**OOP ASSIGNMENT**

package Exception1;

import java.io.\*;

import java.sql.\*;

public class ExceptionHandlingExamples {

public static void main(String[] args) {

handleIOException();

handleFileNotFoundException();

handleEOFException();

handleSQLException();

handleClassNotFoundException();

handleArithmeticException();

handleNullPointerException();

handleArrayIndexOutOfBoundsException();

handleClassCastException();

handleIllegalArgumentException();

handleNumberFormatException();

}

private static void handleIOException() {

try {

BufferedReader reader = new BufferedReader(new FileReader("nonexistent.txt"));

reader.readLine();

} catch (IOException e) {

System.out.println("IOException caught: " + e.getMessage());

}

}

private static void handleFileNotFoundException() {

try {

FileInputStream fis = new FileInputStream("nonexistent.txt");

} catch (FileNotFoundException e) {

System.out.println("FileNotFoundException caught: " + e.getMessage());

}

}

private static void handleEOFException() {

try {

ByteArrayInputStream bais = new ByteArrayInputStream(new byte[] {});

DataInputStream dis = new DataInputStream(bais);

dis.readUTF();

} catch (EOFException e) {

System.out.println("EOFException caught: " + e.getMessage());

} catch (IOException e) {

System.out.println("IOException caught: " + e.getMessage());

}

}

private static void handleSQLException() {

try {

Connection conn = DriverManager.getConnection("jdbc:invalid:url", "user", "password");

} catch (SQLException e) {

System.out.println("SQLException caught: " + e.getMessage());

}

}

private static void handleClassNotFoundException() {

try {

Class.forName("nonexistent.Class");

} catch (ClassNotFoundException e) {

System.out.println("ClassNotFoundException caught: " + e.getMessage());

}

}

private static void handleArithmeticException() {

try {

int result = 10 / 0;

} catch (ArithmeticException e) {

System.out.println("ArithmeticException caught: " + e.getMessage());

}

}

private static void handleNullPointerException() {

try {

String str = null;

str.length();

} catch (NullPointerException e) {

System.out.println("NullPointerException caught: " + e.getMessage());

}

}

private static void handleArrayIndexOutOfBoundsException() {

try {

int[] arr = {1, 2, 3};

int value = arr[10];

} catch (ArrayIndexOutOfBoundsException e) {

System.out.println("ArrayIndexOutOfBoundsException caught: " + e.getMessage());

}

}

private static void handleClassCastException() {

try {

Object obj = new Integer(42);

String str = (String) obj;

} catch (ClassCastException e) {

System.out.println("ClassCastException caught: " + e.getMessage());

}

}

private static void handleIllegalArgumentException() {

try {

Thread thread = new Thread(() -> {});

thread.setPriority(100);

} catch (IllegalArgumentException e) {

System.out.println("IllegalArgumentException caught: " + e.getMessage());

}

}

private static void handleNumberFormatException() {

try {

int num = Integer.parseInt("invalid");

} catch (NumberFormatException e) {

System.out.println("NumberFormatException caught: " + e.getMessage());

}

}

}