

CS323 Project 1 Report

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The bonus features that I have realized:

- comment (both single line and multiple line)
- `for` statement

Comment

I use the function `input()` to implement the comment support of SPL.

The code is as below:

```
1  "/" {
2      char c;
3      while((c=input()) != '\n') {
4          if (c == 0) {
5              processErrorA("unfinished comment");
6              break;
7          }
8      };
9  }
10 "/" {
11     char c1, c2;
12     c1 = input();
13     c2 = input();
14     while (c1 != '*' || c2 != '/') {
15         c1 = c2;
16         c2 = input();
17         if (c2 == 0) {
18             processErrorA("unclosed comment");
19             break;
20         }
21     }
22 }
```

I introduced some simple error processing of comment, if multiple line comment does not close the comment correctly, it can report the error.

for statement

I added `for` in the lexical analyser, and `FOR LP ExpOrNull SEMI ExpOrNull SEMI ExpOrNull RP Stmt` in the syntax analyser. `ExpOrNull` is a newly introduced nonterminal which is `ExpOrNull -> Exp | ε`. I also added some error process about `for` structure, like unclosed parentheses, or missing semicolon inside the parentheses.