`adddoc` Package
A custom way to have a `listofappendix`

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Contents

I. Package Options

Introduction

This document provides a detailed explanation of the options available in the adddoc package. Each option is described with its possible values and effects on document formatting and behavior.

1. Available Options

A. actif

- **Values**: true (default), false
- **Effect**: Enables the attach toggle when set to true or left empty, controlling whether the table of appendices is printed. Stores the value in \activ.

B. pathappendix

- **Values**: Any valid file path string
- **Effect**: Defines the path for appendix files, stored in \appath, used to locate and include appendix files.

C. code

- **Values**: true, false, or empty
- **Effect**: Enables the code toggle when set to true or left empty, allowing the inclusion of code listings using the listings package.

D. logo

- **Values**: Any valid file path string
- **Effect**: Specifies the path to a logo file for appendix headers, stored in `\appathlogo`. If no logo is provided, the default omits the logo from the header.

E. language

- **Values**:
    - `fr`: French
    - `de`: German
    - `en`: English
- **Effect**: Sets the document's language, affecting the table of appendices' names, such as `Table des Annexes` (French), `Anhangsverzeichnis` (German), and `Table of Appendices` (English). Stored in `\doclanguage`.

F. fancyfooter

- **Values**: Any string
- **Effect**: Sets the footer text for appendix pages, stored in `\fancyfooter`.

G. algo

- **Values**: `true`, `false`, or empty
- **Effect**: Enables the `algo` toggle when set to `true` or left empty, allowing the inclusion of algorithms using the `algorithm2e` package.

2. Default Values and Settings

- **Logo Path**: `no` (no logo provided)
- **Appendix Path**: `{}`
- **Language**: `fr` (French)
- **Fancy Footer**: `{}`

II. Functionality of Toggled Options

1. Appendices Management

When `actif` is set to `true`, appendices management is enabled using the `titletoc` package. This includes defining and customizing counters for chapters and appendices, and generating a table of appendices in the selected language.

2. Code Listings

If `code` is enabled, the `listings` package is configured for code snippets with custom settings for different programming languages and UTF-8 support.

- `\lstlisting`: Standard command for code listings.
- `\lstcolor{color}{text}`: Changes text color in code listings.

3. Algorithms

Enabling `algo` configures the `algorithm2e` package for algorithms, customizing the list of algorithms title and setting up keywords and formatting for algorithm blocks.

4. PDF Inclusion

The package provides commands for including PDF files in appendices, with options for landscape or portrait orientation, scaling, and offsets. The `pathappendix` and `logo` options determine file location and display settings.

III. Appendix Commands

1. Appendix Structure in LaTeX

The adddoc package extends LaTeX's basic appendix functionality by introducing:

- Custom appendix counters
- A dedicated list of appendices (\listofappendixs)
- Commands to add appendices and center images within them

2. Commands Overview

- \attachment{label}{title}: Adds an appendix entry with the specified title and label.
- \achapter{title}: Starts a new appendix chapter.
- \asection{label}{title}: Creates a new appendix section under a chapter.
- \lspapp{label}{title}{content}: Creates an appendix section in landscape mode.
- \centeredimg{width}{filepath}: Centers an image within an appendix section.

PDF Inclusion

Different ways to embed a PDF document in the appendix

- \pdf[landscape mode]{ref}{title}{filename.pdf}: simple command, size = 0.8\textwidth
- \pdfsize[landscape mode]{scaling}{ref}{title}{filename.pdf}: Allows for explicit size control.
- \pdfoptions[options]{filename}: A more flexible command that allows detailed customization when embedding PDF files.

```
\pdfoptions[scale=0.9, offseth=-1cm, landscape=true, title={My
```

- scale: Specifies the scale of the PDF (default: 0.8).
- offseth: Sets the vertical offset (default: -2cm).
- offsetw: Sets the horizontal offset (default: 0cm).
- landscape: Indicates whether the PDF should be displayed in landscape mode (values: true or false, default: false).
- title: Specifies the title of the PDF section in the appendix.
- ref: Defines a reference label for the PDF section.

This command allows you to embed a PDF document with customized scaling, offset, and orientation. It also supports the addition of a title and reference label for easy identification in the document.

3. Customizing Appendices

A. Counters

adddoc defines custom counters for clear and consistent numbering:

- achapter: Appendix chapter level (A, B, C, etc.)
- appendix: Individual appendices within chapters (1, 2, 3, etc.)

B. List of Appendices

The list of appendices is customized using the titletoc package:

- \l@achapter[2]{...}: Defines appendix chapter appearance in the TOC.
- \l@appendix{\@dottedtocline{1}{2.5em}{2.3em}}: Formats individual appendix entries.

4. Example Usage

```
\listofappendixs % Generates the list of appendices
\appendix % Start the appendix section
\begin{achapter}{Technical Appendices}
    \asection{specs}{Technical Specifications}
    % Content here...
    \asection{data}{Data Tables}
    \centeredimg{0.9}{images/data_table.png}
    % Content here...
    \lspapp{landscapeApp}{Wide Table}{
        \begin{tabular}{...}
        % Large table content
        \end{tabular}
    }
\end{achapter}
```

Algorithm 1: General calibration algorithm

Data: n samples
Initialisation
  Create a voltage sequence of n samples
  Create the queues and the shared memory
  Start the camera and image processing
  Pause the image acquisition
Main program
  for $i = 1$ **to** n **do**
    Move the mirror according to the voltage sequence
    Start image acquisition and wait until finished
    $P_i \leftarrow Q_i$ `Read the coordinates from FIFO queue */`
End sequence
  Close the processes, queues and shared memory
  Do something with the points P_i
  Write the result into a JSON file

```
\renewcommand{\tcc}[1]{\texttt{\*\hspace{0.5cm}#1\hspace{0.5cm}*/}}
\SetAlgoNlRelativeSize{-2}
\begin{algorithm}
    \caption{General calibration algorithm}
    \label{alg:calibration}
    \DontPrintSemicolon
    \KwData{$n$ samples}
    \init{
        Create a voltage sequence of $n$ samples\;
        Create the queues and the shared memory\;
        Start the camera and image processing\;
        Pause the image acquisition \;
    }
    \main{\For{$i=1$ \KwTo $n$}{
        Move the mirror according to the voltage sequence\;
        Start image acquisition and wait until finished\;
        $P_i \gets Q_i$ \tcc{Read the coordinates from FIFO queue}\;
    }}
    \endpro{
        Close the processes, queues and shared memory\;
        Do something with the points $P_i$\;
        Write the result into a JSON file\;
    }
\end{algorithm}
```

5. Dependencies

- titletoc: Customizes TOC entries.
- pdflscape, pdfpages: Manage landscape orientation and PDF embedding.
- etoolbox, ifthen, xkeyval: Handle package options and conditional logic.