```java
/*
 * Countries of the World App 1.0
 * UserApp.java "User Application"
 * Waleed Gudah
 *
 */

public class UserApp {

    private CountryDataTable DTable;

    private TheLog tLog;

    private TransData td;

    // ************************************************************//
    public UserApp(CountryDataTable DTable, int fileNumber, TheLog tLog) {

        this.DTable = DTable;

        this.tLog = tLog;

        this.td = new TransData(fileNumber, tLog);

        tLog.statusCode("UserApp started");

        processUserInput();

    }

    // ************************************************************//
    public void processUserInput() {

        while (td.nextRecord() == true) {

            inputSwitch(td.getKey());

        }
        td.finishUp();
    }

    // ************************************************************//
    // This method determines the Selection made by the transaction file //
    // and calls one of the 4 helper methods below to perform the appropriate
    // task.//
    public void inputSwitch(String key) {

        switch (key) {

        case "IN":

            insertNode();

            break;

        case "DN":
```

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            deleteNode();
            break;
        case "SA":
            selectAll();
            break;
        case "SN":
            tLog.transProcess("");
            selectNode();
            break;
        }
    }
    // ************************************************************//
    private void deleteNode() {
        tLog.transProcess(td.getKey() + " " + td.getCountry());
        DTable.deleteNode(td.getCountry());
    }
    // ************************************************************//
    private void selectAll() {
        tLog.transProcess(td.getKey());
        tLog.toLog("      CDE NAME------------- CONTINENT---- ------AREA ---POPULATION LIFE");
        DTable.inOrderTraverse(0);
        tLog.toLog("      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++");
    }
    //
*****************************************************************************************//
    // This method guarantees the node being selected is found before writing to
    // log, ie echo//
    private void selectNode() {
        tLog.transProcess(td.getKey() + " " + td.getCountry());
        DTable.selectNode(DTable.binarySearch(td.getCountry()));
    }
    // ************************************************************//
```

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    public void insertNode() {
        tLog.transProcess(td.getKey() + " " + td.getCountry());

        DTable.insert(td.getCode(), td.getCountry(), td.getContinent(),

        td.getArea(), td.getPopulation(), td.getLifeExpectency());

    }

    // ************************************************************//
    public void finishUp() {

        tLog.statusCode("UserApp finished - " + td.getNumberOfTransactions()
                + " transactions processed");

    }

}
```