



DHIS2 Web Skeleton

HISP Mozambique

May 2023

Topics

- ❖ Contextualization
- ❖ Problem
- ❖ Solution
- ❖ Challenges
- ❖ Technologies
- ❖ Demonstration

1. Contextualization

The application development process needs **flexible standards and processes**.

There was a need to develop an application based on components that to be used as a starting point in the development of a **dhis2** application, **this offers all the necessary basic structure** to have a functional application, in this way, we focus more on the **business rule** of our application. **The skeleton app** brings an idea of code standardization and generic components that make the development process **more flexible**.

2. Problem

- ❖ Short deadlines
- ❖ Inconsistencies
- ❖ Unsafety
- ❖ Non modular
- ❖ Maintenance difficulties
- ❖ Doing the same code

3. Solution - Description

To solve **these problems** we created this application which is **components based** to help us to easily maintain the code, facilitate the reuse of the code and have a familiar code **keeping in mind the principles of programming.**

**“Easy things should be easy,
hard things should be possible.”**

Larry Wall, creator of Perl

3. Solution - How we built

- ❖ Survey of generic cases
- ❖ Default UI definition
- ❖ Component division for easy maintenance

3. Solution - TableComponent



```
<Content  
  columnData={columnData}  
  headers={headers}  
  loading={loading}  
  loadingHeader={loadingHeader}  
>/>
```

Nº do Processo no Caso	Número de Entrada nos Serviços de Ação Social	Número do menor de Entrada no Centro
AGJ582829	EAB104640	BCJ637881
JFE781863	AAH356482	EDE756166

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3. Solution - TEIFormComponent



```
<TEIFormComponent
  variables={programRulesAttributes(attributes, values, programRules, programRuleVariables, setvalues)}
  enrollmentDate={enrollmentDateLabel}
  typeView={typeView(type)}
  loadingMutate={loadingMutate || loadingAddRelation}
  createEnrollment={createEnrollment}
  onChange={onChange}
  disabled={disable}
  disableSave={disableSave}
/>
```

Novo registro

Enrollment Date

Registration Date *

Perfil

Número Único de Identificação

Nome

Apelido

Sexo

Data de Nascimento

3. Solution - EventFormComponent



```
<EventFormComponent
  variables={programRulesUtils(dataElements, values, programRules, programRuleVariables, setvalues)}
  executionDateLabel={eventDateLabel}
  repeatable={getActiveProgramStage()?.repeatable}
  initialValues={activeEventData}
  writeAccess={getActiveProgramStage( ).access.data.write}
  programStage={programStage}
/>
```

1. Responsável	2. Caso	3. Informação do(s) requerentes	4. Dados do menor	5. Inquérito do requerente	6. Saúde do requerentes
7. Situação académica, laboral e financeira dos requerentes	8. Participação do menor	9. Processo judicial			

Informação básica

*

Event Information

CNPA - CEI| Nome do técnico responsável por preencher

CNPA - CEI| Função

CNPA - CEI| Contato telefónico

3. Solution - Home



```
return (  
  <>  
  <AppBar />  
  <>  
  <Paper>  
    <>  
    <ListContent  
      program={programId}  
      type={currentProgram?.[0]?.programType}  
    />  
  </>  
  </Paper>  
  <div className={generalPagesStyles.pageStyle}>  
    {currentProgram?.[0]?.programType === "WITH_REGISTRATION" ?  
      <>  
        <TEIComponent program={programId} selectedOu={ouId} selectedOuName={ouName} />  
  
        <EventComponent  
          program={programId}  
          programStage={currentProgram?.[0]?.programStages?.[0]?.id}  
          programStages={currentProgram?.[0]?.programStages}  
        />  
      </>  
    :  
    <EventComponent  
      key={index}  
      program={programId}  
      programStage={currentProgram?.[0]?.programStages?.[0]?.id}  
      programStages={currentProgram?.programStages || []}  
    />  
  }  
  </div>  
  </>  
  </>  
  )
```

