



Open Source Telemedicine

**Procedure Declaration
Using
Mark Up Language**



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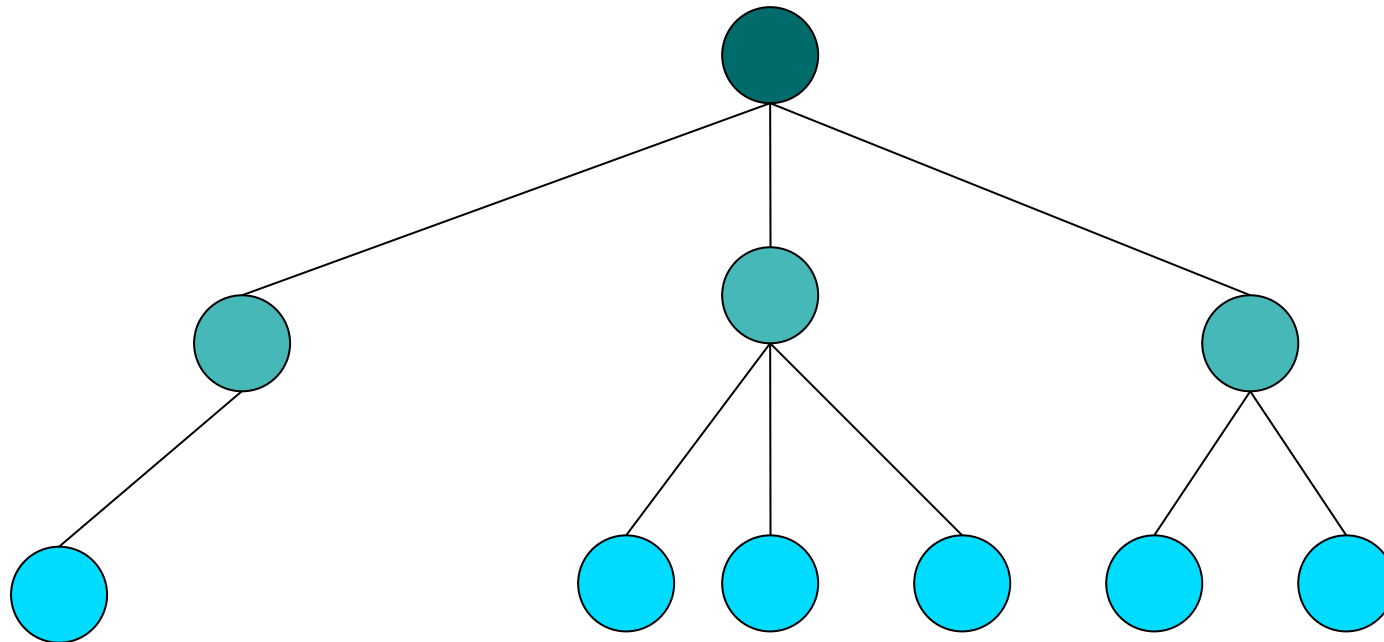
Procedure

A set of one or more instructions which are executed to collect data.

Essentially, they provide the CHWs with the medical decision trees developed by the clinical specialists.



Basic Implementation



Procedure: The decision tree in its entirety.

Page: A set of one or more instructions

Element: A point of instruction.



Simple Procedure XML

```
<Procedure title="Welcome"  
  author="Sana"  
  id="000-0000-0000-0000"  
  Version="1.0">  
  <Page>  
    <Element id="1"  
      concept="FAVORITE COLOR"  
      question="What is your favorite color?"  
      type="ENTRY"  
      answer=""/>  
  </Page>  
</Procedure>
```



Element Attributes

```
<Element id="1"  
  concept="FAVORITE COLOR"  
  question="What is your favorite color?"  
  type="ENTRY"  
  answer="" />
```

Concept: A term from the ontology

Question: Prompt presented to the user

Type: A flag which indicates the widget to use.

Answer: A default value.



Procedure Element Types

- TEXT
- ENTRY
- SELECT
- MULTI-SELCT
- RADIO
- TIME
- DATE
- PATIENT_ID
- BINARYFILE
- GPS
- EDUCATION_RESOURCE
- PICTURE
- SOUND
- PLUGIN
- ENTRY_PLUGIN



