

Simple Android JSON Parser

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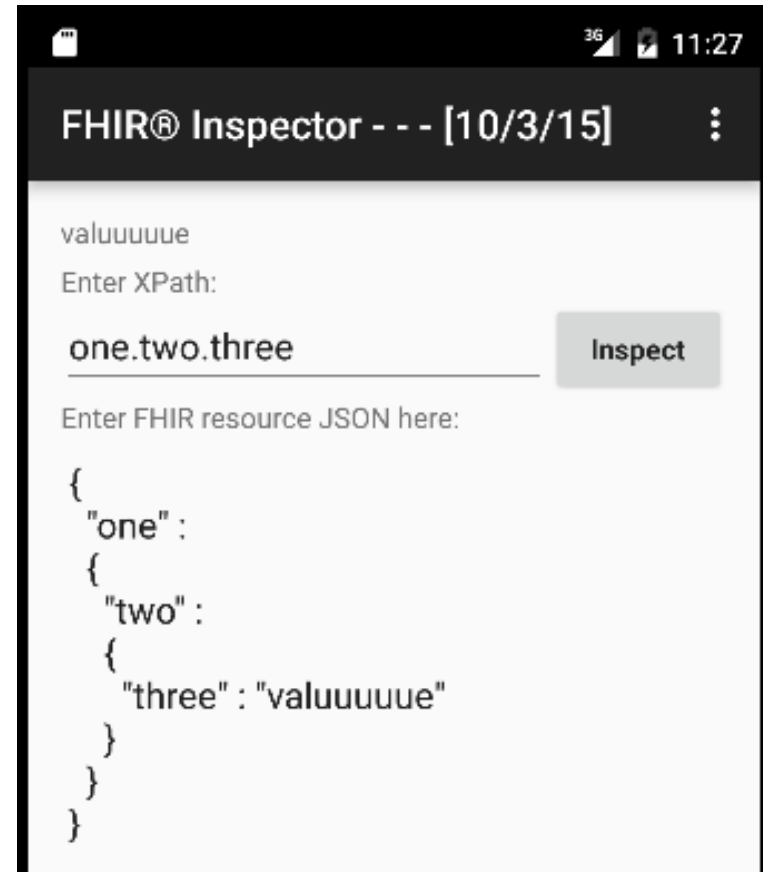
FHIR Connect-a-thon and Application
Implementation Development (AID), HL7 Atlanta

Overview

- My first Android app as a developer
- Learn more about JSON
- Learn about UI layouts in the mobile space.

