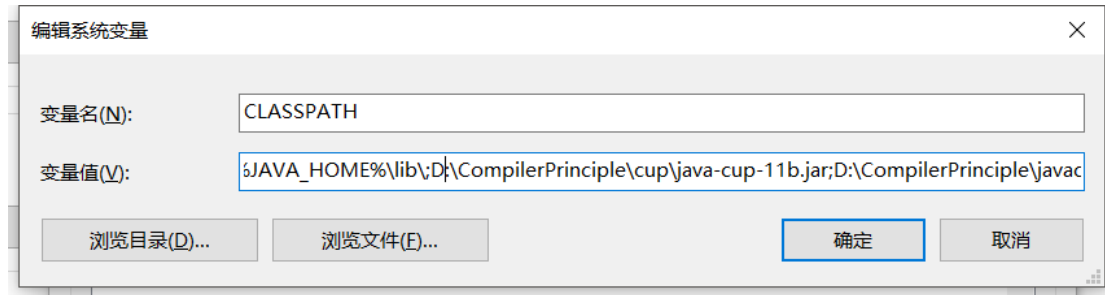


子实验三：生成语法分析程序

3.1 下载自动生成工具 JavaCUP

3.2 配置和试用 JavaCUP

JavaCUP 配置如下图所示：



试运行 JavaCUP 的一个基于命令行的简单计算器应用如下图所示：

```
C:\Windows\System32\cmd.exe
Microsoft Windows [版本 10.0.17134.112]
(c) 2018 Microsoft Corporation. 保留所有权利。

D:\CompilerPrinciple\jflex-1.6.1\examples\cup>jflex lcalc.flex
Reading "lcalc.flex"
Constructing NFA : 46 states in NFA
Converting NFA to DFA :
.....
19 states before minimization, 14 states in minimized DFA
Old file "Lexer.java" saved as "Lexer.java"
Writing code to "Lexer.java"

D:\CompilerPrinciple\jflex-1.6.1\examples\cup>java java_cup.Main < ycalc.cup
----- CUP v0.11b 20160615 (GIT 4ac7450) Parser Generation Summary -----
 0 errors and 0 warnings
11 terminals, 6 non-terminals, and 14 productions declared,
producing 23 unique parse states.
 0 terminals declared but not used.
 0 non-terminals declared but not used.
 0 productions never reduced.
 0 conflicts detected (0 expected).
Code written to "parser.java", and "sym.java".
----- (CUP v0.11b 20160615 (GIT 4ac7450))

D:\CompilerPrinciple\jflex-1.6.1\examples\cup>javac Main.java
注: Main.java使用或覆盖了已过时的 API。
注: 有关详细信息, 请使用 -Xlint:deprecation 重新编译。

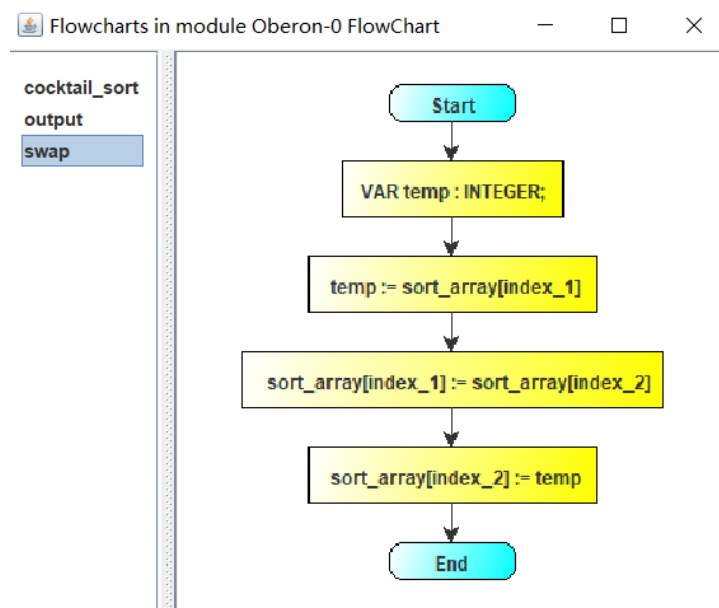
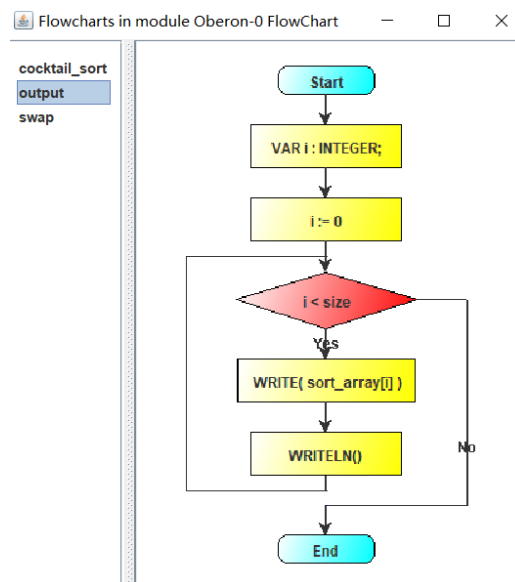
D:\CompilerPrinciple\jflex-1.6.1\examples\cup>java Main test.txt
2 + 4 = 6
5 * ( 6 - 3 ) + 1 = 16
6 / 3 * 5 + 20 = 30
4 * 76 / 31 = 9
1 - 1 - 1 = -1

D:\CompilerPrinciple\jflex-1.6.1\examples\cup>_
```

3.3 生成 Oberon-0 语法分析和语法制导翻译程序

生成 Oberon-0 语法分析和语法制导翻译程序，运行结果如下所示：

```
C:\WINDOWS\system32\cmd.exe
E:\University\Junior\2\编译原理项目\实验项目3\20152100048游森榕\CompilePrinciple3\ex3>cd bin
E:\University\Junior\2\编译原理项目\实验项目3\20152100048游森榕\CompilePrinciple3\ex3\bin>java -classpath .\..\graph\jgr
aph.jar;..\graph\callgraph.jar;..\graph\flowchart.jar;..\javacup\java-cup-11b.jar Main ..\src\testcases\cocktail_sort.ob
r
..\src\testcases\cocktail_sort.obr:
Congratulation!!! There is no error in your program.
Drawing Flowchart, please wait...
```



cocktail_sort
output
swap

