

Parakai Springs XML Design Document

ISCG6420 Assessment 3: Group Project (30/10/2024 – S2-2024)

Summary

The xml is used to show the layout of all the areas that can be booked (that are available at the Parakai Springs park). Each “area” element has its own attributes like their position, its size how much it costs, the capacity, and is it available.

The Root element is “areas”

It has many “area” elements each of which represent its own booking area for the map.

The Child element is “area”

Each “area” has many properties that define the area. These include, id, top, left, width, height, cost, capacity, image and available.

“id”

- Each area has its own unique identifier.
- Example is “1”
- Its data type is integer

“top”

- It shows the vertical position of an area on the map in pixels.
- Example is “80px”
- Its data type is string

“left”

- It shows the horizontal position of an area on the map in pixels.
- Example is “50px”
- Its data type is string

“width”

- It shows width of an area in pixels
- Example is “80px”
- Its data type is string

“height”

- It shows height of an area in pixels
- Example is “150px”
- Its data type is string

“cost”

- It shows cost per day to book the area
- Example is 220
- Its data type is integer

“capacity”

- It shows the maximum no. of people that the area can fit
- Example is “80px” and is an integer.
- Its data type is integer

“image”

- It is the path to the image
- Example is “./assets/room8.jpg”
- It is a string data type

“available”

- Indicates if the area can be booked or not (uses true if it can or false if it can't)
- It is a Boolean data type

XML

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<areas xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
xsi:noNamespaceSchemaLocation="./areas.xsd">
```

```
<!-- Areas with capacity 5 -->
```

```
<area>
```

```
<id>1</id>
```

```
<top>90px</top>
```

```
<left>20px</left>
```

```
<width>80px</width>
```

```
<height>80px</height>
```

```
<cost>100</cost> <!-- Price for one day -->
```

```
<capacity>5</capacity>
```

```
<image>./assets/room1.jpg</image>
```

```
<available>true</available>
```

```
</area>
```

```
<area>
  <id>2</id>
  <top>90px</top>
  <left>150px</left>
  <width>80px</width>
  <height>80px</height>
  <cost>120</cost>
  <capacity>5</capacity>
  <image>./assets/room2.jpg</image>
  <available>true</available>
</area>
```

```
<area>
  <id>3</id>
  <top>210px</top>
  <left>20px</left>
  <width>80px</width>
  <height>80px</height>
  <cost>110</cost>
  <capacity>5</capacity>
  <image>./assets/room3.jpg</image>
  <available>true</available>
</area>
```

```
<area>
  <id>4</id>
  <top>310px</top>
  <left>20px</left>
  <width>80px</width>
  <height>80px</height>
  <cost>130</cost>
```

<capacity>5</capacity>

<image>./assets/room4.jpg</image>

<available>true</available>

</area>

<area>

<id>5</id>

<top>410px</top>

<left>20px</left>

<width>80px</width>

<height>80px</height>

<cost>100</cost>

<capacity>5</capacity>

<image>./assets/room5.jpg</image>

<available>true</available>

</area>

<!-- Areas with capacity 10 -->

<area>

<id>6</id>

<top>80px</top>

<left>300px</left>

<width>100px</width>

<height>100px</height>

<cost>150</cost>

<capacity>10</capacity>

<image>./assets/room6.jpg</image>

<available>true</available>

</area>

<area>

```
<id>7</id>
<top>80px</top>
<left>450px</left>
<width>100px</width>
<height>100px</height>
<cost>140</cost>
<capacity>10</capacity>
<image>./assets/room7.jpg</image>
<available>true</available>
</area>
```

```
<!-- Areas with capacity 20 -->
```

```
<area>
  <id>8</id>
  <top>220px</top>
  <left>440px</left>
  <width>120px</width>
  <height>120px</height>
  <cost>200</cost>
  <capacity>20</capacity>
  <image>./assets/room8.jpg</image>
  <available>true</available>
</area>
```

```
<area>
  <id>9</id>
  <top>410px</top>
  <left>440px</left>
  <width>120px</width>
  <height>120px</height>
  <cost>220</cost>
```

