The current version is #ident "@(#)$Format:LocalFoodAI_lanfr144:Header_Footer_Antigravity.md:Francois Lange:lanfr144@school.lu:2026/06/17 12:00:57:Francois Lange:lanfr144@school.lu:2026/06/17 12:00:57:Not Committed Yet:local:none$"

PDF Header and Footer Generation Guidelines (Antigravity Standard)

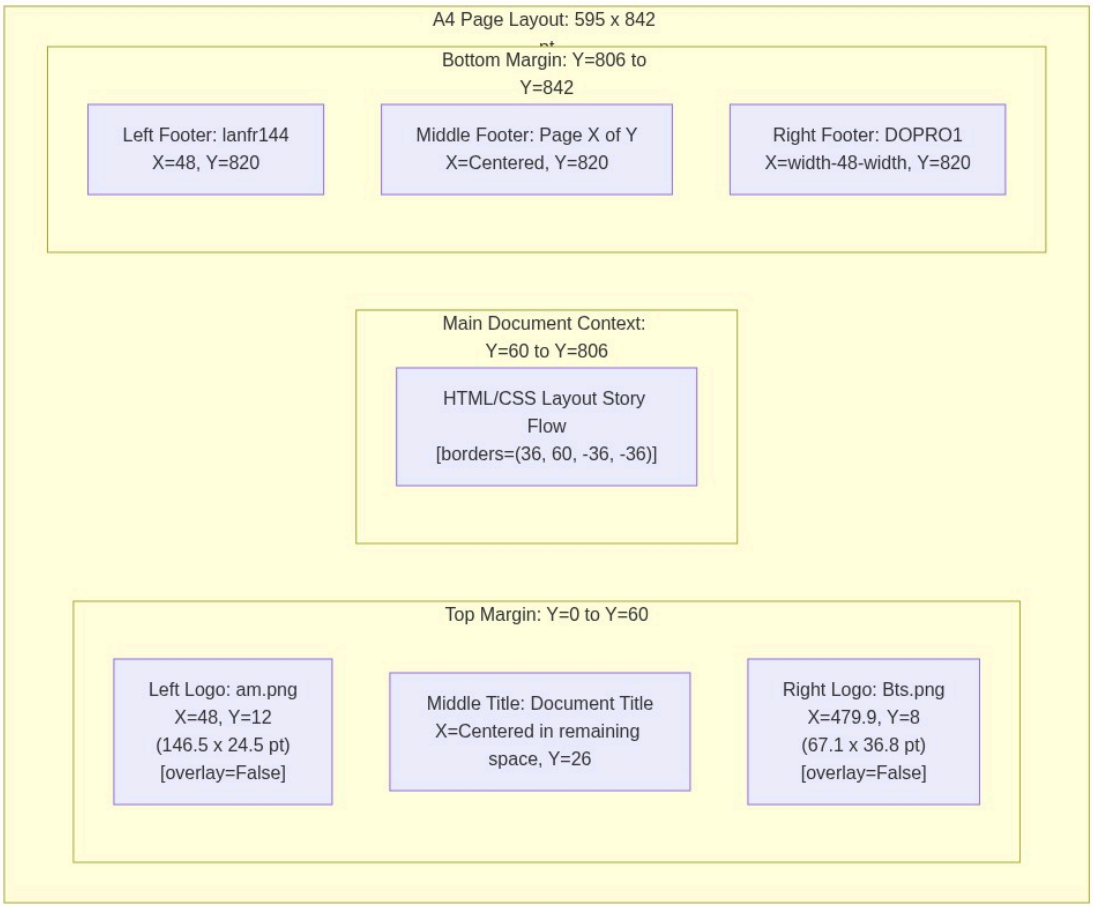
This document provides guidelines on how to programmatically inject institutional headers and footers into compiled PDF documents using Python and PyMuPDF (`fitz`).

1. Concept

Instead of relying on fragile HTML/CSS page rendering contexts that vary across layout engines, the Antigravity approach compiles standard Markdown to a clean, margin-compliant intermediate PDF. We then perform a post-processing pass using PyMuPDF to draw vector logos, document title headers, and footer blocks on every page at absolute coordinates.

2. Layout Structure

The layout bounds on a standard A4 page (595 x 842 points) are mapped as follows:



3. High-Quality Scaled Drawing

To ensure maximum visual fidelity when zoomed, follow these steps:

- **Load PNGs as Pixmaps**: Read the image size using PyMuPDF `fitz.Pixmap`.
- **Compute 10% Bounds**: Scale the pixel width and height to 10% for layout dimensions in points.
- **Draw Bounds in Background**: Insert the image using `page.insert_image(rect, filename, overlay=False)`. Setting `overlay=False` places the header pictures in the background, keeping other text on the foreground.
- **Prevent Header Collisions**: Instantiate the markdown section with a top border margin of 60pt (e.g. `borders=(36, 60, -36, -36)`) so that layout text begins below the header logo graphics.
- **Optimized Saving**: Always save the PDF with deflate compression, garbage collection, and linearization:

```
doc.save(pdf_file, clean=True, garbage=3, deflate=True)
```