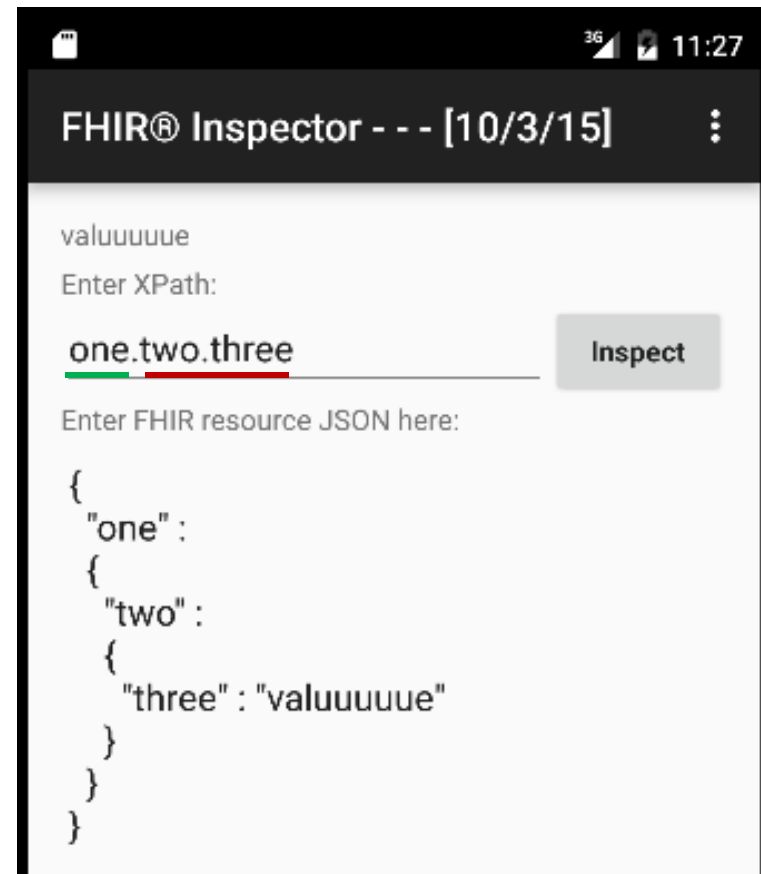
JSON Parser Design

- Use of recursion;
Few lines of code
- Arrays were harder.



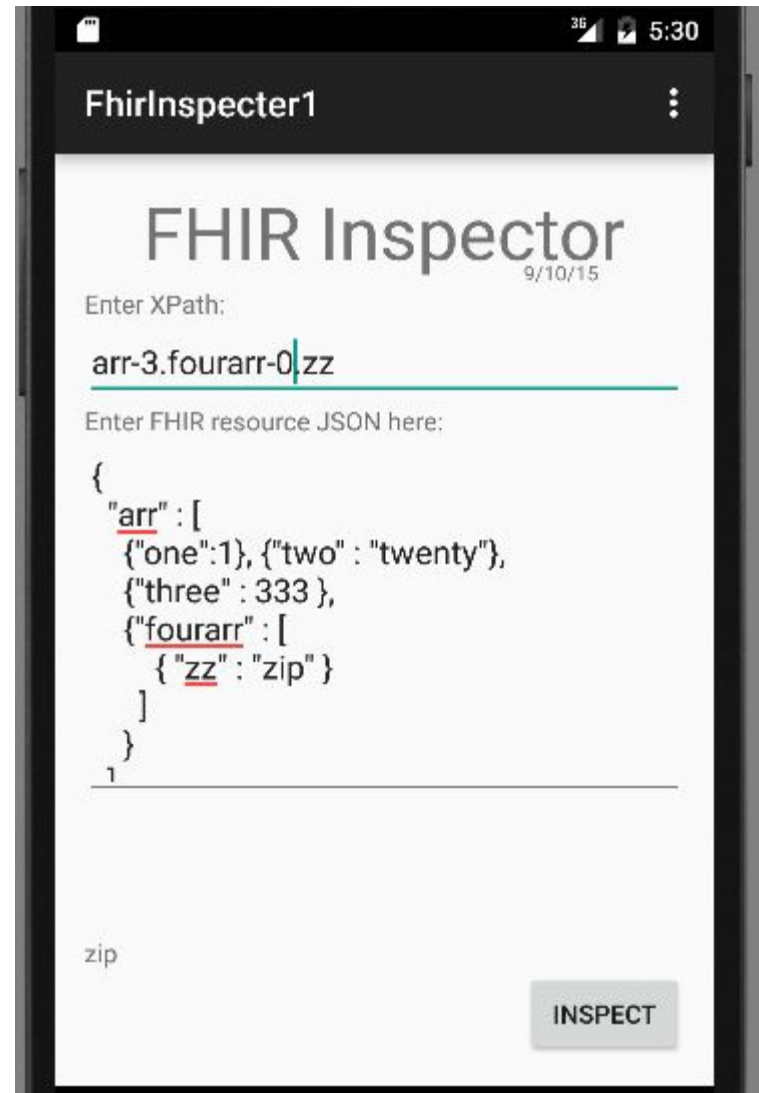
JSON Parser Design

- Process one layer as base case.
- Keep the remainder for recursive case.
- FHIR DSTU2 element depth level causes no stack problems.



