

Assignment 3: Lab assignment on IO and Exception Handling

- 1) Download photo of your favourite player and save in some folder in a drive. Now write program to copy each character from that file and store into another file using
FileReader / FileWriter
FileInputStream / FileOutputStream
- 2) Update program 1 using class supporting buffering, calculate and record performance improvement achieved using it
- 3) Write a program to serialize and deserialize an object of Employee class. Employee class has the following members.

Employee
Int id; String name; Address address; double salary; (nonserializable) void display()

Q4. Write an application to read a file data.txt containing data like (actually it is a record of an book consisting of id, isbn, title, author and price)

file contain data like

books.txt

121:A234:java:raj:456
102:S234:c++:ekta:567

1. read the file and populate records in an LinkedList of books
2. write BookApp
3. write method searchBook(book id)
4. write method sellBook(String isbn, int noOfCopies)
5. write method purchaseBook(String isbn,int noOfCopies)
6. if Not sufficient book throw exception NotSufficientBookException

5. A student portal provides user to register their profile.

During registration the system needs to validate the user should be located in India.

If not the system should throw an exception.

Step 1: Create a user defined exception class named "InvalidCountryException".

Step 2: Overload the respective constructors.

Step 3: Create a main class "UserRegistration", add the following method,

registerUser- The parameter are String username,String userCountry and add the following logic,

- if userCountry is not equal to "India" throw a InvalidCountryException with the message "User Outside India cannot be registered"
- if userCountry is equal to "India", print the message "User registration done successfully"

Invoke the method registerUser from the main method with the data specified and see how the program behaves

6. Write a program to accept name and age of a person from the command prompt(passed as arguments when you execute the class) and ensure that the age entered is ≥ 18 and < 60 . Display proper error messages. The program must exit gracefully after displaying the error message in case the arguments passed are not proper. (Hint : Create a user defined exception class for handling errors.)

7. Write a program that accepts (using Scanner) 2 integers a and b as input and finds the quotient of a/b.

This program may generate an Arithmetic Exception. Use exception handling mechanisms to handle this exception. In the catch block, print the message as shown in the sample output. Also illustrate the use of finally block. Print the message "Inside finally block".

Sample Input and Output

1: Enter the 2 numbers 5 2 The quotient of $5/2 = 2$ Inside finally block

Sample Input and Output

2: Enter the 2 numbers 5 0 DivideByZeroException caught Inside finally block