**LAB-05**

**1.Write a java program to handle Exception using try, catch, finally block while reading input from commandline and store to integer array.**

**package** exception;

**import** java.util.Scanner;

**public** **class** Exception\_Handling {

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

{ Scanner sc = **new** Scanner(System.***in***);

**int**[] array = **new** **int**[5];

**try** {

System.***out***.println("Enter five integers:");

**for** (**int** i=0; i<5; i++) {

array[i] = Integer.*parseInt*(sc.nextLine());

}

}

**catch** (Exception e) {

System.***out***.println("\"Invalid input! Please enter integers only.");

} **finally** {

sc.close();

}

System.***out***.println("Number stored in the array:"); **for** (**int** i=0; i<5; i++) {

System.***out***.println(array[i]);

}

}

}

}

**OUTPUT:**

Enter five integers:

2

3

4

5

6

**Number stored in the array:**

**2**

**3**

**4**

**5**

**6**

**2. Write a java program for Method level exception handling, for writing data to file using objects**.

**import** java.io.FileOutputStream;

**import** java.io.ObjectOutputStream;

**import** java.io.IOException;

**import** java.io.Serializable;

**public** **class** Data **implements** Serializable{

**private** String name;

**private** **int** age;

**public** Data(String name, **int** age) {

**this**.name = name;

**this**.age = age;

}

**public** String getName() {

**return** name;

}

**public** **int** getAge() {

**return** age;

}

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

{

Data data = **new** Data("Haripriya", 10);

*writeDataToFile*(data, "d:\\haripriya\\userfile.txt");

}

**public** **static** **void** writeDataToFile(Data data, String filename)

{

**try** (FileOutputStream fileOutputStream = **new**

FileOutputStream(filename);

ObjectOutputStream objectOutputStream = **new**

ObjectOutputStream(fileOutputStream))

{

objectOutputStream.writeObject(data);

System.***out***.println("Data has been written to the file successfully."); }

**catch** (IOException e)

{

System.***out***.println("An error occurred while writing data to the file: "

+ e.getMessage());

**OUTPUT:**

**Data has been written to the file successfully.**

**3. Write a java program to illustrate, user can check error condition and call the catch block.**

**import** java.util.Scanner;

**public** **class** Catchexception {

@SuppressWarnings("resource")

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

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

**try** {

System.***out***.print("Enter a positive integer: ");

**int** num = Integer.*parseInt*(scanner.nextLine());

**if** (num <= 0) {

**throw** **new** Exception("Invalid input: Number must be positive");

}

System.***out***.println("Entered number: " + num);

} **catch** (NumberFormatException e) {

System.***out***.println("Invalid input: Please enter a valid integer.");

} **catch** (Exception e) {

System.***out***.println(e.getMessage());

}

scanner.close();

}

}

**OUTPUT:**

**Enter a positive integer: -14**

**Invalid input: Number must be positive**

**4. Write a java program to illustrate IO exception**

**import** java.io.BufferedReader;

**import** java.io.FileReader;

**import** java.io.IOException;

**public** **class** IOexception {

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

// **TODO** Auto-generated method stub

BufferedReader reader = **null**;

**try** {

reader = **new** BufferedReader(**new** FileReader("file.txt")); String line;

**while** ((line = reader.readLine()) != **null**) {

System.***out***.println(line);

}

} **catch** (IOException e) {

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

e.printStackTrace();

} **finally** { **try** { **if** (reader != **null**) {

reader.close();

}

} **catch** (IOException e) {

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

e.printStackTrace();

}

}

}

}

**OUTPUT:**

An error occurred while reading the file: file.txt (The system cannot find the file specified)

java.io.FileNotFoundException: file.txt (The system cannot find the file specified)

at java.base/java.io.FileInputStream.open0(Native Method)

at java.base/java.io.FileInputStream.open(FileInputStream.java:216)

at java.base/java.io.FileInputStream.<init>(FileInputStream.java:157)

at java.base/java.io.FileInputStream.<init>(FileInputStream.java:111)

at java.base/java.io.FileReader.<init>(FileReader.java:60)

at IOexception.main(IOexception.java:11)