

Programación orientada a objetos con JAVA

```
package si2;

import javax.xml.transform.OutputKeys;
import javax.xml.transform.Result;
import javax.xml.transform.Source;
import javax.xml.transform.Transformer;
import javax.xml.transform.TransformerFactory;
import javax.xml.transform.dom.DOMSource;
import javax.xml.transform.stream.StreamResult;
import javax.xml.xpath.*;
import org.w3c.dom.*;

public class SI2 {

    public static void main(String[] args) {
        SI2 si2 = new SI2();
        si2.agregarUsuario("usuario", "contraseña");
        si2.listarUsuarios();
    }

    public void listarUsuarios() {
        try {
            Document document =
                javax.xml.parsers.DocumentBuilderFactory.newInstance().newDocumentBuilder().parse(new
                java.io.File("C:/users.xml"));
            XPath xPath = XPathFactory.newInstance().newXPath();

            org.w3c.dom.NodeList usuarios = (org.w3c.dom.NodeList)
            xPath.evaluate("/users/user", document.getDocumentElement(), XPathConstants.NODESET);
            for (int i = 0; i < usuarios.getLength(); i++) {

                //System.out.println(usuarios.item(i).getAttributes().getNamedItem("username").getNodeV
                alue() + " " +
                usuarios.item(i).getAttributes().getNamedItem("password").getNodeValue());
                System.out.println(xPath.evaluate("@username", usuarios.item(i)) + " " +
                xPath.evaluate("@password", usuarios.item(i)));
            }

        } catch (Exception e) {
            e.printStackTrace();
        }
    }

    public void agregarUsuario(String username, String password) {
        try {
            Document document =
                javax.xml.parsers.DocumentBuilderFactory.newInstance().newDocumentBuilder().parse(new
                java.io.File("C:/users.xml"));

            Element users = document.getDocumentElement();

            Element user = document.createElement("user");

            Attr attrUsername = document.createAttribute("username");
            attrUsername.setNodeValue(username);
            user.getAttributes().setNamedItem(attrUsername);

            Attr attrPassword = document.createAttribute("password");
            attrPassword.setNodeValue(password);
            user.getAttributes().setNamedItem(attrPassword);

            users.appendChild(user);

            Source source = new DOMSource(document);

            Result result = new StreamResult(new java.io.File("C:/users.xml"));
            Transformer transformer = TransformerFactory.newInstance().newTransformer();
            transformer.setParameter(OutputKeys.INDENT, "yes");

            transformer.transform(source, result);

        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```