3. Write a program in Java to demonstrate synchronization

```java
package AssistedPracticeProject;

import java.io.*;
import java.util.*;
class Sender
{
    public void send(String msg)
    {
        System.out.println("Sending\t"  + msg );
        try
        {
            Thread.sleep(500);
        }
        catch (Exception e)
        {
            System.out.println("Thread  interrupted.");
        }
        System.out.println("\n" + msg + "Sent");
    }
}
class ThreadedSend extends Thread
{
    private String msg;
    private Thread t;
    Sender  sender;
    ThreadedSend(String m,  Sender obj)
    {
        msg = m;
        sender = obj;
    }

    public void run()
    {
        synchronized(sender)
        {
            sender.send(msg);
        }
    }

}

package AssistedPracticeProject;

public class SyncDemo {
        public static void main(String args[])
            {
                Sender snd = new Sender();
                ThreadedSend S1 =
                    new ThreadedSend( " How are You " , snd );
                ThreadedSend S2 =
                    new ThreadedSend( " Fine,Thank you " , snd );
                S1.start();
                S2.start();
                try
                {
                    S1.join();
                    S2.join();
```

```
        }
        catch(Exception e)
        {
            System.out.println("Interrupted");
        }
    }

}
```

Output:


```
<terminated> SyncDemo [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe  (29-Nov-2023, 8:06:21 am – 8:06:22 am) [pid: 16776]
Sending  How are You

 How are You Sent
Sending  Fine,Thank you

 Fine,Thank you Sent
```