readme执行说明

1. 单独执行语法分析

用parser可执行文件进行语法分析

在Linux系统内输入：

```
cd exe
./parser ./bubbleSort.c > bubbleSort.json
./parser ./palindrome_string.c > palindrome_string.json
```

即可生成语法分析树的json格式；

如果想直接查看这两个测试程序的语法分析结果，可以直接在result文件夹中查看对应的json文件和可视化后的图片。

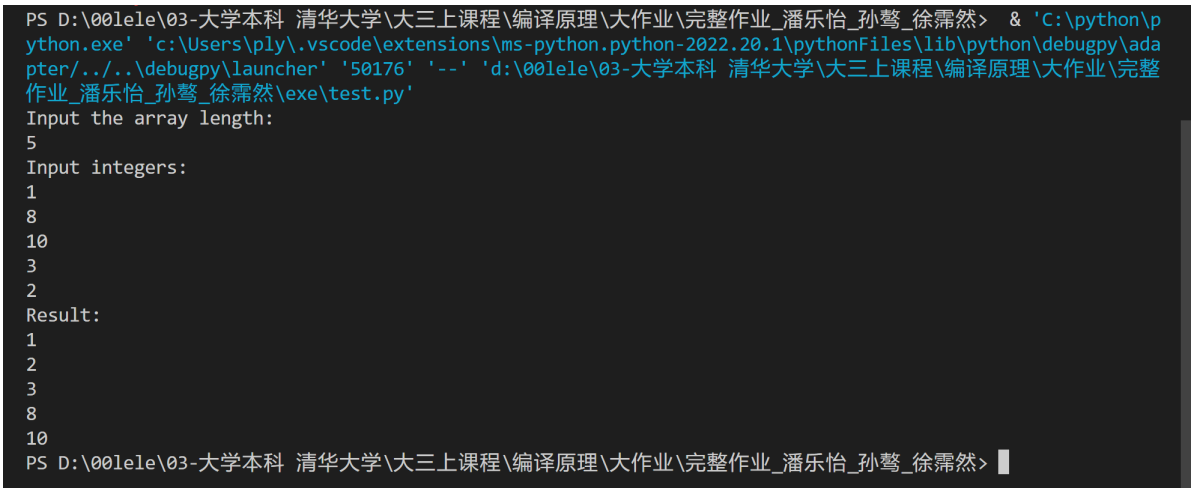
2. 生成python代码

用main可执行文件进行代码翻译

在Linux系统内输入：

```
cd exe
./main ./bubbleSort.c
```

即可生成test.py文件，文件中为翻译出的冒泡排序python代码，直接运行该文件进行冒泡排序；运行test.py截图如下：



在Linux系统内输入：

```
cd
./main ./palindrome_string.c
```

此时test.py文件中为翻译出的回文串检测python代码，直接运行该文件进行回文串检测；运行test.py截图如下：

```
PS D:\00lele\03-大学本科 清华大学\大三上课程\编译原理\大作业\完整作业_潘乐怡_孙骜_徐需然>  d:; cd 'd:\00l
ele\03-大学本科 清华大学\大三上课程\编译原理\大作业\完整作业_潘乐怡_孙骜_徐需然'; & 'C:\python\python.exe
' 'c:\Users\ply\.vscode\extensions\ms-python.python-2022.20.1\pythonFiles\lib\python\debugpy\adapter/../.
.\debugpy\launcher' '50203' '--' 'd:\00lele\03-大学本科 清华大学\大三上课程\编译原理\大作业\完整作业_潘乐
怡_孙骜_徐需然\exe\test.py'
Input the string length:
6
Input string:
aabbaa
TRUE!
PS D:\00lele\03-大学本科 清华大学\大三上课程\编译原理\大作业\完整作业_潘乐怡_孙骜_徐需然>
```

如果想直接查看这两个测试程序转换生成的python代码，可以直接在result文件夹中查看bubbleSort.py和palindrome_string.py。

注：错误测例的翻译

在Linux系统内输入

```
cd exe
./main ./error1.c
```

即可在控制台看到输出信息，检测出变量num未定义错误：

```
(base) ply@DESKTOP-5EQ9FHB:/mnt/d/00lele/03-大学本科 清华大学/大三上课程/编译原理/大作业/完整作业_潘乐怡_
孙骜_徐需然/exe$ ./main error1.c


----------------------Generate Process----------------------


Creating Python Code for: BlockNode
Creating Python Code for: ArrayDeclarationNode
Creating Python Code for: IntegerNode
Creating Python Code for: FunctionDeclarationNode
Creating Python Code for: BlockNode
Creating Python Code for: ExpressionStatementNode
Creating Python Code for: ArrayAssignmentNode
Creating Python Code for: ArrayIndexNode
Creating Python Code for: IdentifierNode
Creating Python Code for: IntegerNode
Creating Python Code for: IntegerNode
Creating Python Code for: ExpressionStatementNode
Creating Python Code for: AssignmentNode
Creating Python Code for: IdentifierNode
Creating Python Code for: IntegerNode
Error occurred
Identifier "num" is undefined
```

在Linux系统内输入

```
cd exe
./main ./error2.c
```

即可在控制台看到输出信息，检测出变量num重定义错误：

```
----------------------Generate Process----------------------


Creating Python Code for: BlockNode
Creating Python Code for: ArrayDeclarationNode
Creating Python Code for: IntegerNode
Creating Python Code for: FunctionDeclarationNode
Creating Python Code for: BlockNode
Creating Python Code for: VariableDeclarationNode
Creating Python Code for: AssignmentNode
Creating Python Code for: IdentifierNode
Creating Python Code for: IntegerNode
Creating Python Code for: ExpressionStatementNode
Creating Python Code for: ArrayAssignmentNode
Creating Python Code for: ArrayIndexNode
Creating Python Code for: IdentifierNode
Creating Python Code for: IntegerNode
Creating Python Code for: IntegerNode
Creating Python Code for: VariableDeclarationNode
Error occurred
Redefinition of identifier "num"
```

在Linux系统内输入

```
cd exe
./main ./error2.c
```

即可在控制台看到输出信息，检测出函数func重定义错误：

```
----------------------Generate Process----------------------


Creating Python Code for: BlockNode
Creating Python Code for: FunctionDeclarationNode
Creating Python Code for: BlockNode
Creating Python Code for: ReturnStatementNode
Creating Python Code for: IntegerNode
Creating Python Code for: FunctionDeclarationNode
Creating Python Code for: BlockNode
Creating Python Code for: ReturnStatementNode
Creating Python Code for: IntegerNode
Creating Python Code for: FunctionDeclarationNode
Error occurred
Redefinition of function "func"
```