

# Free Syntax Programming using DSL for computer systems development

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## Abstract

Free Syntax Programming (FSP) is software development technique enlarges your coding skills efficiency. This article describes

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## 1 FSP Project structure

.table FSP project contains this set of files:

|              |  |
|--------------|--|
| .gitignore   |  |
| Makefile     | project building scripts   |
| .fsp         | .fsp files can have any names, you control it via Makefile FSP var |
| filetype.vim | (g)vim config file with event processing og *.fsp file open        |
| syntax.vim   | (g)vim syntax file with your own FSP tags and syntax coloring      |
| parser.ypp   | bison parser   |
| lexer.lpp    | flex lexer   |
| core.cpp     | FSP dynamic language runtime                                       |
| FSP.hpp      | .h-file definitions  |

### 1.1 Configuring (g)Vim for FSP programming

#### 1.1.1 Define \*.fsp filetype

```
.file \${VIMFILES}/ftdetect/fsp.vim
source D:\w\FSP\filetype.vim
.eof
```

```
.file \$(VIMFILES)/syntax/fsp.vim
source D:\w\FSP\filetype.vim
.eof
```

## 1.2 Makefile

## 1.3 Lexer

## 1.4 Parser

## 1.5 Dynamic runtime

# 2 Typical syntax elements (you can change it as you like)

## 2.1 Comments

```
.file  
\# line comment
```

```
\#| block  
comment |\#  
.eof
```

## 2.2 Variables

Symbolic vars widely used in FSP, some of them defined low-level in core.cpp and used via it's substitution as multi-platform compatibility tip. As example you can review .refvimfiles \$VIMFILES variable use.