Recipedia

Database Design

Tables:

1. users

Attributes:

- `user_id` (Primary Key, Auto-increment): Unique identifier for each user.
- `username` (Unique): Username of the user.
- `password`: Password of the user.

2. recipe

Attributes:

- `recipe_id` (Primary Key, Auto-increment): Unique identifier for each recipe.
- `name`: Name of the recipe.
- `ingredients`: Ingredients required for the recipe.
- `preparation`: Steps for preparing the recipe.
- `comment`: Any additional comments or notes for the recipe.

3. created

Attributes:

- `create_id` (Primary Key, Auto-increment): Unique identifier for each creation entry.
- `user_id` (Foreign Key referencing users): ID of the user who created the recipe.
- `recipe_id` (Foreign Key referencing recipe): ID of the recipe created by the user.

4. meta

Attributes:

- `meta_id` (Primary Key, Auto-increment): Unique identifier for each metadata entry.
- `user_id` (Foreign Key referencing users): ID of the user performing the operation.
- `operation`: Type of operation performed (e.g., add, edit, delete).
- `timestamp`: Timestamp indicating when the operation was performed.

Relationships:

- **One-to-Many Relationship (users to created):**
  - One user can create multiple recipes.
  - Each recipe is created by one user.

- **One-to-Many Relationship (recipe to created):**
  - One recipe can be created by multiple users (if sharing is allowed).
  - Each creation entry corresponds to one recipe.

- **One-to-Many Relationship (users to meta):**
  - One user can perform multiple operations.
  - Each operation is performed by one user.

Additional Notes:

- The `users` table stores information about users, including their username and password.
- The `created` table establishes the relationship between users and recipes, allowing us to track who created which recipe.
- The `meta` table records user operations such as adding, editing, or deleting recipes along with timestamps for audit purposes.
- Foreign keys ensure data integrity by linking records in different tables.

Table Structure:

1) **user –**

	Field	Type	Null	Key	Default	Extra
▶	user_id	int	NO	PRI	NULL	auto_increment
	username	varchar(255)	NO	UNI	NULL	
	password	varchar(255)	NO		NULL	

2) **recipe –**

	Field	Type	Null	Key	Default	Extra
▶	recipe_id	int	NO	PRI	NULL	auto_increment
	name	varchar(255)	NO		NULL	
	ingredients	text	NO		NULL	
	preparation	text	NO		NULL	
	comment	text	YES		NULL	

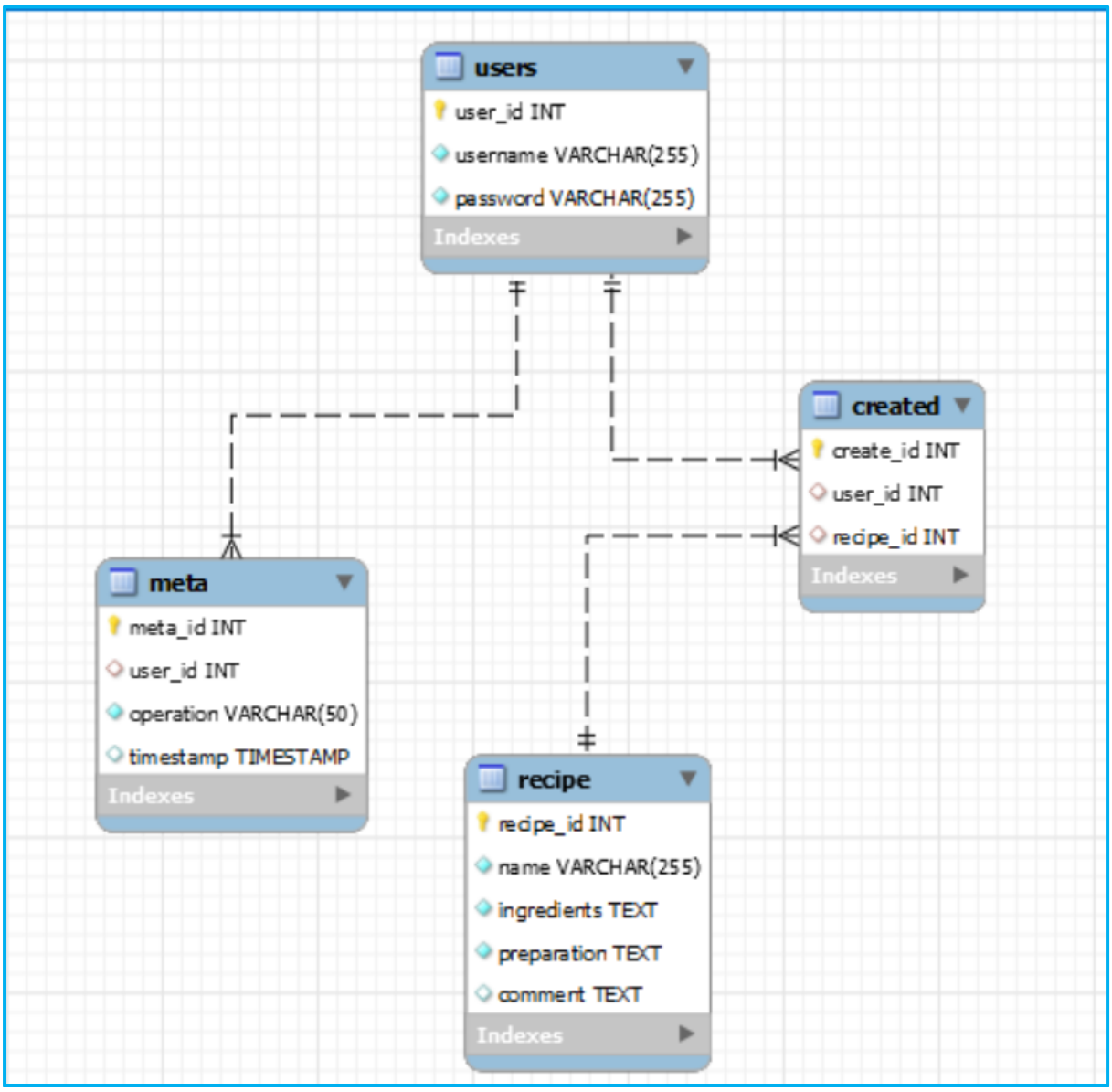
3) **created –**

	Field	Type	Null	Key	Default	Extra
▶	create_id	int	NO	PRI	NULL	auto_increment
	user_id	int	YES	MUL	NULL	
	recipe_id	int	YES	MUL	NULL	

4) **meta –**

	Field	Type	Null	Key	Default	Extra
▶	meta_id	int	NO	PRI	NULL	auto_increment
	user_id	int	YES	MUL	NULL	
	operation	varchar(50)	NO		NULL	
	timestamp	timestamp	YES		CURRENT_TIMESTAMP	DEFAULT_GENERATED

ER Diagram:


users
user_id INT
username VARCHAR(255)
password VARCHAR(255)
Indexes
created
create_id INT
user_id INT
recipe_id INT
Indexes
meta
meta_id INT
user_id INT
operation VARCHAR(50)
timestamp TIMESTAMP
Indexes
recipe
recipe_id INT
name VARCHAR(255)
ingredients TEXT
preparation TEXT
comment TEXT
Indexes