

Users Table

```
CREATE TABLE Users (  
  user_id INT PRIMARY KEY AUTO_INCREMENT,  
  username VARCHAR(255) UNIQUE NOT NULL,  
  email VARCHAR(255) UNIQUE NOT NULL,  
  password VARCHAR(255) NOT NULL,  
  full_name VARCHAR(255),  
  bio TEXT,  
  profile_image_url VARCHAR(255),  
  registration_date DATETIME DEFAULT CURRENT_TIMESTAMP  
);
```

user_id	username	email	password	full_name	bio	profile_image_url	registration_date
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Candidate keys can be = { (user_id), (username), (email) }

Non-prime attributes = { password, full_name, bio, profile_image_url, registration_date }

No partial dependencies (no non-prime attribute depends partially on candidate key)

No transitive dependency (no non-prime attribute determines another non-prime attribute)

So this table is in 2nd NF

Categories Table

```
CREATE TABLE Categories (  
  category_id INT PRIMARY KEY AUTO_INCREMENT,  
  name VARCHAR(255) NOT NULL  
);
```

category_id	name
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Candidate keys can be = { category_id }

Non-prime attributes = { name }

No partial dependencies (no non-prime attribute depends partially on candidate key)

No transitive dependency (no non-prime attribute determines another non-prime attribute)

So this table is in 2nd NF

BlogPosts Table

```
CREATE TABLE BlogPosts (  
  post_id INT PRIMARY KEY AUTO_INCREMENT,  
  title VARCHAR(255) NOT NULL,  
  content TEXT NOT NULL,  
  author_id INT NOT NULL,  
  publication_date DATETIME DEFAULT CURRENT_TIMESTAMP,  
  last_modified_date DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE  
  CURRENT_TIMESTAMP,  
  category_id INT NOT NULL,  
  FOREIGN KEY (author_id) REFERENCES Users(user_id),  
  FOREIGN KEY (category_id) REFERENCES Categories(category_id)  
);
```

post_id	title	content	author_id	publication_date	last_modified_date	category_id
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Candidate keys can be = { post_id }

Non-prime attributes = { title, content, author_id, publication_date, last_modified_date, category_id }

No partial dependencies (no non-prime attribute depends partially on candidate key)

No transitive dependency (no non-prime attribute determines another non-prime attribute)

So this table is in 2nd NF

Tags Table

```
CREATE TABLE Tags (  
  tag_id INT PRIMARY KEY AUTO_INCREMENT,  
  name VARCHAR(255) NOT NULL  
);
```

tag_id	name
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Candidate keys can be = { tag_id }

Non-prime attributes = { name }

No partial dependencies (no non-prime attribute depends partially on candidate key)

No transitive dependency (no non-prime attribute determines another non-prime attribute)

So this table is in 2nd NF

Comments Table

```
CREATE TABLE Comments (  
  comment_id INT PRIMARY KEY AUTO_INCREMENT,  
  post_id INT,  
  author_id INT,  
  content TEXT NOT NULL,  
  comment_date DATETIME DEFAULT CURRENT_TIMESTAMP,  
  parent_comment_id INT,  
  FOREIGN KEY (post_id) REFERENCES BlogPosts(post_id),  
  FOREIGN KEY (author_id) REFERENCES Users(user_id),  
  FOREIGN KEY (parent_comment_id) REFERENCES Comments(comment_id)  
);
```

comment_id	post_id	author_id	content	comment_date	parent_comment_id
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Candidate keys can be = { comment_id }

Non-prime attributes = { post_id, author_id, content, comment_date, parent_comment_id }

No partial dependencies (no non-prime attribute depends partially on candidate key)

No transitive dependency (no non-prime attribute determines another non-prime attribute)

So this table is in 2nd NF

Likes Table

```
CREATE TABLE Likes (  
  like_id INT PRIMARY KEY AUTO_INCREMENT,  
  user_id INT,  
  post_id INT,  
  like_date DATETIME DEFAULT CURRENT_TIMESTAMP,  
  FOREIGN KEY (user_id) REFERENCES Users(user_id),  
  FOREIGN KEY (post_id) REFERENCES BlogPosts(post_id)  
);
```

like_id	user_id	post_id	like_date
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Candidate keys can be = { like_id }

Non-prime attributes = { post_id, user_id, like_date }

No partial dependencies (no non-prime attribute depends partially on candidate key)

No transitive dependency (no non-prime attribute determines another non-prime attribute)

So this table is in 2nd NF

Followers Table

```
CREATE TABLE Follows (  
    follower_id INT,  
    followed_user_id INT,  
    PRIMARY KEY (follower_id, followed_user_id),  
    FOREIGN KEY (follower_id) REFERENCES Users(user_id),  
    FOREIGN KEY (followed_user_id) REFERENCES Users(user_id)  
);
```

follower_id	followed_user_id
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Composite Candidate key = { follower_id followed_user_id }

Non-prime attributes = { NULL }

No partial dependencies (no non-prime attribute depends partially on candidate key)

No transitive dependency (no non-prime attribute determines another non-prime attribute)

So this table is in 2nd NF

Post Tags Table

```
CREATE TABLE posttags (  
    post_id INT,  
    tag_id INT,  
    PRIMARY KEY (post_id, tag_id),  
    FOREIGN KEY (post_id) REFERENCES BlogPosts(post_id),  
    FOREIGN KEY (tag_id) REFERENCES Tags(tag_id)  
);
```

post_id	tag_id
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Composite Candidate key = { post_id tag_id }

Non-prime attributes = { NULL }

No partial dependencies (no non-prime attribute depends partially on candidate key)

No transitive dependency (no non-prime attribute determines another non-prime attribute)

So this table is in 2nd NF

Media Table

```
CREATE TABLE Media (  
    media_id INT PRIMARY KEY AUTO_INCREMENT,  
    file_url VARCHAR(255) NOT NULL,  
    post_id INT,  
    FOREIGN KEY (post_id) REFERENCES BlogPosts(post_id)  
);
```

media_id	file_url	post_id
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Candidate key = { media_id }

Non-prime attributes = { file_url, post_id }

No partial dependencies (no non-prime attribute depends partially on candidate key)

No transitive dependency (no non-prime attribute determines another non-prime attribute)

So this table is in 2nd NF

ER Diagram