```

    <capacity>20</capacity>

    <image>./assets/room9.jpg</image>

    <available>true</available>
</area>

<!-- Area with capacity 50 -->
<area>
    <id>10</id>

    <top>480px</top>

    <left>140px</left>

    <width>150px</width>

    <height>150px</height>

    <cost>300</cost>

    <capacity>50</capacity>

    <image>./assets/room10.jpg</image>

    <available>true</available>

</area>
</areas>

```

XSD

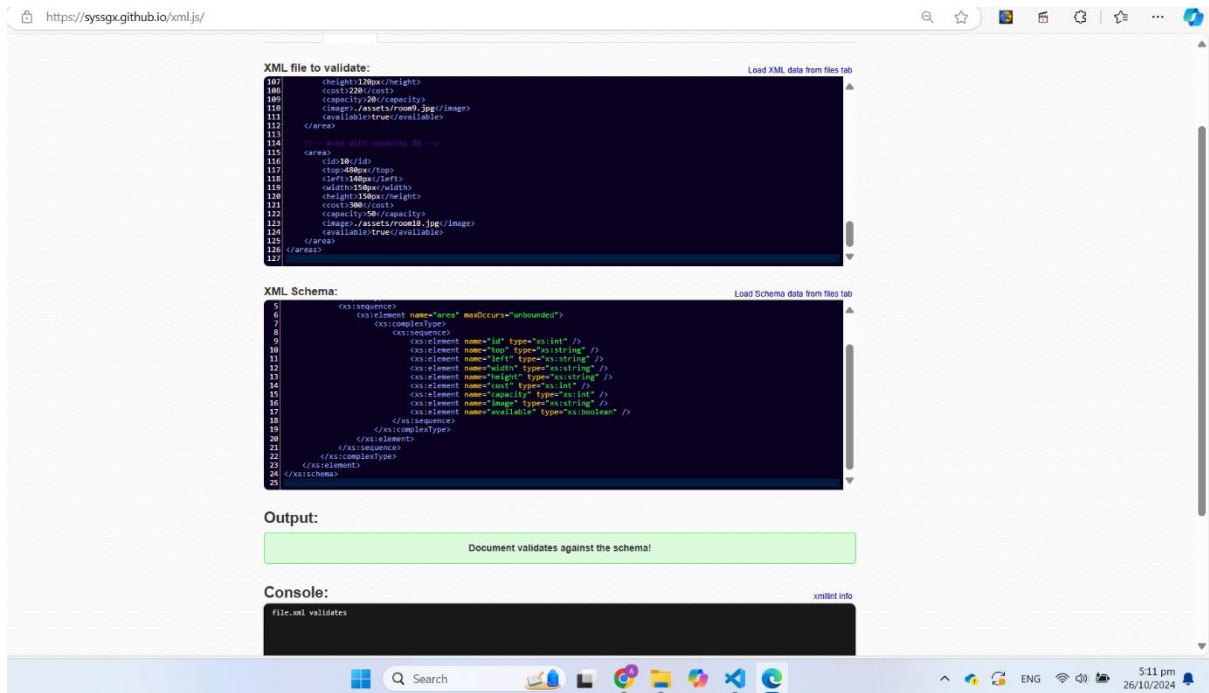
```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <xs:element name="areas">
        <xs:complexType>
            <xs:sequence>
                <xs:element name="area" maxOccurs="unbounded">
                    <xs:complexType>
                        <xs:sequence>
                            <xs:element name="id" type="xs:int" />
                            <xs:element name="top" type="xs:string" />

```

```
<xs:element name="left" type="xs:string" />
<xs:element name="width" type="xs:string" />
<xs:element name="height" type="xs:string" />
<xs:element name="cost" type="xs:int" />
<xs:element name="capacity" type="xs:int" />
<xs:element name="image" type="xs:string" />
<xs:element name="available" type="xs:boolean" />
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>
```

Validation



The website used was from the XML Exercises in week 9. This screenshot shows that the XML validates (as we can see in green)