Select Program | Select registering unit

Subcadastro de Adopção x | Escolinha 12 de Maio x

Processos em curso | Processos findos

Nº do Processo no Caso v | Número de Entrada nos Serviços de Acção Social v | Número do menor de Entrada no Centro v

Nº do Processo no Caso	Número de Entrada nos Serviços de Acção Social	Número do menor de Entrada no Centro
AGJ582829	EAB104640	BCJ637881
JFE781863	AAH356482	EDE756166

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Novo registo

Enrollment Date

Data de Registo * | 05/11/2023

3. Solution - Generic Forms

```

const GenericForm = (props) => {
  const { valueType } = props?.element;

  switch (valueType) {
    case "TEXT":
    case "EMAIL":
    case "PHONE_NUMBER":
      return (
        <SingleTextField {...props} />
      );
    case "DATE":
    case "AGE":
      return (
        <Input type="date" {...props} />
      )
    case "BOOLEAN":
      return (
        <Switch {...props} />
      )
    case "NUMBER":
    case "INTEGER_ZERO_OR_POSITIVE":
      return (
        <PositiveNumber {...props} />
      )
    case "TRUE_ONLY":
      return (
        <BpCheckbox {...props} />
      )
    case "LIST":
      return (
        <FormSelect {...props} />
      )
    case "LONG_TEXT":
      return (
        <LongTextField {...props} />
      )
    default:
      return null
  }
}

```

Perfil	
Número Único de Identificação	<input type="text"/>
Nome	<input type="text"/>
Apelido	<input type="text"/>
Data de Nascimento	<input type="text" value="mm/dd/yyyy"/>
Sexo	<input type="text"/>
Nome da mãe biológica	<input type="text"/>
Nome do pai biológico	<input type="text"/>
Nacionalidade	<input type="text"/>

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Challenges

4.ProgramRule (ASSIGN)

```

export function programRuleAssignValue(values, programRules, programRuleVariables) {
  const dataElements = {}, attributes = [];
  for (const programRule of programRules.filter(x => x.programRuleActionType === "ASSIGN") || []) {
    const firstCondition = replaceEspecifValue(programRuleVariables, values, removeSpecialCharacters(programRule.condition));
    const secondCondition = replaceEspecifValue(programRuleVariables, values, removeSpecialCharacters(programRule.data));
    const functionName = getFunctionExpression(programRule.data)

    if (programRule.type === "attribute" && eval(firstCondition)) {
      attributes.push({
        attribute: programRule.variable,
        value: verifyFunction(functionName, secondCondition)
      })
    } else if (programRule.type === "dataElement" && eval(firstCondition)) {
      // eslint-disable-next-line no-prototype-builtins
      if (dataElements.hasOwnProperty(programRule.programStage)) {
        dataElements[programRule.programStage].push({
          dataElement: programRule.variable,
          value: verifyFunction(functionName, secondCondition),
        })
      } else {
        dataElements[programRule.programStage] = [];
        dataElements[programRule.programStage].push({
          dataElement: programRule.variable,
          value: verifyFunction(functionName, secondCondition),
        })
      }
    }
  }
  return { dataElements, attributes };
}

```

3.ProgramRule (Other)

```
// eslint-disable-next-line max-params
export function modifyFeilds(programRuleActionType, condition, variable, sectionvariables) {
  // (programRuleActionType);
  for (const section of sectionvariables) {

    if (programRuleActionType === "HIDEFIELD") {
      for (const dataElement of section.dataElements || []) {
        if (eval(condition)) {
          if (dataElement.name === variable) {
            dataElement.visible = false;
          }
        } else {
          if (dataElement.name === variable) {
            dataElement.visible = true;
          }
        }
      }
    }
    else if (programRuleActionType === "HIDESECTION") {
      if (eval(condition)) {
        if (section.name === variable) {
          section.visible = false;
        }
      } else {
        if (section.name === variable) {
          section.visible = true;
        }
      }
    }
  }
}
```



Technologies

5. Technologies

- ❖ React Js
- ❖ DHIS2 Ui Library
- ❖ DHIS2 App Platform
- ❖ Material Ui

4.Demonstration



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Thank you!