**Weak XML Schema: Type Any Development Mitigation SOP**

When a XML Schema allows the <any> element, it provides a means for XML injections to occur. The <any> element can be included in a valid XML document, and an attacker can add nodes in to the XML document not declared in the schema or overwrite any previous written nodes.

**Defense Against Weak XML Schema: Type Any**

To prevent being vulnerable to this exploit, replace the <any> element with a concretely defined elements. By removing the <any> element, it removes the capability of the document to not contain any additional elements that are not declared in the XML schema.

**Example**

1. **<xs:schema** xmlns:xs="http://www.w3.org/2001/XMLSchema"  **>**
2. **<xs:element** name="cart" **>**
3. **<xs:complexType>**
4. **<xs:sequence>**
5. **<xs:element** name="itemID" maxOccurs="1" **/>**
6. **<xs:element** name="price" maxOccurs="1" **/>**
7. **<xs:element** name="description" maxOccurs="1"**/>**
8. **<xs:any** minOccurs="0"**/>**
9. **</xs:sequence>**
10. **</xs:complexType>**
11. **</xs:element>**
12. **<xs:element** name="description" type="xs:string"**/>**
13. **<xs:element** name="name" type="xs:string"**/>**
14. **<xs:element** name="price" type="xs:decimal"**/>**
15. **<xs:element** name="code" type="xs:string"**/>**
16. **</xs:schema>**

**Explanation**

For the above example, the <any> element is used to extend the XML document and allows to overwrite previous nodes.

**Recommendation**

To prevent being vulnerable to this exploit, explicitly define elements instead of using the <any> element.

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3. **<xs:complexType>**
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8. **</xs:sequence>**
9. **</xs:complexType>**
10. **</xs:element>**
11. **<xs:element** name="description" type="xs:string"**/>**
12. **<xs:element** name="name" type="xs:string"**/>**
13. **<xs:element** name="price" type="xs:decimal"**/>**
14. **<xs:element** name="code" type="xs:string"**/>**
15. **</xs:schema>**