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## 1 groups

Creation: May 25, 2025 at 06:27 PM  
Last update: May 25, 2025 at 06:38 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(10)	UNSIGNED	No		auto_increment			
name	varchar(50)		No					
description	text		Yes	NULL				

## 2 guru

Creation: May 25, 2025 at 06:40 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id_guru	int(11)		No		auto_increment			
nip	varchar(20)		No					
nama_guru	varchar(100)		No					
email	varchar(100)		Yes	NULL				
mapel_id	int(11)		Yes	NULL		-> mapel.id_mapel ON UPDATE RESTRICT ON DELETE SET_NULL		

### 3 h\_ujian

Creation: May 25, 2025 at 06:42 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(11)		No		auto_increment			
ujian_id	int(11)		No			-> m_ujian.id_ujian ON UPDATE RESTRICT ON DELETE CASCADE		
siswa_id	int(11)		No			-> siswa.id_siswa ON UPDATE RESTRICT ON DELETE CASCADE		
list_soal	text		No					
tgl_mulai	datetime		Yes	current_timestamp()				
tgl_selesai	datetime		Yes	current_timestamp()				
status	enum('completed', 'unfinished', 'expired')		Yes	unfinished				
jml_benar	int(11)		Yes	NULL				
nilai	float		Yes	NULL				
nilai_bobot	float		No					
list_jawaban	text		Yes	NULL				
token	varchar(6)		Yes	NULL				

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## 4 kelas

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Creation: May 25, 2025 at 06:34 PM  
Last update: May 25, 2025 at 06:34 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id_kelas	int(11)		No		auto_increment			
nama_kelas	varchar(50)		No					

5 kelas\_guru

Creation: May 25, 2025 at 06:41 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(11)		No		auto_increment			
kelas_id	int(11)		No			-> kelas.id_kelas ON UPDATE RESTRICT ON DELETE CASCADE		
guru_id	int(11)		No			-> guru.id_guru ON UPDATE RESTRICT ON DELETE CASCADE		

# 6 login\_attempts

Creation: May 25, 2025 at 06:27 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(11)		No		auto_increment			
ip_address	varchar(45)		Yes	NULL				
login	varchar(100)		Yes	NULL				
time	int(10)	UNSIGNED	No					

# 7 mapel

Creation: May 25, 2025 at 06:40 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id_mapel	int(11)		No		auto_increment			
nama_mapel	varchar(100)		No					



## 8 m\_ujian

Creation: May 25, 2025 at 06:43 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id_ujian	int(11)		No		auto_increment			
token	varchar(6)		Yes	NULL				
nama_ujian	varchar(100)		No					
mapel_id	int(11)		No			-> mapel.id_mapel ON UPDATE RESTRICT ON DELETE CASCADE		
jumlah_soal	int(11)		No					
waktu	int(11)		No				durasi dalam menit	
acak_soal	enum('Y', 'N')		Yes	N				
acak_opsi	enum('Y', 'N')		Yes	N				
aktif	enum('Y', 'N')		Yes	Y				
tgl_mulai	datetime		Yes	current_timestamp()				
terlambat	datetime		No	current_timestamp()				
jenis	enum('acak', 'urut')		Yes	acak				
guru_id	int(11)		No			-> guru.id_guru ON UPDATE RESTRICT ON DELETE CASCADE		
created_at	timestamp		No	current_timestamp()				
updated_at	timestamp		No	current_timestamp()	on update current_timestamp()			

# 9 siswa

Creation: May 25, 2025 at 06:43 PM  
Last update: May 25, 2025 at 06:43 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id_siswa	int(11)		No		auto_increment			
nisn	varchar(20)		No					
nama	varchar(100) )		No					
jenis_kelamin	varchar(10)		Yes	NULL				
kelas_id	int(11)		Yes	NULL		-> kelas.id_kelas ON UPDATE RESTRICT ON DELETE SET_NULL		

# 10 tb\_soal

Creation: May 25, 2025 at 06:43 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id_soal	int(11)		No		auto_increment			
matkul_id	int(11)		No			-> mapel.id_mapel ON UPDATE RESTRICT ON DELETE CASCADE		
guru_id	int(11)		No			-> guru.id_guru ON UPDATE RESTRICT ON DELETE CASCADE		
soal	text		No					
file	varchar(255)		Yes	NULL				
tipe_file	varchar(50)		Yes	NULL				
opsi_a	text		Yes	NULL				
opsi_b	text		Yes	NULL				
opsi_c	text		Yes	NULL				
opsi_d	text		Yes	NULL				
opsi_e	text		Yes	NULL				
file_a	text		Yes	NULL				
file_b	int(11)		Yes	NULL				
file_c	int(11)		Yes	NULL				
file_d	int(11)		Yes	NULL				
file_e	int(11)		Yes	NULL				
jawaban	enum('A', 'B', 'C', 'D', 'E')		No					
gambar	varchar(255)		Yes	NULL				
created_on	int(10)		Yes	current_timestamp()				
updated_on	int(10)		Yes	current_timestamp()				
bobot	int(5)		No					

# 11 users

Creation: May 25, 2025 at 06:27 PM  
Last update: May 25, 2025 at 06:28 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(10)	UNSIGNED	No		auto_increment			
ip_address	varbinary(16)		No					
username	varchar(100)		Yes	NULL				
password	varchar(255)		No					
email	varchar(100)		No					
activation_selector	varchar(255)		Yes	NULL				
activation_code	varchar(255)		Yes	NULL				
forgotten_password_selector	varchar(255)		Yes	NULL				
forgotten_password_code	varchar(255)		Yes	NULL				
forgotten_password_time	datetime		No	current_timestamp()				
remember_selector	varchar(255)		Yes	NULL				
remember_code	varchar(255)		Yes	NULL				
created_on	int(11)		Yes	current_timestamp()				
last_login	datetime		No	current_timestamp()				
active	tinyint(1)		Yes	1				
first_name	varchar(50)		Yes	NULL				
last_name	varchar(50)		Yes	NULL				
company	varchar(100)		Yes	NULL				
phone	varchar(20)		Yes	NULL				

## 12 users\_groups

Creation: May 25, 2025 at 06:27 PM  
Last update: May 25, 2025 at 06:28 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
user_id	int(10)	UNSIGNED	No			-> users.id ON UPDATE RESTRICT ON DELETE CASCADE		
group_id	int(10)	UNSIGNED	No			-> groups.id ON UPDATE RESTRICT ON DELETE CASCADE		

