**Java Experiment: 5**

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**Semester:** III

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**Date of Experiment:** 21/01/2022

**Name of the Experiment:**

Write java program where user will enter login id and password as input. The password should be 8 digits containing one digit and one special symbol. If user enter valid password satisfying above criteria, then show “Login Successful Message”. If user enter invalid Password, then create Invalid-Password-Exception stating Please enter valid password of length 8 containing one digit and one Special Symbol.

**Aim:**

To understand the concept of Exception Handling in Java.

**Objectives:**

To create a java program for password validation using Exception Handling in Java.

**Outcomes:**

LO1-Explain the fundamental concepts of Java Programing.

LO3-Demonstrate how to extend java classes and achieve reusability using Inheritance, Interface and Packages.

LO4-Construct robust and faster programmed solutions to problem using concept of Multithreading, exceptions and file handling.

**Theory:**

The Exception Handling in Java is one of the powerful mechanism to handle the runtime errors so that normal flow of the application can be maintained.

**Software Requirements:**

* JDK-14
* Command Line
* Notepad

**Source Code:**

import java.util.Scanner;

import java.util.regex.Pattern;

class InvalidPasswordException extends Exception

{

int a=0;

public InvalidPasswordException(int conditionViolated)

{

a=conditionViolated;

}

public String printMessage()

{

switch(a)

{

case 1: return("Enter valid password satisfying given conditions !!!");

}

return("");

}

}

public class Password

{

public static void main(String[] args)

{

System.out.println("Enter Username : ");

Scanner in=new Scanner(System.in);

String username=in.nextLine();

System.out.println("Enter Password (Note: The password should be 8 digit containing one digit(0-9) and one special symbol) : ");

String password=in.nextLine();

try

{

isValid(password);

System.out.println("Login Successful ");

}

catch(InvalidPasswordException e)

{

System.out.println(e.printMessage());

}

}

public static void isValid(String password) throws InvalidPasswordException

{

int count=0;

for (int i=0;i<=9;i++)

{

String str1=Integer.toString(i);

if(password.contains(str1))

{

count=1;

}

}

Pattern specialCharPattern=Pattern.compile("[^a-z0-9]",Pattern.CASE\_INSENSITIVE);

if (password.length()<8|| count==0 ||!specialCharPattern.matcher(password).find())

{

throw new InvalidPasswordException(1);

}

}

}

**Output:**

Graphical user interface, text, application

Description automatically generated

**Conclusion:**

This experiment implies successful implementation of Exception Handling in Java.