External Document

이름

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Build And Test Environment

- OS : Windows 11
- JDK : Amazon Corretto 17
- Build System : Gradle 7.2

How To Run

```
>> java -jar .\Main.jar .\testcase\example1.txt
```

OR

```
>> java -jar .\Main.jar  -v .\testcase\example1.txt
```

How To Build

```
>> ./gradlew build
```

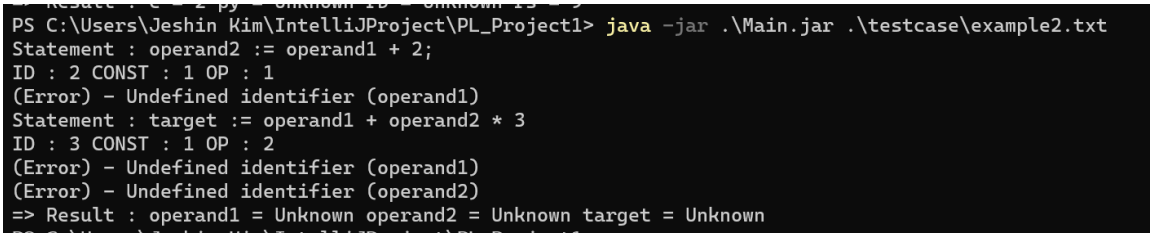
Exception Handling

Error

- 선언되지 않은 변수 사용
  - 예제 문장

```
operand2 := operand1 + 2 ;
target := operand1 + operand2 * 3
```

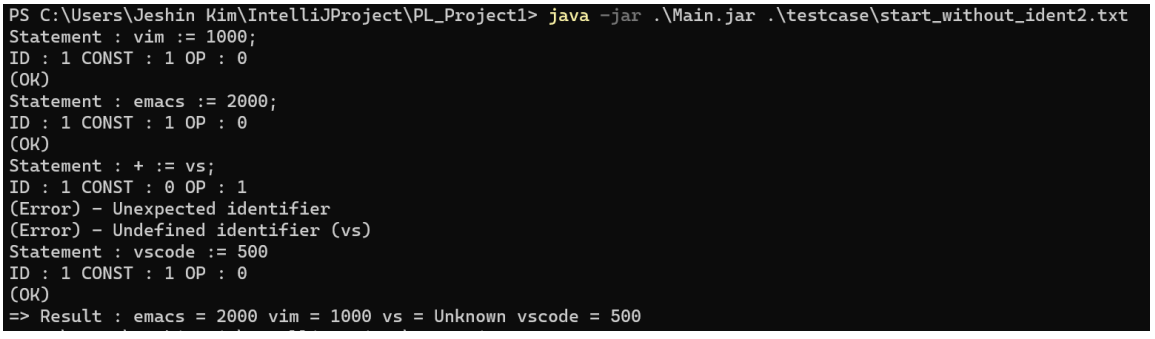
  - 실행 결과



- Statement가 변수로 시작되지 않는 경우
  - 예제 문장

```
vim := 1000;
emacs := 2000;
+ := vs;
vscode := 500
```

  - 실행 결과



- $, % 같은 정의되지 않은 기호들이 나올 경우
  - 예제 문장

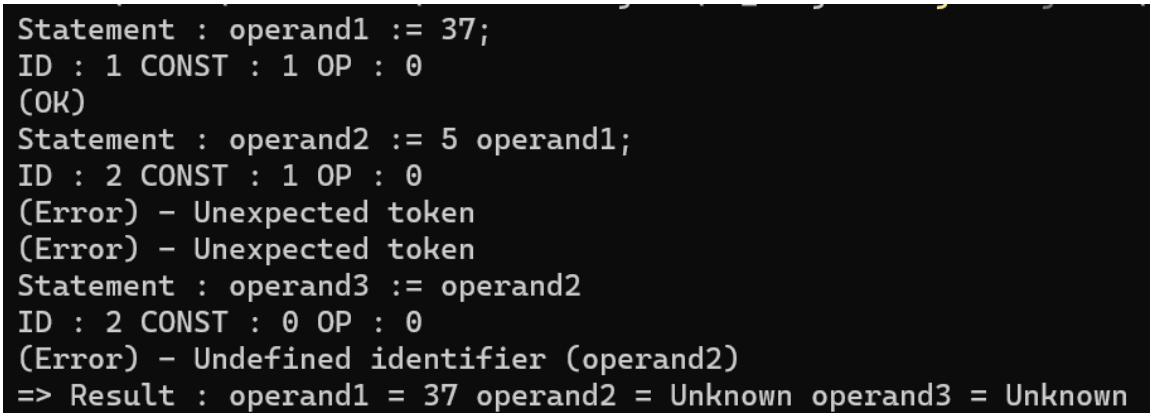
```
c := 1 + 1;
py := 2 % 2;
rs := 3 * 3;
rb := 4 $ 4
```

