

# JSGF 语法规则

介绍变量、句式和关键字生成 JSGF 语法规则

## 1.全部不为空的情况

变量

<a>=she|Lisa  
<b>=bookstore

增加变量

句式

<a> is going to <b>  
<b>

增加句式

关键字

<a>  
<b>

增加关键词

获取结果

JSGF语法 :

{  
 "Version": "1",  
 "DisplayText": "Jsgf Grammar Tool Generated",  
 "GrammarWeight": "{  
 "weight\_struct": [  
 [{"weight": 0.5, "key": "she"}],  
 [{"weight": 0.5, "key": "lisa"}],  
 [{"weight": 0.5, "key": "bookstore"}]  
 ]  
 },  
 "Grammar": "#JSGF V1.0 utf-8 cn; grammar main; public <main> =  
 "<s>(<a> is going to <b>|<b>)"</s>"; <a> = (she|lisa); <b> =  
 (bookstore);"  
}

注: 该JSGF语法展开后答案条数为 3 条。

在 3 项都填写的情况下，生成的 json 主要由以下几个部分组成：

其中红色是需要拼接的可变字段，其他颜色是固定字段。

weight\_struct 是存放关键字信息，

Grammar 中是存放句式信息，绿色部分是固定字段，<s>和</s>中间是句式部分，</s>；之后是变量名称及数据。

```
{  
  "Version": "1",  
  "DisplayText": "Jsgf Grammar Tool Generated",  
  "GrammarWeight": "{  
    "weight_struct": [  
      [{"weight": 0.5, "key": "she"}],  
      [{"weight": 0.5, "key": "lisa"}],  
      [{"weight": 0.5, "key": "bookstore"}]  
    ]  
  },  
  "Grammar": "#JSGF V1.0 utf-8 cn; grammar main; public <main> =  
    "<s>(<a> is going to <b>|<b>)"</s>"; <a> = (she|lisa); <b> =  
    (bookstore); "  
}
```

```
}
```

## 关键字规则

### 或关系

关键字之间如果是或的关系，则每个关键字用一个字典形式{}，外面再用[]。

例如关键字是 she|Lisa 中间是或的关系，生成的字段则是：

```
[{"weight":0.5,"key":"she"}, {"weight":0.5,"key":"lisa"}]
```

### 与关系

如果关键字之间是与的关系，例如 she 和 bookstore 要同时满足，则如下：

```
[ [{"weight":0.5,"key":"she"}, {"weight":0.5,"key":"lisa"}], [{"weight":0.5,"key":"bookstore"}] ]
```

都包含在 weight\_struct 内

## 2.变量/关键字为空的情况

变量

增加变量

句式

she is going to bookstore  
bookstore

增加句式

关键字

增加关键词

获取结果

罗列语法：

{ "Version": "1", "DisplayText": "Enumerate Grammar Tool Generated", "GrammarWeight": "{ \"weight\_struct\": [] }", "Grammar": "#enumerate\nshe is going to bookstore\nbookstore\n"}

JSGF语法：

{ "Version": "1", "DisplayText": "Jsgf Grammar Tool Generated", "GrammarWeight": "{ \"weight\_struct\": [] }", "Grammar": "#JSGF V1.0 utf-8 cn;\ngrammar main;\npublic <main> = \"<s>\"(she is going to bookstore|bookstore)\"</s>\";\n"}

注：该JSGF语法展开后答案条数为 2 条。

```
{  
  
  "Version": "1",  
  "DisplayText": "Jsgf Grammar Tool Generated",  
  "GrammarWeight": "{ \"weight_struct\": [] }",  
  "Grammar": "#JSGF V1.0 utf-8 cn; grammar main; public <main> =
```

```
"<s>"(she is going to bookstore|bookstore)"</s>"; "
```

其中红色部分是可变的，其他都是固定的字段

### 3.定义的变量未使用的情况

```
{  
  "Version": "1",  
  "DisplayText": "Jsgf Grammar Tool Generated",  
  "GrammarWeight": "{ \"weight_struct\": [] }",  
  "Grammar": "#JSGF V1.0 utf-8 cn; grammar main; public <main> =  
  "<s>"(she is going to <b>|<b>)"</s>"; <a> = (smile); <b> =  
  (bookstore); "  
}
```

即使未被使用，变量也会被列举出来。

### 4.关于句式中标点的替换

如果原始的句式中存在标点的情况，在生成 jsgf 语法的时候，句式中标点需要替换成空格或是半角的标点。如下方所示：

变量

增加变量

句式

Lisa, where are you going?

增加句式

关键字

增加关键词

获取结果

罗列语法 :

{ "Version": "1", "DisplayText": "Enumerate Grammar Tool Generated", "GrammarWeight": "{ \"weight\_struct\": [] }", "Grammar": "#enumerate \nLisa where are you going\n"}  
JSGF语法 :  
{ "Version": "1", "DisplayText": "Jsgf Grammar Tool Generated", "GrammarWeight": "{ \"weight\_struct\": [] }", "Grammar": "#JSGF V1.0 utf-8 cn;\ngrammar main;\npublic <main> = \"<s>\"(lisa where are you going)\"</s>\";\n"}  
注：该JSGF语法展开后答案条数为 1 条。

```
{  
  "Version": "1",  
  "DisplayText": "Jsgf Grammar Tool Generated",
```

```

    "GrammarWeight":{"weight_struct":[]},"
    "Grammar":"#JSGF V1.0 utf-8 cn; grammar main; public <main> =
"<s>"(lisa where are you going)"</s>"; "
}

```

上面生成的 jsgf 语法，标红的句式，已经将中间的标点替换成空格，句式末尾的空格可以去掉。

具体需要替换的标点列表如下：

' : ' => ' ',

' . ' => ' ',

' ! ' => ' ',

' ! ' => ' ',

' ? ' => ' ',

' ? ' => ' ',

' ; ' => ' ',

' - ' => ' ',

' / ' => ' "',

' ' ' => ' "',

' " ' => ' "',

' " ' => ' "',

' " ' => ' "',

' . ' => ' "',

' . ' => ' "',

' 。 ' => ' "',

' , ' => ' "',

' , ' => ' "',

' ( ' => ' (',

" ) " => ' ) ',

$$'' = '' \Rightarrow ' = ',$$
$$'<' \Rightarrow '<',$$
$$'>' \Rightarrow '>',$$
$$'''' \Rightarrow '' ,$$
$$| \psi \rangle = | \psi \rangle,$$
$$''' = >'' ,$$
$$''' \Rightarrow ''$$