Source code for UserAuthentication:

1. Authentication:

```
package com.simplilearn.demo;

import java.util.regex.*;

public class Authentication {
        public boolean authenticate(String Email, String password){

                String email = "Vyshi@1432";
                String pass = "vyshi";
                String emailPatern = "^(.+)@(.+)$";
                Pattern p = Pattern.compile(emailPatern);
                Matcher m = p.matcher(Email);
                if(m.matches())
                {
                        if(email.equals(Email) && pass.equals(password))
                                return true;
                        else
                                return false;
                }
                return false;

        }
}
```

2. AuthenticationTest:

```
package com.simplilearn.demo;

import static org.junit.jupiter.api.Assertions.*;
import static org.junit.jupiter.api.DynamicTest.dynamicTest;

import java.util.Arrays;
import java.util.Collection;

import org.junit.jupiter.api.AfterEach;
import org.junit.jupiter.api.BeforeEach;
import org.junit.jupiter.api.DynamicTest;
import org.junit.jupiter.api.TestFactory;

class AuthenticationTest {

        private Authentication a;
        @BeforeEach
        public void iniatilse()
```

```java
{
        a = new Authentication();
}
@AfterEach
public void destroy()
{
        a =null;
}

@TestFactory
Collection<DynamicTest> authenticationTestDemo(){

        return Arrays.asList(
                                dynamicTest("Test 1", ()->assertEquals(true, a.authenticate("Vyshi@1432",
"vyshi"))),
                                dynamicTest("Test 2", ()->assertNotEquals(true, a.authenticate("vyshi",
"Vyshi"))),
                                dynamicTest("Test 3", ()->assertTrue(a.authenticate("Vyshi@1432", "vyshi"))),
                                dynamicTest("Test 4", ()->assertNotSame(false, a.authenticate("Vyshi@1432",
"vyshi"))),
                                dynamicTest("Test 5", ()->assertEquals(false, a.authenticate("Vyshi@1432",
"Vyshi")))
                );
        }
}
```

3.pom.xml:

```xml
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.simplilearn.demo</groupId>
  <artifactId>UserAuthentication1</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <packaging>jar</packaging>

  <name>UserAuthentication1</name>
  <url>http://maven.apache.org</url>

  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
  </properties>
```

```xml
  <dependencies>
    <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>3.8.1</version>
      <scope>test</scope>
    </dependency>
    <dependency>
      <groupId>org.junit.jupiter</groupId>
      <artifactId>junit-jupiter-api</artifactId>
      <version>5.9.0</version>
      <scope>test</scope>
    </dependency>
  </dependencies>
  <build>

    <plugins>
      <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-compiler-plugin</artifactId>
        <version>3.10.1</version>
        <configuration>
          <source>1.8</source>
          <target>1.8</target>
        </configuration>
      </plugin>
    </plugins>

  </build>
</project>
```