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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]);
    }
}

```

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.