JAPC manual

1 Introduction

Content

1.1 About this document.

This is the user's guide for JAPC. It describes the installation and use of the JAPC compiler front-end on the different supported platforms. It does attempt to give an exhaustive list of all supported commands, but not a definition of the Pascal language. For a description of the possibilities and the inner workings of the compiler, see the Programmer's Guide (`https://ivanmtze.github.io/JAPC/`). In the appendices of this document you will find lists of compiler error messages (with descriptions).

This document describes the compiler as it is/functions at the time of writing.

1.2 About the project.

JAPC was conceived as an Extended Pascal Compiler front-end using LLVM (version 12.0.1) as backend.

JAPC is designed to be, as much as possible, compatible with ISO Extended Pascal and Pascal. As of the date this manual is written (23 November 2022) not all Extended Pascal and Pascal features are implemented. However you will find lists of this unimplemented features in the appendices of this document.

1.3 Getting more information.

If the documentation doesn't give an answer to your questions, you can obtain more information on Github, at the following address.

- `https://ivanmtze.github.io/JAPC/` is the project main repository. Please do not hesitate on creating a issue about your question and mark it as documentation.

Finally, if you think something should be added to this user manual (more than possible), please do not hesitate and contact me at `ivanmtze96@gmail.com` or `zS18003209@estudiantes.uv.mx`.

I really hope we can build something really useful.

2 Installing the compiler

Content

2.1 Before Installation: requirements

2.1.1 Hardware requirements

Memory and disk requirements:

The memory and disk requirements vary from platform to platform. At least 250 megabytes are recomemded for a basic installation; 500 megabytes should be counted if you want to recompile the compiler and all it's contents.

2.1.2 Software requirements

Under Linux (Linux Mint)

Under Linux Mint you need to have the following programs installed:

1. LLVM (Version 12.0.1)
2. doxygen (If programmer's guide to be build)
3. clang (If recompiling the compiler)
4. texinfo (If user's manual to be build)
5. latex (If programmer's and/or user's manual to be build)

3 Using the compiler

Here we describe the essentials to compile a program.

3.1 File searching

Before you start compiling a program, it is important for JAPC to know where it looks for its source files. In this section we discuss this, and we indicate how to influence this.

Important: The use of slashes as directory separators is relevant, since the compiler has not been tested yet under platforms that make use of backslashes. However, if you find a problem related to the use of slashes and backslashes, please do not hesitate and contact me (see Section 1.3 [Getting more information], page 1). Examples on this manual will be given using slashes, since this is the only officially supported platform at this moment.

3.1.1 Command line files

The file that you specify on the command line, such as in:

```
japc foo.pas
```

will be looked for only in the current directory. If you specify the directory in the filename, then the compiler will look in that directory:

```
japc subdir/foo.pas
```

will look for foo.pas in the subdirectory subdir of the current directory.

Under case sensitive file systems (such as Linux), the name of this file is case sensitive.

3.1.2 Include files

When you compile a program that needs multiple files, you will need to provide the compiler with the path of such files.