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

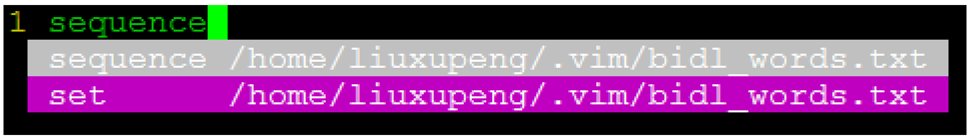
1) 将 bidl.vim 放置在$HOME/.vim/ftplugin 目录中。
2) 将 bidl_words.txt 放置在$HOME/.vim 目录中。

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>
```

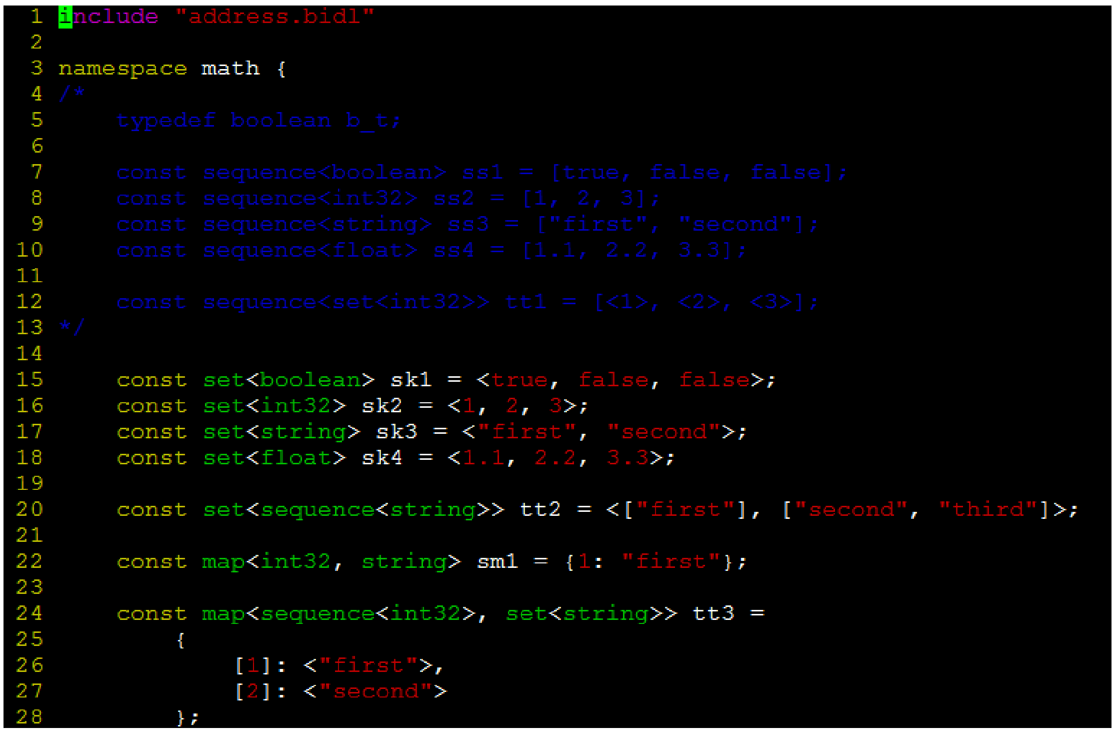
2.2 使用

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：



```
 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：



```
include "address.bidl"

namespace math {
/*
    typedef boolean b_t;

    const sequence<boolean> ss1 = [true, false, false];
    const sequence<int32> ss2 = [1, 2, 3];
    const sequence<string> ss3 = ["first", "second"];
    const sequence<float> ss4 = [1.1, 2.2, 3.3];

    const sequence<set<int32>> tt1 = [<1>, <2>, <3>];
*/

    const set<boolean> sk1 = <true, false, false>;
    const set<int32> sk2 = <1, 2, 3>;
    const set<string> sk3 = <"first", "second">;
    const set<float> sk4 = <1.1, 2.2, 3.3>;

    const set<sequence<string>> tt2 = <["first"], ["second", "third"]>;

    const map<int32, string> sm1 = {1: "first"};

    const map<sequence<int32>, set<string>> tt3 =
        {
            [1]: <"first">,
            [2]: <"second">
        };
```

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bidl.vim

```
" Vim syntax file
" Language: bidl
" Maintainer:
    " 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     inline instanceof  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  null 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\+\(u\=l\{0,2}\|ll\=u\)\>"
    syn match   cFloat           display contained "\d\+f"
    syn match   cFloat           display contained "\d\+\.\d*\(e[-+]\=\d\+\)\=[fl]\="
    syn match   cFloat              display contained "\.\d\+\(e[-+]\=\d\+\)\=[fl]\=\>"
    syn match   cFloat              display contained "\d\+e[-+]\=\d\+[fl]\=\>"

    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
```