Consider a simplified social media system that consists of three classes: User, AdminUser, and Post.

a) User Class:

Create a User class with the following attributes and methods:

Attributes:

userId (String): identifier for each user.

username (String): The username of the user.

email (String): The email address of the user.

friends (List<User>): A list containing user objects representing friends.

numberOfUsers (static int): A static parameter to count the total number of users in the system.

Methods:

User(String userId, String username, String email): Initializes a user with the given userId, username, and email.

addFriend(User friend): Adds the specified user object to the friends list and automatically adds this user to the friend's list.

getFriends(): List<User>: Returns a list of user objects that are friends with the current user.

b) AdminUser Class (Inherits from User):

Create an AdminUser class that inherits from the User class. Add the following additional attributes and methods:

Additional Attributes:

isAdmin (boolean): Indicates whether the user has administrative privileges.

Additional Methods:

AdminUser(String userId, String username, String email, boolean isAdmin): Initializes an admin user with the given userId, username, email, and isAdmin status.

c) Post Class:

Create a Post class with the following attributes and methods:

Attributes:

postId (String): identifier for each post.

author (User): The user object who created the post.

content (String): The content of the post.

likes (int): The number of likes the post has received.

likedBy (List<User>): A list containing user objects representing users who liked the post.

Methods:

Post(String postId, User author, String content): Initializes a post with the given postId, author (a user object), and content.

addLike(User user): Increments the number of likes by 1 if the user hasn't already liked the post.

getLikes(): int: Returns the current number of likes on the post.

toString(): String: Returns a string representation of the post.

Driver Class :

Create Users with relevant information.

Make users friends with each other.

Create a Post object authored by one of the users.

Print the details of the post using the toString() method.

Add a like to the post.

Print the updated number of likes on the post.

Print the number of users on the system.