  - 실행 결과

- Operator가 없을 경우
  - 예제 문장

```
operand1 := 37;
operand2 := 5 operand1;
operand3 := operand2
```

  - 실행 결과

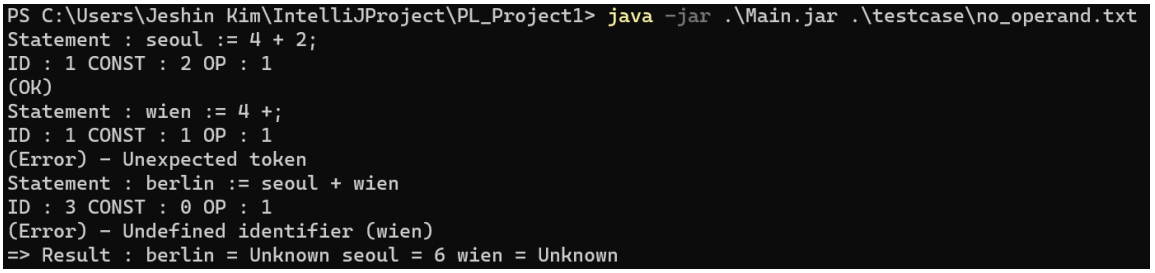


- Operand가 없을 경우

- 예제 문장

```
seoul := 4 + 2;
wien := 4 + ;
berlin := seoul + wien
```

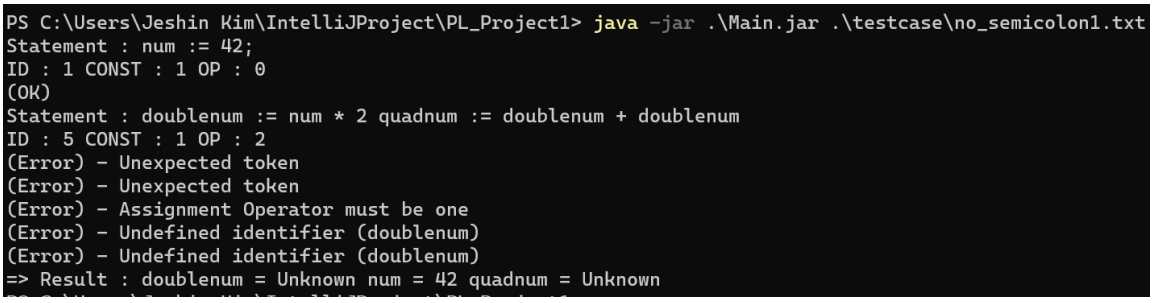
- 실행 결과



- 중간에 세미콜론이 없는 경우
  - 예제 문장

```
num := 42;
doublenum := num * 2
quadnum := doublenum + doublenum
```

- 실행 결과



- 파일이 공백일 경우
  - 예제 문장

```

```

- 실행 결과

```
PS C:\Users\Jeshin Kim\IntelliJProject\PL_Project1> java -jar .\Main.jar .\testcase\no_statement.txt
Statement :
ID : 0 CONST : 0 OP : 0
(Error) - There is no input.
PS C:\Users\Jeshin Kim\IntelliJProject\PL_Project1>
```

Warning

- 연산자가 두 개 연속으로 나올 경우에 뒤의 연산자는 전부 무시
  - 예제 문장

```
a := 1 + - * / / + - 4;
b := a * / / - - a
```

  - 실행 결과

```
PS C:\Users\Jeshin Kim\IntelliJProject\PL_Project1> java -jar .\Main.jar .\testcase\operators.txt
Statement : a := 1 + 4;
ID : 1 CONST : 2 OP : 1
(Warning) - Consecutive operators were found - Remove Backward operator +
(Warning) - Consecutive operators were found - Remove Backward Operator *
(Warning) - Consecutive operators were found - Remove Backward Operator /
(Warning) - Consecutive operators were found - Remove Backward Operator /
(Warning) - Duplicate operators were found - Remove duplicate operator (+)
(Warning) - Consecutive operators were found - Remove Backward operator +
Statement : b := a * a
ID : 3 CONST : 0 OP : 1
(Warning) - Consecutive operators were found - Remove Backward operator *
(Warning) - Consecutive operators were found - Remove Backward operator *
(Warning) - Consecutive operators were found - Remove Backward operator-
(Warning) - Consecutive operators were found - Remove Backward operator-
=> Result : a = 5 b = 25
```

