

baidu

BIDL VIM Plugin

百度接口定义语言 VIM 插件

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BIDL VIM Plugin

1 介绍

1.1 背景

百度接口定义语言（Baidu Interface Definition Language，以下简称为 BIDL），是一种规范性语言，采用类 C/C++ 语法来定义 BGCC 客户程序与服务器程序之间的通信接口。BIDL 提供了一套通用的基本数据类型，并以这些基本数据类型来定义更为复杂的数据类型，剥离了语言与平台的差异性，使得客户程序与服务程序均不感知接口背后的实现细节。特别地，分离了业务逻辑与通信逻辑，大大提升了客户程序与服务程序的运行可靠性，并降低了编写客户程序与服务程序的复杂性。

为了能方便快捷地编写 BIDL 文件，故开发了此 VIM 插件。

1.2 内容

本手册涉及的内容包括 BIDL VIM Plugin 的安装与使用指导。

1.3 功能

本 VIM 插件包含的功能有：

- 1) BIDL 语法高亮
- 2) BIDL 关键字自动补全

2 安装与使用

bidl.vim 包含 BIDL 语法高亮 VIM 插件，bidl_words.txt 包含 BIDL 关键字单词表，用于自动补全。测试环境：vim7.3。bidl.vim 与 bidl_words.txt 见附录。

2.1 安装

- 1) 将 bidl.vim 放置在 \$HOME/.vim/ftplugin 目录中。
- 2) 将 bidl_words.txt 放置在 \$HOME/.vim 目录中。

```
3) 在$HOME/.vimrc 中添加如下行

syntax on

au BufRead,BufNewFile *.bidl setfiletype bidl

set dict+=~/vim/bidl_words.txt

imap <c-l> <c-x><c-k>
```

2.2 使用

- 1) 新建 BIDL 文件 xx.bidl。
- 2) 在 VIM Insert 模式下，输入 se，然后按<Ctrl-l>，有如下显示：

```
1 sequence
sequence /home/liuxupeng/.vim/bidl_words.txt
set /home/liuxupeng/.vim/bidl_words.txt
```

- 3) 分别键入<Ctrl-n>和<Ctrl-p>，可在多个选项间跳转。
- 4) BIDL 语法高亮如下所示：

```
1 include "address.bidl"
2
3 namespace math {
4 /*
5     typedef boolean b_t;
6
7     const sequence<boolean> ss1 = [true, false, false];
8     const sequence<int32> ss2 = [1, 2, 3];
9     const sequence<string> ss3 = ["first", "second"];
10    const sequence<float> ss4 = [1.1, 2.2, 3.3];
11
12    const sequence<set<int32>> tt1 = [<1>, <2>, <3>];
13 */
14
15    const set<boolean> sk1 = <true, false, false>;
16    const set<int32> sk2 = <1, 2, 3>;
17    const set<string> sk3 = <"first", "second">;
18    const set<float> sk4 = <1.1, 2.2, 3.3>;
19
20    const set<sequence<string>> tt2 = <["first"], ["second", "third"]>;
21
22    const map<int32, string> sm1 = {1: "first"};
23
24    const map<sequence<int32>, set<string>> tt3 =
25    {
26        [1]: <"first">,
27        [2]: <"second">
28    };
```

3 附录

bidl.vim

```
" Vim syntax file
" Language: bidl
" Maintainer: liuxupeng<liuxupeng@baidu.com>
```

```

" Last Change: 2012 Oct 23

if exists("b:current_syntax")
    finish
endif

syn keyword cStatement namespace const in out all typedef
syn keyword cStructure struct enum class
syn keyword cType void boolean int8 int16 int32 int64 float string binary
syn keyword cType map sequence set
syn keyword cConstant true TRUE false FALSE

syn keyword cReservedError __CLASS__ __DIR__ __FILE__ __LINE__ __METHOD__
__NAMESPACE__ abstract
syn keyword cReservedError alias alignas alignof and and_eq args as
syn keyword cReservedError asm assert auto BEGIN bitand bitor bool
syn keyword cReservedError break byte case catch char char16_t char32_t
syn keyword cReservedError clone compl const_cast constexpr continue cpp cpp_type
syn keyword cReservedError declare decltype def default del delete do
syn keyword cReservedError double dynamic dynamic_cast elif else elseif elsif
syn keyword cReservedError END enddeclare endfor endforeachendif endswitch endwhile
syn keyword cReservedError ensure except exec explicit export extends extern
syn keyword cReservedError final finally for foreach friend function global
syn keyword cReservedError goto if implements import inlineinstanceof int
syn keyword cReservedError interface is java lambda long module mutable
syn keyword cReservedError native new next nil noexcept not not_eq
syn keyword cReservedError nullptr operator optional or or_eq package
syn keyword cReservedError pass print private protected protocol public raise
syn keyword cReservedError redo register reinterpret_cast request request_len
required rescue
syn keyword cReservedError retry return self short signed sizeof static
syn keyword cReservedError static_assert static_cast strictfp superswitch synchronized
template
syn keyword cReservedError then this thread_local throw throws transient try
syn keyword cReservedError typeid typename undef unionunless unsigned until
syn keyword cReservedError use using var virtual volatile wchar_t when
syn keyword cReservedError while with xor xor_eq yield

syn region cCppString start="+L\="+ skip="+\\\\\\|\\\"|\\\\$+ excludenl end="+"+ end='$'

syn match cNumbers display transparent "<d\|\\.d" contains=cNumber,cFloat
syn match cNumber display contained "<d\+\\(u=\\{0,2\\}|ll=u\\)>"
syn match cFloat display contained "<d\+f"
syn match cFloat display contained "<d\+\\.d*\\(e[-+]=<d\+\\)=\\[f]\\="

```

```

syn match cFloat          display contained "\.d\+\(e[-+]\d\+\)\=[fI]\>=\>"
syn match cFloat          display contained "d\+e[-+]\d\+[fI]\>=\>"

syn region cCommentL      start="//" skip="\\$" end="$" keepend
syn region cComment matchgroup=cCommentStart start="/\*" end="*/" fold extend
syntax match cCommentError display "\*/"

syn region cIncluded      display contained start="+\" skip="\\\\\\\\\\\\" end="+\"
syn match cInclude        display "^s*include\>s*["<]" contains=cIncluded

hi def link cCppString    String
hi def link cCommentL     cComment
hi def link cCommentStart cComment
hi def link cNumber       Number
hi def link cFloat        Float
hi def link cCommentError Error
hi def link cReservedError Error
hi def link cStructure     Structure
hi def link cInclude       Include
hi def link cIncluded      String
hi def link cStatement     Statement
hi def link cType          Type
hi def link cConstant      Constant
hi def link cString        String
hi def link cComment       Comment

let b:current_syntax = "bidl"

" vim: ts=4

```

bidl_words.txt

```

include
int64
typedef
true
namespace
float
struct
TRUE
void
string
enum
false
boolean

```

```
binary
const
FALSE
int8
map
in
int16
sequence
out
int32
set
all
class
```