JSON Parser Design

- Drills into array index on a named object.
 - Anonymous arrays can't be indexed!
- Could arrays be handled generically?



JSON Parser Design

- Returns functional JSON object.



The screenshot shows a mobile application titled "FHIR Inspector" with a status bar at the top displaying "3G", a battery icon, and the time "4:29". The app's title bar is "FhirInspector1" with a menu icon on the right. The main content area has the title "FHIR Inspector" and the date "9/10/15". It contains two input fields: "Enter XPath:" with the value "array-1" and "Enter FHIR resource JSON here:". Below the second field is a text area containing a JSON object:

```
{  "array" : [    {"one" : 1}, {"two" : 2}  ]}
```

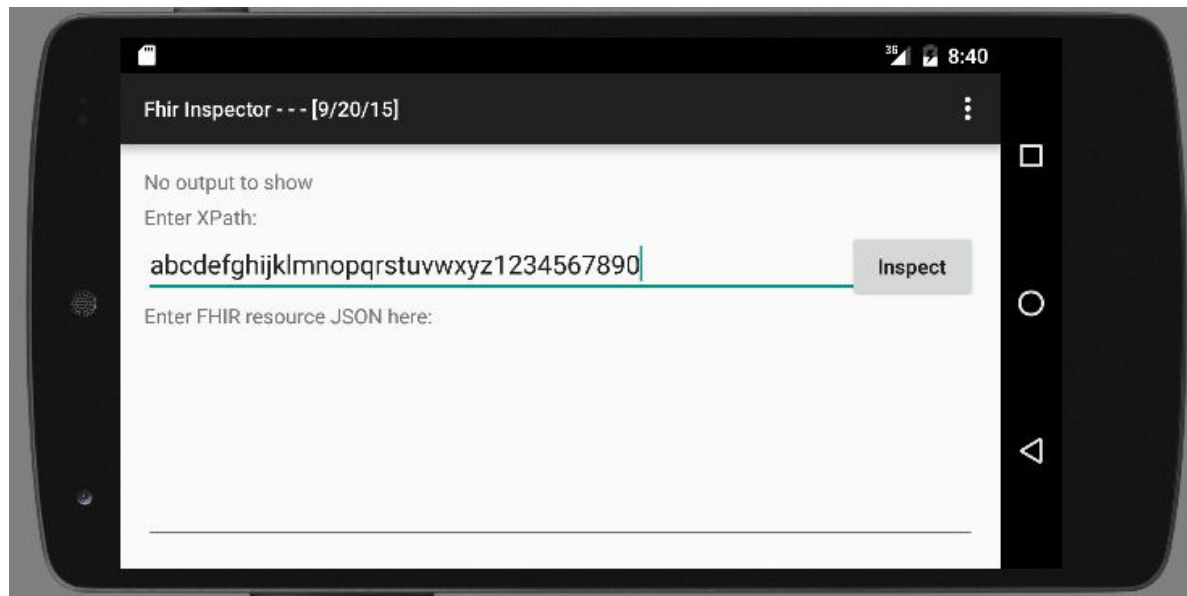
. At the bottom left, the result of the XPath query is shown as

```
{"two":2}
```

. A grey button labeled "INSPECT" is located at the bottom right.

