	------------	---------

	task_id_14	integer
--	------------	---------

	task_id_15	integer
--	------------	---------

	task_id_16	integer
--	------------	---------

	task_id_17	integer
--	------------	---------

	task_id_18	integer
--	------------	---------

	task_id_19	integer
--	------------	---------

	task_id_20	integer
--	------------	---------

	task_id_21	integer
--	------------	---------

	task_id_22	integer
--	------------	---------

	task_id_23	integer
--	------------	---------

	task_id_24	integer
--	------------	---------

	task_id_25	integer
--	------------	---------

	task_id_26	integer
--	------------	---------

	task_id_27	integer
--	------------	---------

### Indexes

Type	Name	On
------	------	----

Pk	examvariant_pkey	id
----	------------------	----

### Foreign Keys

Type	Name	On
------	------	----

	examvariant_exam_id_fkey ( exam_id ) ref exam ( id )	
--	--	--

	examvariant_task_id_1_fkey ( task_id_1 ) ref task ( id )	
--	--	--

	examvariant_task_id_2_fkey ( task_id_2 ) ref task ( id )	
--	--	--

	examvariant_task_id_3_fkey ( task_id_3 ) ref task ( id )	
--	--	--

	examvariant_task_id_4_fkey ( task_id_4 ) ref task ( id )	
--	--	--

	examvariant_task_id_5_fkey ( task_id_5 ) ref task ( id )	
--	--	--

### Table examvariant

examvariant_task_id_6_fkey ( task_id_6 ) ref task ( id )
examvariant_task_id_7_fkey ( task_id_7 ) ref task ( id )
examvariant_task_id_8_fkey ( task_id_8 ) ref task ( id )
examvariant_task_id_9_fkey ( task_id_9 ) ref task ( id )
examvariant_task_id_10_fkey ( task_id_10 ) ref task ( id )
examvariant_task_id_11_fkey ( task_id_11 ) ref task ( id )
examvariant_task_id_12_fkey ( task_id_12 ) ref task ( id )
examvariant_task_id_13_fkey ( task_id_13 ) ref task ( id )
examvariant_task_id_14_fkey ( task_id_14 ) ref task ( id )
examvariant_task_id_15_fkey ( task_id_15 ) ref task ( id )
examvariant_task_id_16_fkey ( task_id_16 ) ref task ( id )
examvariant_task_id_17_fkey ( task_id_17 ) ref task ( id )
examvariant_task_id_18_fkey ( task_id_18 ) ref task ( id )
examvariant_task_id_19_fkey ( task_id_19 ) ref task ( id )
examvariant_task_id_20_fkey ( task_id_20 ) ref task ( id )
examvariant_task_id_21_fkey ( task_id_21 ) ref task ( id )
examvariant_task_id_22_fkey ( task_id_22 ) ref task ( id )
examvariant_task_id_23_fkey ( task_id_23 ) ref task ( id )
examvariant_task_id_24_fkey ( task_id_24 ) ref task ( id )
examvariant_task_id_25_fkey ( task_id_25 ) ref task ( id )
examvariant_task_id_26_fkey ( task_id_26 ) ref task ( id )
examvariant_task_id_27_fkey ( task_id_27 ) ref task ( id )

### Table feedback

Idx	Name	Data Type
* Pk	id	serial
	user_task_id	integer
	teacher_id	integer
*	feedback_text	text
*	feedback_date	date

#### Indexes

Type	Name	On
Pk	feedback_pkey	id

#### Foreign Keys

Type	Name	On
	feedback_user_task_id_fkey ( user_task_id ) ref usertask ( id )	
	feedback_teacher_id_fkey ( teacher_id ) ref User ( id )	

### Table hint

Idx	Name	Data Type
* Pk	id	serial
*	description	text

#### Indexes

Type	Name	On
Pk	hint_pkey	id

### Table progress

Idx	Name	Data Type
-----	------	-----------

## Table progress

* Pk	id	serial
	user_id	integer
	task_id	integer
*	status	varchar(20)