- 맨 마지막 세미콜론이 있을 경우 삭제
  - 예제 문장

```
open := 123;
lab := 456;
```

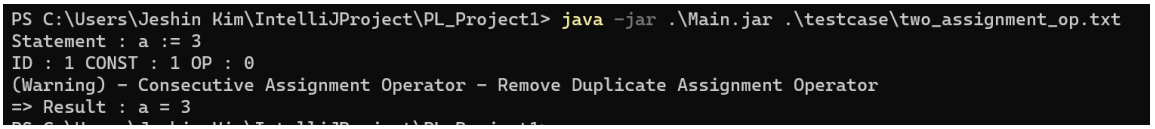
  - 실행 결과

```
PS C:\Users\Jeshin Kim\IntelliJProject\PL_Project1> java -jar .\Main.jar .\testcase\semicolon_at_the_end.tx
Statement : open := 123;
ID : 1 CONST : 1 OP : 0
(OK)
Statement : lab := 456
ID : 1 CONST : 1 OP : 0
(Warning) - Semicolon in the last statement is not required. - Delete semicolon
=> Result : lab = 456 open = 123
```

- Assignment Operator가 두 개 이상 나왔을 경우 하나만 빼고 무시.
  - 예제 문장

```
a := := 3;
```

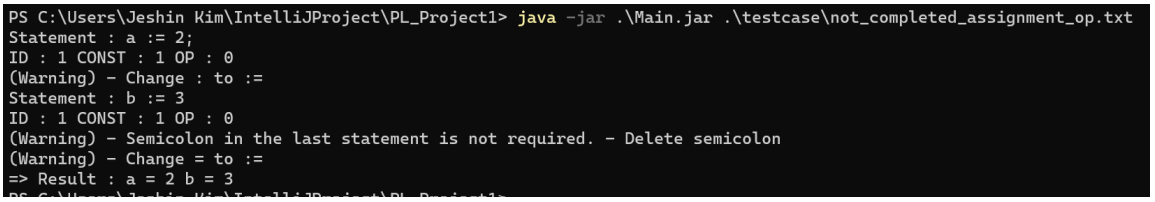
- 실행 결과



- Assignment Operator가 완성되지 않았을 때 (ex) `;` , `=`), 이것들을 `:=` 로 바꿔서 처리.
  - 예제 문장

```
a : 2;
b = 3;
```

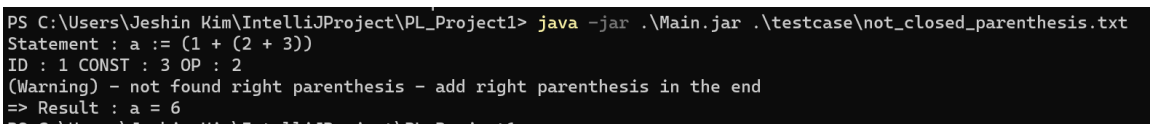
- 실행 결과



- 괄호가 닫히지 않았을 때, 나머지 괄호들을 마지막에 넣음으로써 처리.
  - 예제 문장

```
a := (1 + (2 + 3)
```

- 실행 결과

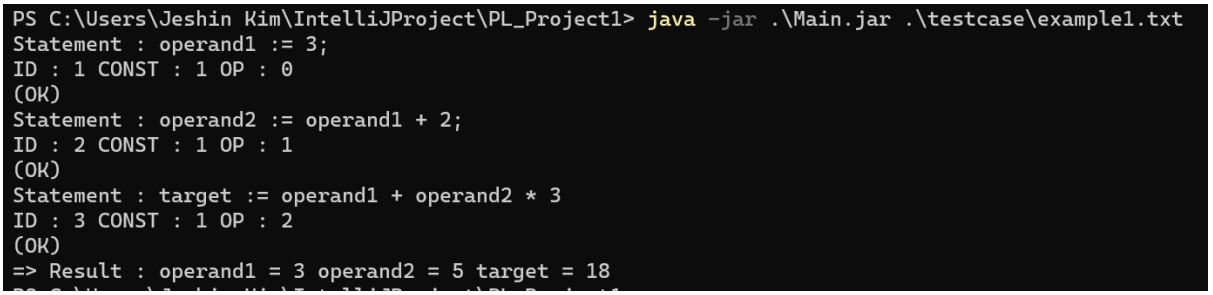


정상 실행 결과

- 예제 문장

```
operand1 := 3 ;
operand2 := operand1 + 2 ;
target := operand1 + operand2 * 3
```

- 실행 결과



- -v 옵션을 적용 시킨 실행 결과