Other Element Attributes

- **Optional Attributes**

- required
- audio
- image

Element Specific

**RADIO, SELECT,
MULTI_SELECT**

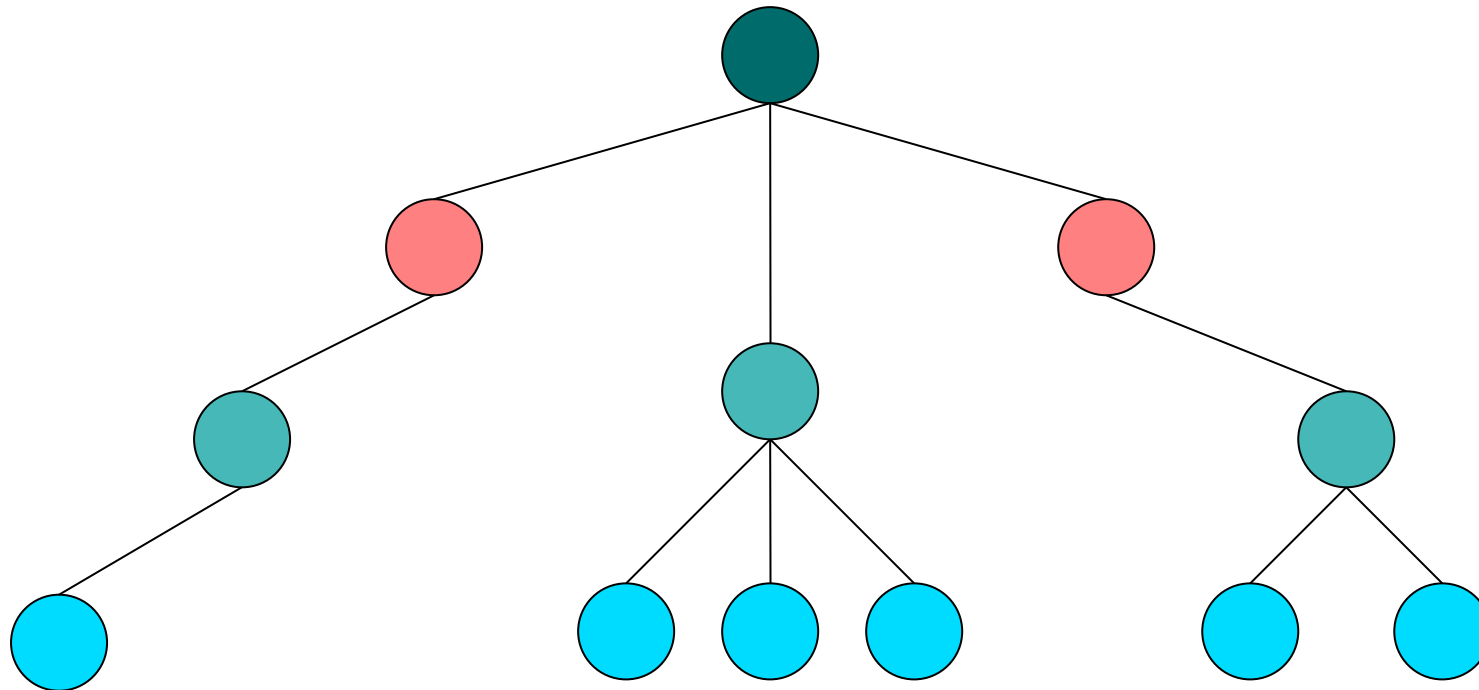
- choices

PLUGIN

- action
- mimeType



Complex Implementation



Branching Logic: Branching logic added at the page level.



Branching Logic

Simple Comparison

```
<Page>  
  <ShowIf>  
    <Criteria type="EQUALS" id="1" value="BLUE"/>  
  </ShowIf>  
  <Element ...>  
</Page>
```

Type: Comparison operators.

EQUALS, GREATER, LESS



Branching Logic

Compound

```
<Page>
  <Showif>
    <or>
      <Criteria type="EQUALS" id="1" value="BLUE"/>
      <not>
        <Criteria type="EQUALS" id="1" value="BLUE"/>
      </not>
    </or>
  </Showif>
  <Element ...>
</Page>
```

Boolean Operators: **and, or, not**



Branching Logic

Simple Comparison

```
<Page>  
  <ShowIf>  
    <Criteria type="EQUALS" id="1" value="BLUE"/>  
  </ShowIf>  
  <Element ...>  
</Page>
```

Type: Comparison operators.

EQUALS, GREATER, LESS



Procedure Example

```
<Procedure title="Welcome" author="Sana" version="1.0"
  id="000-0000-0000-0000" >
  <Page>
    <Element id="1" concept="FAVORITE COLOR" type="ENTRY"
      question="What is your favorite color?" answer=""/>
  </Page>
  <Page>
    <ShowIf>
      <or>
        <Criteria type="EQUALS" id="1" value="BLUE"/>
        <Criteria type="EQUALS" id="1" value="RED"/>
      </or>
    </ShowIf>
    <Element id="2" concept="QUEST" type="ENTRY"
      question="What is your quest?" answer=""/>
  </Page>
</Procedure>
```

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