**USER AUTHENTICATION**

**UserAuthentication.java:**

**package** com.example.authentication;

**import** java.util.regex.Pattern;

**public** **class** UserAuthentication

{

**public** **static** **boolean** patternMatches(String emailAddress, String regexPattern) {

**return** Pattern.*compile*(regexPattern)

.matcher(emailAddress)

.matches();

}

**public** **static** **boolean** passwordMatches(String passwordMat, String regexPatterns) {

**return** Pattern.*compile*(regexPatterns)

.matcher(passwordMat)

.matches();

}

}

**AuthenticationTestDemo.java:**

**package** com.example.authentication;

**import** **static** org.junit.jupiter.api.Assertions.\*;

**import** org.junit.jupiter.api.Test;

**import** org.junit.jupiter.api.Assertions.\*;

**import** com.example.authentication.UserAuthentication;

**import** org.junit.jupiter.api.AfterEach;

**import** org.junit.jupiter.api.BeforeEach;

**class** AuthenticationTestDemo {

**private** UserAuthentication obj;

@BeforeEach

**public** **void** setup() {

obj= **new** UserAuthentication();

System.***out***.println("User Initiated");

}

@AfterEach

**public** **void** tearDown() {

obj=**null**;

System.***out***.println("User Closed");

}

@Test

**public** **void** testUsingStrictRegex() {

String emailAddress = "nivethakamal@gmail.com";

String regexPattern = "^(?=.{1,64}@)[A-Za-z0-9\_-]+(\\.[A-Za-z0-9\_-]+)\*@"

+ "[^-][A-Za-z0-9-]+(\\.[A-Za-z0-9-]+)\*(\\.[A-Za-z]{2,})$";

*assertTrue*(UserAuthentication.*patternMatches*(emailAddress, regexPattern));

//Assert Null for Email

emailAddress=**null**;

*assertNull*(emailAddress);

//Assert Not Null for Email

emailAddress="nivethakamal@gmail.com";

*assertNotNull*(emailAddress);

}

@Test

**public** **void** testUsingPasswordStrictRegex() {

String passwordMat = "Nivesha99@";

String regexPatterns = "^(?=.\*[0-9])"

+ "(?=.\*[a-z])(?=.\*[A-Z])"

+ "(?=.\*[@#$%^&+=])"

+ "(?=\\S+$).{8,20}$";

*assertTrue*(UserAuthentication.*passwordMatches*(passwordMat, regexPatterns));

//Assert Null for Password

passwordMat=**null**;

*assertNull*(passwordMat);

//Assert Not Null for Password

passwordMat="Nivesha99@";

*assertNotNull*(passwordMat);

}

}

**POM.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>JUNITSampleTest</artifactId>

<version>0.0.1-SNAPSHOT</version>

<packaging>jar</packaging>

<name>JUNITSampleTest</name>

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

<properties>

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

</properties>

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>3.8.1</version>

<scope>test</scope>

</dependency>

<!--Junit Jupiter API-->

<dependency>

<groupId>org.junit.jupiter</groupId>

<artifactId>junit-jupiter-api</artifactId>

<version>5.9.0</version>

<scope>test</scope>

</dependency>

</dependencies>

<!--maven compiler plugin-->

<!--link: https://maven.apache.org/plugins/maven-compiler-plugin/examples/set-compiler-source-and-target.html-->

<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>