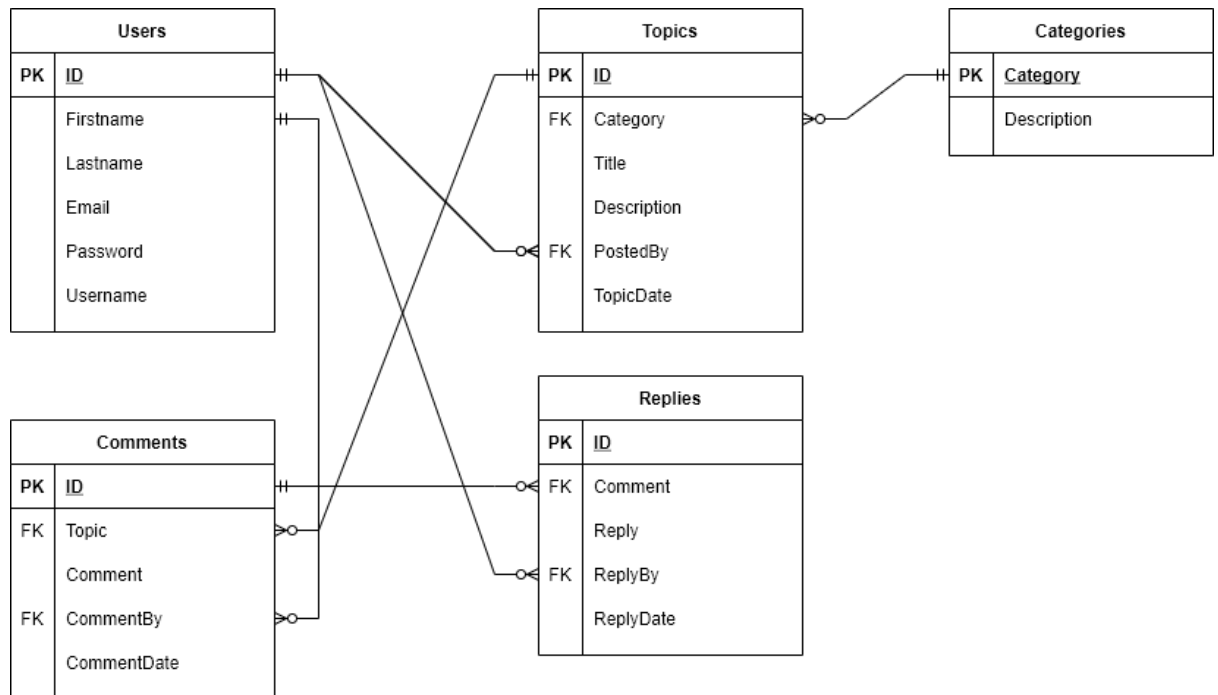


## Database

### Initial design:



### Final design:

```
CREATE SCHEMA FORUM;
```

```
CREATE TABLE Categories(  
  Category INT IDENTITY(1,1) PRIMARY KEY,  
  Description VARCHAR(280) NOT NULL  
);
```

```
ALTER TABLE Categories  
ADD CategoryName VARCHAR(255) NOT NULL UNIQUE;
```

```
CREATE TABLE Users(  
  ID INT IDENTITY(100,1) PRIMARY KEY,  
  Firstname VARCHAR(55) NOT NULL,  
  Lastname VARCHAR(55) NOT NULL,  
  Email VARCHAR(30),  
  Password VARCHAR(15) NOT NULL,  
  Username VARCHAR(15) NOT NULL UNIQUE  
);
```

```
ALTER TABLE Users  
  ADD SecurityQuestion VARCHAR(255) NOT NULL
```

```
ALTER TABLE Users  
  ADD SecurityAnswer VARCHAR(255) NOT NULL
```

```
CREATE TABLE Topics(  
  ID INT IDENTITY(1,1) NOT NULL PRIMARY KEY,  
  Category INT NOT NULL,  
  Title VARCHAR(255) NOT NULL,  
  Description VARCHAR(500) NOT NULL,  
  PostedBy INT NOT NULL,  
  TopicDate DATETIME NOT NULL,  
  CONSTRAINT fk_Topic_Category  
  FOREIGN KEY(Category) REFERENCES Categories(Category),  
  CONSTRAINT fk_Topic_By  
  FOREIGN KEY(PostedBy) REFERENCES Users(ID)  
);
```

```
CREATE TABLE Comments(  
  ID INT IDENTITY(1,1) NOT NULL PRIMARY KEY,  
  Topic INT NOT NULL,  
  Comment VARCHAR(500) NOT NULL,  
  CommentBy INT NOT NULL,  
  CommentDate DATETIME NOT NULL,  
  CONSTRAINT fk_Comment_Topic  
  FOREIGN KEY(Topic) REFERENCES Topics(ID),  
  CONSTRAINT fk_Comment_By  
  FOREIGN KEY(CommentBy) REFERENCES Users(ID)  
);
```

```
CREATE TABLE Replies(  
  ID INT IDENTITY(1,1) NOT NULL PRIMARY KEY,  
  Comment INT NOT NULL,  
  Reply VARCHAR(500) NOT NULL,  
  ReplyBy INT NOT NULL,  
  ReplyDate DATETIME NOT NULL,  
  CONSTRAINT fk_Reply_Comment  
  FOREIGN KEY(Comment) REFERENCES Comments(ID),  
  CONSTRAINT fk_Reply_By  
  FOREIGN KEY(ReplyBy) REFERENCES Users(ID)  
);
```