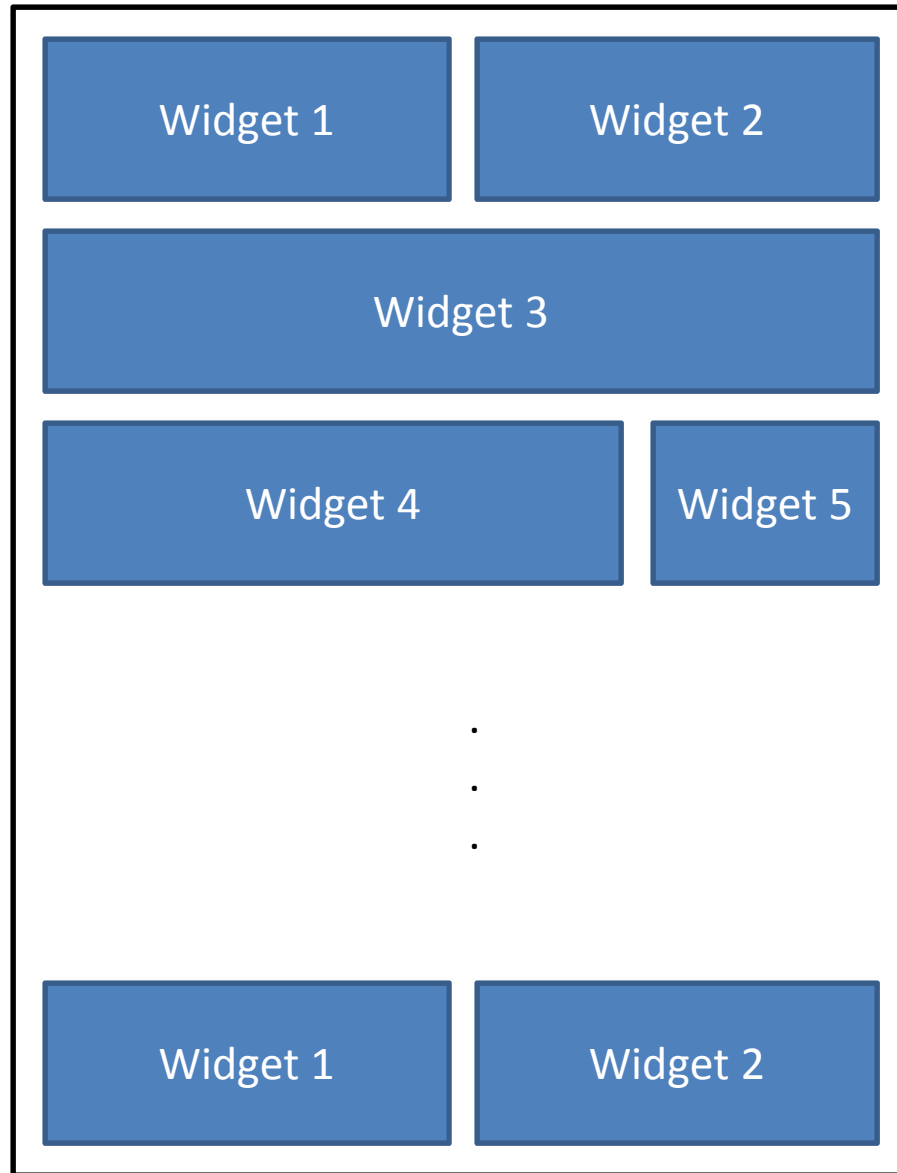
UI Layout Design

- Was more difficult to get right than I imagined.
 - Widgets off the screen
 - Button in the middle of the screen



