

```

/**This class methods are called on execution of modify methods
in Database and Transaction */

import java.io.File;
import java.io.FileWriter;
import java.io.IOException;

public class ModifyDataCommand extends CommandAdaptor {

    protected Object prevData;
    private StringBuilder value = new StringBuilder();
    private File file = new File("commands.txt");
    private FileWriter fileWriter = null;

    public ModifyDataCommand(IDatabase database, String key,
Object data) {
        super(database, key, data);
    }

    /**
     * saving command as add, as data can be modified on recover
by just putting
     * the updated value with previous key
    */
    @Override
    public boolean execute() {
        value.append("add@").append(this.key +
"@").append(this.data + "@").append(getInstance());
        try {
            fileWriter = new FileWriter(file, true);
            fileWriter.write(value.toString());
            fileWriter.write("\n");
            fileWriter.flush();
            fileWriter.close();
        } catch (IOException e) {
            e.printStackTrace();
        }
        value.setLength(0);
        /** value before modification */
        this.prevData = this.database.get(key);
        return (this.database.data().put(key, data) != null);
    }

    @Override
    public boolean undo() {
        value.append("add@").append(this.key +
"@").append(this.prevData + "@").append(getInstance());
        try {
            fileWriter = new FileWriter(file, true);
            fileWriter.write(value.toString());
            fileWriter.write("\n");

```

```

        fileWriter.flush();
        fileWriter.close();
    } catch (IOException e) {
        e.printStackTrace();
    }
    value.setLength(0);
    return (this.database.data().remove(key) != null) &&
(this.database.data().put(key, prevData) != null);
}

@Override
public boolean canRedo() {
    return true;
}

@Override
public boolean canUndo() {
    return true;
}

@Override
public String getInstance() {
    if (this.data instanceof Integer)
        return "Integer";
    else if (this.data instanceof Double)
        return "Double";
    else if (this.data instanceof String)
        return "String";
    else if (this.data instanceof ArrayFormat)
        return "Array";
    else
        return "Object";
}
}

```