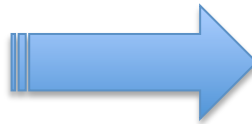


XML

Elements

<!ELEMENT element-name (element-content)>

<!ELEMENT foo (#PCDATA)>



<foo>bar</foo>

<foo />

<!ELEMENT foo (baz, qux)>



<foo>

 <baz />

 <qux>quux</qux>

</foo>

Attributes

<!ATTLIST element-name attribute-name attribute-type default-value>

<!ATTLIST foo bar (#CDATA) #REQUIRED>  <foo bar="baz">qux</foo>

<!ATTLIST foo bar (#CDATA) #DEFAULT "baz">
 <foo bar="qux">quux</foo>

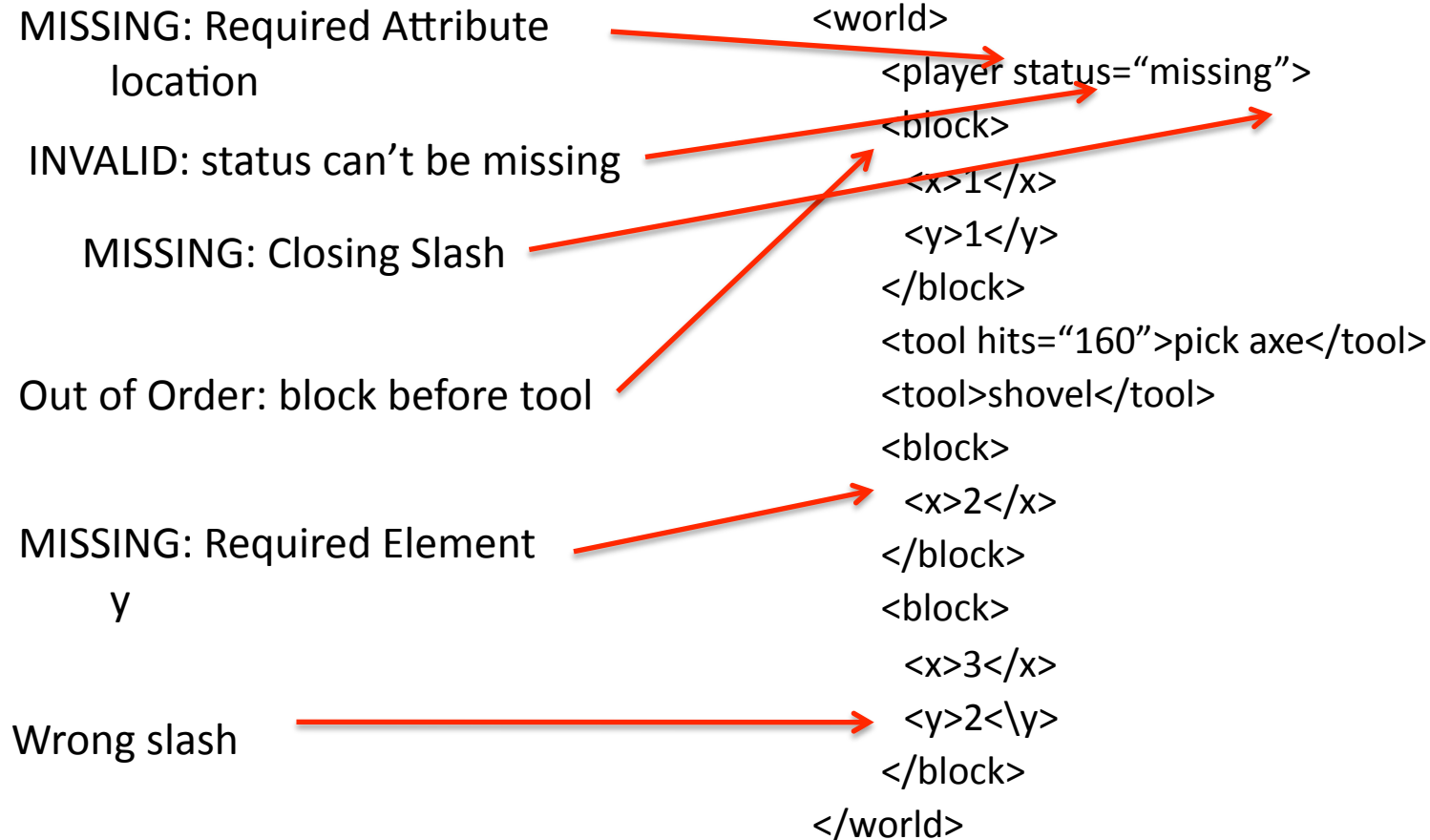
<!ATTLIST foo bar (baz|qux) "qux">  <foo bar="qux">quux</foo>
or
<foo bar="baz">quux</foo>

Find the XML Errors

```
<? xml version =“1.0” ?>
<!DOCTYPE world [
  <!ELEMENT world (player, tool*, block)>
  <!ELEMENT player (#PCDATA)>
  <!ATTLIST player location #CDATA
#REQUIRED>
  <!ATTLIST player status (alive|dead)
#REQUIRED>
  <!ELEMENT tool (#PCDATA)>
  <!ATTLIST tool hits CDATA #DEFAULT “100”>
  <!ELEMENT block (x, y)>
  <!ELEMENT x (#PCDATA)>
  <!ELEMENT y (#PCDATA)>
]>
```

```
<world>
  <player status=“missing”>
    <block>
      <x>1</x>
      <y>1</y>
    </block>
    <tool hits=“160”>pick axe</tool>
    <tool>shovel</tool>
    <block>
      <x>2</x>
    </block>
    <block>
      <x>3</x>
      <y>2<\y>
    </block>
  </world>
```

Find the XML Errors



Convert to a DTD

- An exam has a title, an author (which may be omitted), and one or more questions.
- Each Question question has a title and a body and must have maximum possible grade associated with it. All questions need to be categorized as easy or hard and needs a type of either normal or bonus where normal is the default.

```
<? xml version="1.0" ?>
<!DOCTYPE exam [
    <!ELEMENT exam (title, author?, question+)>
    <!ELEMENT title (#PCDATA)>
    <!ELEMENT author (#PCDATA)>
    <!ELEMENT question (title, body)>
    <!ATTLIST question grad (#CDATA) #REQUIRED>
    <!ATTLIST question category (easy|hard)
    #REQUIRED>
    <!ATTLIST question type (normal|bonus)
    "normal">
]>
```