Atitit 构建ast v3 AstBuilderV3s528 新特性版本

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V2 版本太烂了

## V3 版本优化结构

增加了jsonname模式，方便序列化后查看结构

网站的实现了工具 curtoken和stat来切换模式。。

增加了记录当前token与ast零时状态

严格按照递归下降法与状态机简析构造ast

List<String> tokens;

**int** token\_index = 0;

**int** paramIdx = 0;

String stat = "ini";

**private** Expression Expression;

## Ast json树

{

"Exp":{

"arguments":[

"contstuParamVal"

],

"jsonname":"ClassInstanceCreation",

"name":"com.attilax.core.methodRunner",

"paramtypes":["\"string\""]

},

"Name":"methDync",

"arguments":[

"haha"

],

"exp":{"$ref":"$.Exp"},

"jsonname":"MethodInvocation",

"name":"methDync",

"paramtypes":["\"string\""]

}

/ftpserverati/src/com/attilax/core/AstBuilderV3s528.java

**package com.attilax.core;**

**import java.util.List;**

**import com.alibaba.fastjson.JSON;**

**import com.attilax.ast.ClassInstanceCreation;**

**import com.attilax.ast.Expression;**

**import com.attilax.ast.MethodInvocation;**

**import com.attilax.ast.SimpleName;**

**import com.attilax.collection.listBuilder;**

**import com.attilax.parser.Token;**

**import com.attilax.str.strService;**

**import com.google.common.collect.Lists;**

## public class AstBuilderV3s528 {

**public static void main(String[] args) {**

**String s = "invokeMethod com.attilax.core.methodRunner \"string\" contstuParamVal . methDync \"string\" haha";**

**String[] a = s.split(" ");**

**List li = listBuilder.$(a).trimElement().delEmptyElement().build();**

**com.attilax.ast.Expression buildAstV3s528 = new AstBuilderV3s528().buildAstV3s528(li);**

**System.out.println(JSON.toJSONString(buildAstV3s528,true) );**

**}**

**List<String> tokens;**

**int token\_index = 0;**

**int paramIdx = 0;**

**String stat = "ini";**

**private Expression Expression;**

**public Expression buildAstV3s528(List<String> tokens) {**

**this.tokens = tokens;**

**System.out.println("tokenindex" + token\_index);**

**if (token\_index == 4)**

**System.out.println("dbg");**

**if (token\_index >= tokens.size())**

**return this.Expression;**

**String cur\_token = tokens.get(token\_index);**

**if (token\_index == 0 && stat.equals("ini")) {**

**if (cur\_token.equals("invokeMethod")) {**

**ClassInstanceCreation cic = new ClassInstanceCreation();**

**// cic.arguments = getArgs(tokens, m\_index);**

**this.Expression = cic;**

**this.Expression.jsonname = "ClassInstanceCreation";**

**this.stat = "startgetClassname";**

**//**

**}**

**if (cur\_token.equals("invokeStaticMethod")) {**

**this.Expression = new SimpleName(cur\_token);**

**this.Expression.jsonname = "ClassInstanceCreation";**

**this.stat = "startgetClassname";**

**}**

**} else if (stat.equals("startgetClassname")) {**

**if (this.Expression instanceof ClassInstanceCreation) {**

**ClassInstanceCreation cic = (ClassInstanceCreation) this.Expression;**

**cic.name = cur\_token;**

**} else // static class simplename**

**{**

**SimpleName sn = (SimpleName) this.Expression;**

**sn.IDENTIFIER = cur\_token;**

**}**

**this.stat = "ClassInstanceCreationParamType";**

**} else if (stat.equals("ClassInstanceCreationParamType")) {**

**this.stat = "ClassInstanceCreationParamStart";**

**this.Expression.paramtypes = cur\_token.split(",");**

**}**

**else if (!cur\_token.equals(".") && stat.equals("ClassInstanceCreationParamStart")) {**

**ClassInstanceCreation cic = (ClassInstanceCreation) this.Expression;**

**Object params = getArg(cur\_token, paramIdx, this.Expression.paramtypes);**

**cic.arguments.add(cur\_token);**

**paramIdx++;**

**}**

**else if (cur\_token.equals(".") && stat.equals("ClassInstanceCreationParamStart")) {**

**this.stat = "ClassInstanceCreationParamEnd";**

**} else if (stat.equals("ClassInstanceCreationParamEnd")) {**

**MethodInvocation mi = new MethodInvocation();**

**mi.jsonname="MethodInvocation";**

**mi.Exp = this.Expression;**

**mi.Name = cur\_token;**

**this.Expression = mi;**

**this.stat = "MethodInvocationType";**

**} else if (stat.equals("MethodInvocationType")) {**

**this.stat = "MethodInvocationParamStart";**

**this.Expression.paramtypes = cur\_token.split(",");**

**} else if (stat.equals("MethodInvocationParamStart")) {**

**MethodInvocation cic = (MethodInvocation) this.Expression;**

**cic.arguments.add(cur\_token);**

**}**

**token\_index++;**

**return buildAstV3s528(tokens);**

**}**

**private Object getArg(String cur\_token, int paramIdx2, String[] paramtypes) {**

**String ptype = paramtypes[paramIdx2];**

**if (ptype.equals("int"))**

**return Integer.parseInt(cur\_token.toString());**

**return cur\_token;**

**}**

**}**

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