Bilkent University | Department of Computer Engineering

CS 315: Programming Languages

Lexical Analyser for a Programming Language for an Integer Language

Language: ***HazardCat***

13.10.2034

Section: 2

Group: 14?

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1. <main > =: execute begin <program> end
2. <program> :: = <statements>
3. <statements>::= <statement>|< statements> +<statement>
4. <statement>:: =<cond_statement> | <loop> | <single_statement>|<statement>
5. <cond_statement>::= if (<single_statement>){<statements>}| else_if (<single_statement>){<staments>}|else{<staments>}
6. <loop>::= <for>|<while>
7. <for>::=for (<var_name>=<expr>(<cond_statement>)){<statements>}
8. <while>::= while (<expr>){statements}
9. <single_statement>::=<type><var_name>=<exprs>|<return_st>|<list_stat>
10. <return_stat>::=return <exprs>
11. <list_stat>::= let [] <var_name>=list<size>
12. <list_assign>::= <var_name> = {<list_expr>}
13. <list_expr>::=<exprs>|<expr>
14. <exprs>::= <expr>+<expr>|<expr>*<expr>|expr
15. <expr>::=<var_name>|<var_name>+<expr>|<constant>
16. <var_name>::=<lower_lets>|<lower_lets>+<upper_let>|<lower_lets>+<upper_lets>+<nums>
17. <func>::=func<var_name>(<parameters>){<statements>}
18. <parameters>::=int<var_name>
19. <input_scan>::=read<exprs>
20. <string>::=<lower_lets>|upper_lets>|< digits>|<special_buts>
21. <lower_lets>::= a|b|c|d|e|f|g|h|i|j|k|l|m|n|o|p|q|r|s|t|u|v|w|x|y|z |<lower_lets>
22. <upper_let>::= A|B|C|D|E|F|G|H|I|J|K|L|M|N|O|P|Q|R|S|T|U|V|W|X|Y|Z|<upper_let>
23. <special_buts>::=/|.|,|*|&|^|%|$|#|@!|~

24.<compare>::=< | > | <= | >= | == | !=

25.<negative>::=-(number)

26.<number>::=<digits><digits>|<digits>| <negative><digits>|<negative>

27.<digits>::=0|1|2|3|4|5|6|7|8|9

28.<comments>::= #

29.<print>::=print(<number>|<expr>|<string>)

30.<print_line>::=print_line+<print>