**Day 21\_Java Assignment**

**1. Problem Description:**

What are the different types of Java exceptions?

**2. My Solution:**

There are 2 types of Exceptions as mentioned in below:

1. Built-in Exception

* Checked Exceptions
* Unchecked Exceptions

2. User-Defined Exception

|  |  |
| --- | --- |
| **Checked Exceptions** | **Unchecked Exceptions** |
| The classes that directly inherit from the Throwable class are known as checked exceptions. For example, IO Exception, SQL Exception, etc. Checked exceptions are checked at compile time. | The classes that inherit from the Runtime Exception are known as unchecked exceptions. For example, Arithmetic Exception, NullpointerException, ArrayIndexOutOfBoundsException, etc. Unchecked exceptions are not checked at compile-time, but they are checked at runtime. |

**Examples of Checked Exceptions:**

**1. IO Exception:**

It represents an error related to input or output operations, such as file handling.

**package** daily\_assesment;

**import** java.io.\*;

**import** java.io.FileReader;

**import** java.io.IOException;

**public** **class** FileHandler {

**public** **void** readFile(String filePath) **throws** IOException {

**try** {

File file = **new** File(filePath);

FileReader reader = **new** FileReader(file);

// Read file contents

reader.close();

} **catch** (IOException e) {

System.***out***.println("An error occurred while reading the file: " + e.getMessage());

}

}

**public** **static** **void** main(String[] args) **throws** IOException {

FileHandler handler = **new** FileHandler();

String filePath = "example.txt"; // Change this to the path of your file

handler.readFile(filePath);

}

}

**2. SQL Exception:**

package JDBC;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

import java.sql.Statement;

public class JDBC2 {

public static void main(String[] args) throws ClassNotFoundException, SQLException

{

//load and register the driver

Class.forName("com.mysql.cj.jdbc.Driver");

System.out.println("Driver is registered");

//Establish the connection

String url = "jdbc:mysql://localhost:3306/school\_db";

String userName = "root";

String password = "5.Exercise!";

Connection connect = DriverManager.getConnection(url,userName,password);

System.out.println("Connection established");

Statement stmnt = connect.createStatement();

String query = "INSERT INTO students (ID, NAME, AGE, GENDER)"

+ "VALUES(7, 'Rohit', 38, 'Male')";

int rowAffected = stmnt.executeUpdate(query);

System.out.println("Query is fine!");

System.out.println(rowAffected);

if(rowAffected != 0)

System.out.println("Check DB! Data has been added");

else

System.out.println("Failt to add");

stmnt.close();

connect.close();

}

}

**Example of Unchecked Exceptions:**

**Arithmetic Exception:**

**package** daily\_assesment;

**import** java.util.Scanner;

**public** **class** ArithmetException {

**public** **static** **void** main(String[] args) {

System.***out***.println("Welcome to my app!");

**try**

{

Scanner scanner = **new** Scanner(System.***in***);

System.***out***.println("Kindly enter the numerator to divide");

**int** num1 = scanner.nextInt();

System.***out***.println("Kindly enter the denominator");

**int** num2 = scanner.nextInt();

**int** res = num1 / num2;

System.***out***.println("The result is : " + res);

}

**catch**(ArithmeticException e)

{

System.***out***.println("Please give non zero denominator");

}

System.***out***.println("Thank you for using the app!");

}

}