A small restful Java program (A MAVEN PROJECT ilms) is written for performing basic create, update, delete and retrieve information of users of e-learning service (provided by ILMS). classes and functions used in the program are depicted by diagrams. the whole application is mainly divided in four packages:

PACKAGE1.com.domain:it includes java beans for storing information access, and objects for storing information from the csv given a input.

#### PACKAGE2. com.dao:

includes following classes and their interfaces:

### NetClientGet.java (implementing NetClientGetI interface):

Methods:

getOneUser(String emailid)-> which returns details of particular user
of given emailid in java beans.

getAllUsers()->returns details of all users into java bean.

getJsonStringfromInputstream(HttpURLConnection conn)->returns son string from input stream from a httpURL connection.

## **UpdateUser(implementing UpdateUserl interface):**

Methods:

updateUser(int id,String payload)->update user detials of given id(extracted from client bean which was retrieved by Netclient class method) with the given payload.

## deleteUser(implementing deleteUserl interface):

Methods:

deleteGivenUser(int ID)->delete user of given id(extracted from client bean which was retrieved by Netclient class method).

# **CreateNewUser(implementing CreateNewUserl interface)**

Methods:

int createUser()->creates new user by reading a create.json file and
returns the ID of the new user.

PACKAGE3.services:

Methods:

**GetInfoOfUsers.java**->uses functionality of NetClientGetI interface of com.dao package.

**DeleteAuser.java ->** uses functionality of deleteUserI interface of com.dao package.

**CompareAndUpdate.java->** uses functionality of UpdateUserI interface of com.dao package.

**AddUser.java ->** uses functionality of createNewUserI interface of com.dao package.

**CSVRead.java** (implementing CSVReadl interface)-> uses readCsvUserFile() function to read CSV file.

#### PACKAGE4.clientUser:

**MainClass.java->** includes main method for a console user to use the application by giving inputs from the console and using the services of the program.

we have used slf4j logging system.

The workflow of the whole application is depicted in the diagrams attached along with this read document.