### Indexes

Type	Name	On
Pk	progress_pkey	id

### Foreign Keys

Type	Name	On
	progress_user_id_fkey ( user_id ) ref User ( id )	
	progress_task_id_fkey ( task_id ) ref task ( id )	

### Constraints

Name	Definition
progress_status_check	((status)::text = ANY ((ARRAY['not_started'::character varying, 'in_progress'::character varying, 'completed'::character varying])::text[]))

## Table recommendation

Idx	Name	Data Type
* Pk	id	serial
	user_id	integer
	task_id	integer
*	recommendation_date	date

### Indexes

Type	Name	On
Pk	recommendation_pkey	id

### Foreign Keys

Type	Name	On
	recommendation_user_id_fkey ( user_id ) ref User ( id )	
	recommendation_task_id_fkey ( task_id ) ref task ( id )	

## Table task

Idx	Name	Data Type
* Pk	id	serial
*	title	varchar(255)
*	description	text
*	difficulty	varchar(10)
	theory_id	integer
	hint_id_1	integer
	hint_id_2	integer
	hint_id_3	integer
	hint_id_4	integer
	hint_id_5	integer

### Indexes

Type	Name	On
Pk	task_pkey	id

### Foreign Keys

Type	Name	On
	task_theory_id_fkey ( theory_id ) ref theory ( id )	

## Table task

task\_hint\_id\_1\_fkey ( hint\_id\_1 ) ref hint ( id )

task\_hint\_id\_2\_fkey ( hint\_id\_2 ) ref hint ( id )

task\_hint\_id\_3\_fkey ( hint\_id\_3 ) ref hint ( id )

task\_hint\_id\_4\_fkey ( hint\_id\_4 ) ref hint ( id )

task\_hint\_id\_5\_fkey ( hint\_id\_5 ) ref hint ( id )

### Constraints

Name	Definition
task_difficulty_check	((difficulty)::text = ANY ((ARRAY['easy'::character varying, 'medium'::character varying, 'hard'::character varying])::text[]))

## Table taskpoints

Idx	Name	Data Type
* Pk	id	serial
	user_id	integer
	task_id	integer
*	points	integer

### Indexes

Type	Name	On
Pk	taskpoints_pkey	id

### Foreign Keys

Type	Name	On
	taskpoints_user_id_fkey ( user_id ) ref User ( id )	
	taskpoints_task_id_fkey ( task_id ) ref task ( id )	

## Table theory

Idx	Name	Data Type
* Pk	id	serial
*	title	varchar(255)
*	content	text
	video_url	varchar(255)

### Indexes

Type	Name	On
Pk	theory_pkey	id

## Table userachievement

Idx	Name	Data Type
* Pk	id	serial
	user_id	integer
	achievement_id	integer
*	date_awarded	date

### Indexes

Type	Name	On
Pk	userachievement_pkey	id

### Foreign Keys

Type	Name	On
	userachievement_user_id_fkey ( user_id ) ref User ( id )	
	userachievement_achievement_id_fkey ( achievement_id ) ref achievement ( id )	

Table userpoints		
Idx	Name	Data Type
* Pk	id	serial
	user_id	integer
*	total_points	integer
Indexes		
Type	Name	On
Pk	userpoints_pkey	id
Foreign Keys		
Type	Name	On
	userpoints_user_id_fkey ( user_id ) ref User ( id )	

Table usertask		
Idx	Name	Data Type
* Pk	id	serial
	user_id	integer
	task_id	integer
*	completion_date	date
	is_correct	boolean
	hints_used	integer
Indexes		
Type	Name	On
Pk	usertask_pkey	id
Foreign Keys		
Type	Name	On
	usertask_user_id_fkey ( user_id ) ref User ( id )	
	usertask_task_id_fkey ( task_id ) ref task ( id )	