//--------------------------------------SocSecException class---------

public class SocSecException extends Exception{

public SocSecException (String error){

super ("Invalid social security number" + error);

}

}

//------------------------------------------SocSecProcessor class-----

import java.util.Scanner;

public class SocSecProcessor {

public static void main(String[] args){

Scanner input = new Scanner(System.in);

char decision;

do {

System.out.print("Please enter a name: ");

String fName = new String(input.next());

String lName = new String(input.next());

String name = fName+ " " +lName;

System.out.print("Please enter a social security number: ");

String ssn = new String(input.next());

try {

if (isValid(ssn)) {

System.out.println(name + " " + ssn + " is valid.");

}

} catch (Exception e) {

System.out.println(name + " " + ssn + " " + e.getMessage());

}

System.out.println("Enter Y/N if you want to continue ");

String choice = input.next();

decision = choice.charAt(0);

} while (Character.toUpperCase(decision) == 'Y');

}

public static boolean isValid(String ssn)throws SocSecException{

boolean valid = true;

if (ssn.length() != 11 ) {

throw new SocSecException(" ssn needs to have 11 characters ");

}

else if (ssn.charAt(3) != '-') {

throw new SocSecException(" ssn needs to have a '-' at character 3");

}

else if(ssn.charAt(6) != '-') {

throw new SocSecException(" ssn needs to have a '-' at character 6");

}

for (int i = 0; i <3 ; i++){

if(!Character.isDigit(ssn.charAt(i)))

throw new SocSecException(" One of the characters in 1-3 is not a digit");

}

for (int i = 4; i <6 ; i++){

if(!Character.isDigit(ssn.charAt(i)))

throw new SocSecException(" One of the characters in 4-6 is not a digit");

}

for (int i = 7; i < 11 ; i++){

if (!Character.isDigit(ssn.charAt(i)))

throw new SocSecException(" One of the characters in 7-11 is not a digit");

}

return valid;

}

}

//-----------------------------------------------------------Output

Please enter a name: Dodie Matthew

Please enter a social security number: 123-12-222

Dodie Matthew 123-12-222 Invalid social security number ssn needs to have 11 characters

Enter Y/N if you want to continue

y

Please enter a name: George Bush

Please enter a social security number: 123-45-6789

George Bush 123-45-6789 is valid.

Enter Y/N if you want to continue

y

Please enter a name: Dudlry Doright

Please enter a social security number: 222-00-999o

Dudlry Doright 222-00-999o Invalid social security number One of the characters in 7-11 is not a digit

Enter Y/N if you want to continue

y

Please enter a name: John Doe

Please enter a social security number: 333-333-333

John Doe 333-333-333 Invalid social security number ssn needs to have a '-' at character 6

Enter Y/N if you want to continue

n

Process finished with exit code 0