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Class: SE A

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Subject: OOP&CG

```
public class SimpleChat {
    public static void main(String[] args) throws Exception {
        ChatUser u1 = new ChatUser("Alice", new String[]{"Hi", "How Are You?", "Bye!"});
        ChatUser u2 = new ChatUser("Bob", new String[]{"Hello Alice", "I am Fine!", "OK See
you soon Bye!"});

        u1.start();
        u2.start();

        System.out.println("Alice alive? " + u1.isAlive());

        Thread.sleep(1000);
        u2.pauseChat();
        System.out.println("Bob paused...");

        Thread.sleep(1000);
        u2.resumeChat();
        System.out.println("Bob resumed...");

        Thread.sleep(1000);
        u1.stopChat();
        System.out.println("Alice stopped...");

        u1.join();
        u2.join();

        System.out.println("Alice alive after join? " + u1.isAlive());
        System.out.println("Chat ended.");
    }
}
```

```
class ChatUser extends Thread {
    private String[] messages;
    private volatile boolean running = true;
    private volatile boolean paused = false;
```

```

ChatUser(String name, String[] messages) {
    super(name);
    this.messages = messages;
}

public void pauseChat() {
    paused = true;
}

public synchronized void resumeChat() {
    paused = false;
    notify();
}

public void stopChat() {
    running = false;
}

public void run() {
    for (int i = 0; i < messages.length && running; i++) {
        synchronized (this) {
            while (paused) {
                try {
                    wait(); // thread waits until resumeChat() is called
                } catch (InterruptedException e) {
                    e.printStackTrace();
                }
            }
        }
    }

    System.out.println(getName() + " says: " + messages[i]);

    try {
        Thread.sleep(1000); // delay between messages
    } catch (InterruptedException e) {
        e.printStackTrace();
    }
}
}

```

OUTPUT:

Alice alive? true

Alice says: Hi

Bob says: Hello Alice

Bob paused...

Alice says: How Are You?

Bob resumed...

Bob says: I am Fine!

Alice says: Bye!

Alice stopped...

Bob says: OK See you soon Bye!

Alice alive after join? false

Chat ended.