

## Overview

**DAOUI Reports** is a visual report designer and viewer built using **Delphi FireMonkey (FMX)**. It allows users to design printable reports using a visual layout interface with support for headers, footers, details, zoom, pagination, and PDF export.

#### Project Structure

Unit Name	Description
DesignU.pas	Main unit for report design. Handles adding visual components to the canvas.
PreviewU.pas	Handles rendering and previewing the designed report before print/export.
DataU.pas	Manages connections and datasets for dynamic data binding.
Main.pas	Main form for switching between design/preview modes.

# **Neport Structure**

Each report page contains the following sections:

- Header (: Static top section, repeated on every page.
- **Detail ()**: The core repeating section, dynamically created for each record.
- Footer (): Bottom section for summaries, page numbers, etc.

Each section is implemented using [TRectangle] and holds child controls like [TLabel], [TImage], or [TText].

## Core Components

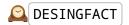


Containers that represent each section. All rectangles are added here.



Functions that add labels or image boxes inside a zone (header/detail/footer).

Functions to clear existing visual content from the zones.



Function that dynamically builds the full report layout by calculating how many pages are needed and cloning visual elements.



ComboZOMChangeTracking

Handles zoom changes and resizes the preview page proportionally.

#### **Image Rendering and Zooming**

When rendering images in PreviewU, the zoom is applied using this formula:

```
hh := Round((v * 1754) / 150);
ww := Round((v * 1240) / 150);
```

This resizes the A4 page size proportionally based on the zoom percentage v.

Each preview image is aligned using:

```
TImage.Align := TAlignLayout.Bottom;
TImage.Margins.Top := 15;
```

This ensures each page image stacks vertically with spacing.

## 🗹 Memory and Cleanup

- DisposeOf is used for all components created at runtime.
- All clearing functions (ClerDetail, FormDestroy, etc.) carefully release both Children and Components.
- Application.ProcessMessages is used in loops to ensure the UI remains responsive during bulk deletion.

## Data Binding

Each control can optionally be linked to a dataset field:

- A TagString or Hint can be used to store the field name.
- At runtime, the detail section clones are updated with live data for each record.

# PDF Export and Printing

- Each page (as TImage) is rendered and converted to a printable format.
- Pages can be saved to PDF using a third-party library or Windows print services.

# **Features Summary**

- Visual layout design with drag-and-drop.
- Dynamic detail record rendering.
- Zoom support (25%-200%).
- Print and PDF export.
- Multi-page layout and auto pagination.

## Roadmap Suggestions

- · Add undo/redo support.
- Implement snapping and alignment guides.
- Enable field binding via UI dropdown.
- Save/load full report designs as JSON or XML.
- Introduce themes or styling templates.

#### Developer Notes

- Target Platforms: Windows, Android (FMX cross-platform support)
- Required Delphi Version: Delphi 10.4+ recommended
- Open Source License: MIT (suggested)
- Author: Daoui Mahmoud (@devlop0 on GitHub)

## Support

If you enjoy using or contributing to DAOUI Reports, you can support development at: <a href="https://coff.ee/daouimahmoud">https://coff.ee/daouimahmoud</a>

Feel free to suggest improvements or contribute on GitHub!