NAME

bison – GNU Project parser generator (yacc replacement)

SYNOPSIS

bison [**–b** *file-prefix*] [**—file-prefix=***file-prefix*] [**–d**] [**—defines**] [**–l**] [**—no-lines**] [**–o** *outfile*] [**—output-file=***outfile*] [**–p** *prefix*] [**—name-prefix=***prefix*] [**–t**] [**—debug**] [**–v**] [**—verbose**] [**–V**] [**—version**] [**–y**] [**—yacc**] [**—fixed-output-files**] file

DESCRIPTION

Bison is a parser generator in the style of *yacc*(1). It should be upwardly compatible with input files designed for *yacc*.

Input files should follow the *yacc* convention of ending in **.y**. Unlike *yacc*, the generated files do not have fixed names, but instead use the prefix of the input file. For instance, a grammar description file named **parse.y** would produce the generated parser in a file named **parse.tab.c**, instead of *yacc*'s **y.tab.c**.

This description of the options that can be given to *bison* is adapted from the node **Invocation** in the **bison.texinfo** manual, which should be taken as authoritative.

Bison supports both traditional single-letter options and mnemonic long option names. Long option names are indicated with **—** instead of **–**. Abbreviations for option names are allowed as long as they are unique. When a long option takes an argument, like **—file-prefix**, connect the option name and the argument with **=**.

OPTIONS

–b *file-prefix*
—file-prefix=*file-prefix*

Specify a prefix to use for all *bison* output file names. The names are chosen as if the input file were named *file-prefix***.c**.

–d
—defines

Write an extra output file containing macro definitions for the token type names defined in the grammar and the semantic value type **YYSTYPE**, as well as a few **extern** variable declarations.

If the parser output file is named *name***.c** then this file is named *name***.h**.

This output file is essential if you wish to put the definition of **yylex** in a separate source file, because **yylex** needs to be able to refer to token type codes and the variable **yylval**.

–l
—no-lines

Don't put any **#line** preprocessor commands in the parser file. Ordinarily *bison* puts them in the parser file so that the C compiler and debuggers will associate errors with your source file, the grammar file. This option causes them to associate errors with the parser file, treating it an independent source file in its own right.

–o *outfile*
—output-file=*outfile*

Specify the name *outfile* for the parser file.

The other output files' names are constructed from *outfile* as described under the **–v** and **–d** switches.

–p *prefix*
—name-prefix=*prefix*

Rename the external symbols used in the parser so that they start with *prefix* instead of **yy**. The precise list of symbols renamed is **yyparse**, **yylex**, **yyerror**, **yylval**, **yychar**, and **yydebug**.

For example, if you use **–p c**, the names become **cparse**, **clex**, and so on.

–t
—debug
Output a definition of the macro **YYDEBUG** into the parser file, so that the debugging facilities are compiled.

–v
—verbose
Write an extra output file containing verbose descriptions of the parser states and what is done for each type of look-ahead token in that state.

This file also describes all the conflicts, both those resolved by operator precedence and the unresolved ones.

The file's name is made by removing **.tab.c** or **.c** from the parser output file name, and adding **.output** instead.

Therefore, if the input file is **foo.y**, then the parser file is called **foo.tab.c** by default. As a consequence, the verbose output file is called **foo.output**.

–V
—version
Print the version number of *bison*.

–y
—yacc
—fixed-output-files
Equivalent to **–o y.tab.c**; the parser output file is called **y.tab.c**, and the other outputs are called **y.output** and **y.tab.h**. The purpose of this switch is to imitate *yacc*'s output file name conventions. Thus, the following shell script can substitute for *yacc*:

bison –y $*

The long-named options can be introduced with '+' as well as '—', for compatibility with previous releases. Eventually support for '+' will be removed, because it is incompatible with the POSIX.2 standard.

FILES

/usr/local/lib/bison.simple simple parser
/usr/local/lib/bison.hairy complicated parser

SEE ALSO

yacc(1)
The *Bison Reference Manual*, included as the file **bison.texinfo** in the *bison* source distribution.

DIAGNOSTICS

Self explanatory.