Q1: Write a user contact management Java program.

Required tasks

1. Create a Contact class to save contact details.
2. Required fields for Contact class (name, phone, address).
3. Create a UserContactBook class to manage contacts.
4. Define add() method to add a new contact.
5. search() method to search by contact name or phone no.
6. remove() method to remove contact from the contact list.
7. Write a method to show all contacts.
8. Define a Test class and create a UserContactBook object to add, search, and remove contacts. Add at least 2 or more contacts and apply search and remove methods.

Q2. Write a simple blog management Java program.

Required tasks

1. Create a User class to save user details (user_id, name, email, password).
2. Create a Post class to save blog posts (post_id, user_id, post_body).
3. Create a Comment class to save post comments (post_id, user_id, comment_body).
4. Define a relationship between the User, Post, and Comment classes.
5. 1 user can have multiple posts.
6. 1 post can have multiple comments.
7. Define a Test class and create 1 user having 2 posts. Each post must have 1 or more comments.

Q3. Write a simple student management Java program.

Required tasks:

1. Create a new Classroom and add at least 5 students in a newly created classroom.
2. Create subjects (Math, Urdu, English, etc)
3. Assign subjects to the student (1 .. *)
4. Set marks for each student against the given subject.
5. Search student by name or roll no.
6. Edit student details.
7. Delete student.
8. Define Test class to show your work.

Required classes:

Classroom, Student, Subject