

User				
Attribute	Data Type	Description	Constraints	Example
userID	INT	Unique ID for each user	Primary Key, Auto Increment	1
username	VARCHAR(20)	User's chosen login name	Not Null, Unique	rjones
email	VARCHAR(255)	User's email address	Not Null	rjones@example.com
passwordHash	VARCHAR(99)	Hashed password string	Not Null	\$2by#10\$ac...
role	ENUM	Role of the user in the system	Not Null, Default, Must be one of: 'member', 'author', 'visitor'	member

Post				
Attribute	Data Type	Description	Constraints	Example
postID	INT	Unique ID for each post	Primary Key, Auto Increment	101
title	VARCHAR(80)	Title of the post	Not Null	"How to bake"
content	TEXT	Full content of the post	Not Null	"First, mix flour..."
postDate	DATETIME	Date and time the post was created	Not Null, Default, CURRENT_TIMESTAMP	2025-05-16 14:30:00
imagePath	VARCHAR(255)	Optional path to an image for the post	Nullable	uploads/img-245.jpg
userID	INT	ID of the user who created the post	FK -> User(userID), Not Null	1

Comment				
Attribute	Data Type	Description	Constraints	Example
commentID	INT	Unique ID for each comment	Primary Key, Auto Increment	2001
content	TEXT	The content of the comment	Not Null	"Fun post!"
commentDate	DATETIME	Date and time the comment was posted	Not Null, Default, CURRENT_TIMESTAMP	2025-05-16 14:30:00
userID	INT	ID of the user who made the comment	FK -> User(userID), Not Null	1
postID	INT	ID of the post the comment is on	FK -> Post(postID), Not Null	2

Rating				
Attribute	Data Type	Description	Constraints	Example
ratingID	INT	Unique ID for each rating	Primary Key, Auto Increment	501
value	TINYINT	Rating value given by the user (1 to 5)	Not Null, CHECK (value BETWEEN 1 AND 5)	4
userID	INT	ID of the user who submitted the rating	FK -> User(userID), Not Null	1
postID	INT	ID of the post that was rated	FK -> Post(postID), Not Null	101
(userID, postID)	----	Ensures user can only rate a post once	UNIQUE constraint (applied to both fields)	----

Tag				
Attribute	Data Type	Description	Constraints	Example
tagID	INT	Unique ID for each tag	Primary Key, Auto Increment	1
name	VARCHAR(30)	Name of the tag	Not Null, Unique	baking

PostTag (Composite Key)				
Attribute	Data Type	Description	Constraints	Example
postID	INT	ID of the post linked to the tag	Primary Key, Foreign Key -> Post(postID), Not Null	101
tagID	INT	ID of the tag linked to the post	Primary Key, Foreign Key -> Tag(tagID), Not Null	1