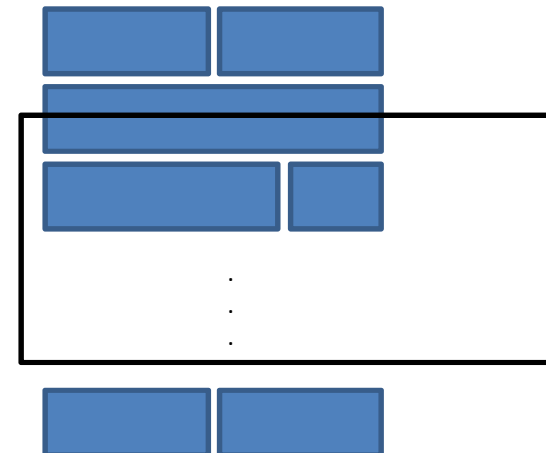
UI Layout Design

portrait



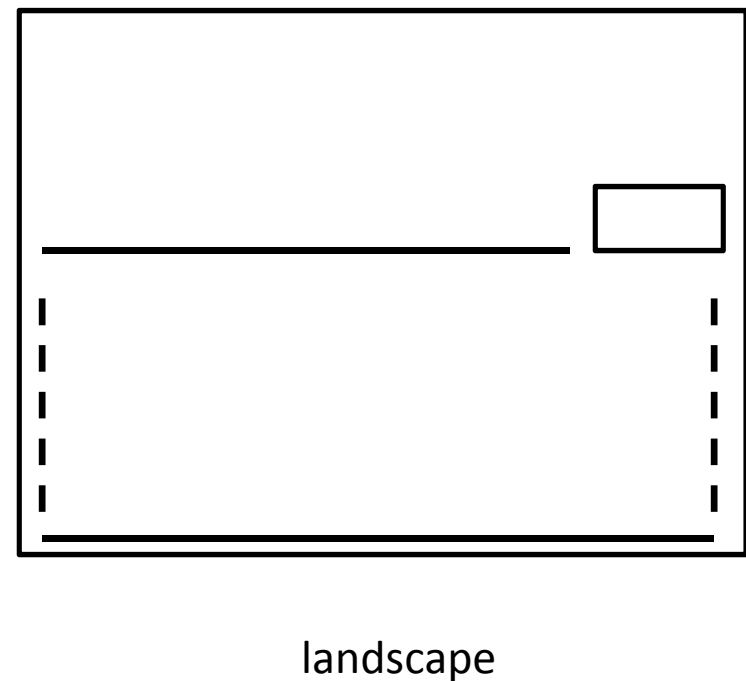
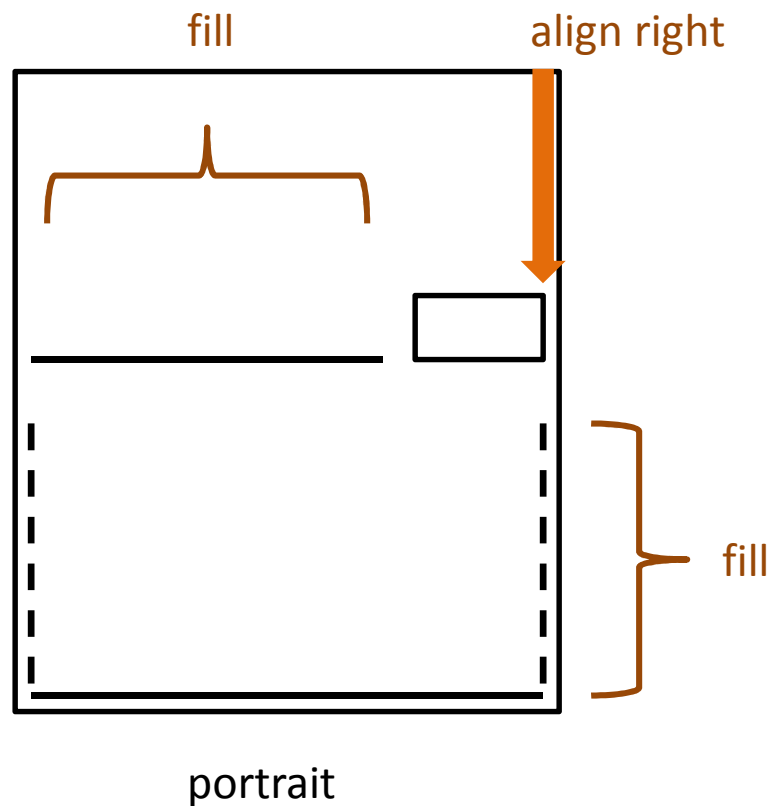
landscape

Looks great until ...



UI Layout Design

- Use layout that optimizes use of coordinates of the screen.



Next Steps

- Testing on a tablet
- Account for virtual keyboard taking up space
- Incorporate REST client capability
- Potentially optimize parsing of JSON arrays.