

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS

Principles of Programming Languages (CS F301)

I Semester 2020-21

Assignment-1 Code Submission

Coding Details

(October 29, 2020)

Group No.14

1. IDs and Names of team members

ID: 2017B1A70977P	Name: Rushikesh Zawar
ID: 2017B2A71038P	Name: Shrey Shah
ID: 2017B3A70637P	Name: Abhimanyu Sethi
ID: 2017B3A70736P	Name: Pranali Sancheti

2. Mention the names of the Submitted files :

1 driver.c	7 nonterminals.txt	13. stackdef.c	19 t4.txt
2 grammar_parser.c	8 tokens.txt	14. stackdef.h	21 t5.txt
3 grammar_parser.h	9 treenode.c	15. makefile	21 t6.txt
4 lexer.c	10 treenode.h	16. t1.txt	22 coding details proforma.docx
5.lexer.h	11 typeExpression.c	17 t2.txt	
6 grammar.txt	12 typeExpression.h	18 t3.txt	

- 3. Total number of submitted files: 22** (All files should be in **ONE folder** named exactly as Group_#, # is your group number)
- 4. Have you mentioned your names and IDs at the top of each file (and commented well)? (Yes/ no) YES** [Note: Files without names will not be evaluated]
- 5. Have you compressed the folder as specified in the submission guidelines? (yes/no) YES**
- 6. Have you ensured that the folder does not have any *.o file or any executable file? (yes/no) YES**
- 7. Grammar and token stream**

Total number of production rules: 61

Total number of nonterminals: 34

Total number of terminals: 36

Grammar.txt file created [yes/no]: **YES**

Nonterminal symbols enumerated [yes/no]: **YES**

Terminal symbols enumerated [yes/no]: **YES**

Grammar data structure populated successfully [yes/no]: **YES**

Tokenstream created [yes/no]: **YES**

8. Which functions have you implemented?

- [A]. *readGrammar ()* [yes/no] **YES**
- [B]. *tokeniseSourcecode ()* [yes/no] **YES**
- [C]. *createParseTree ()* [yes/no] **YES**
- [D]. *traverseParseTree ()* [yes/no] **YES**
- [E]. *printParseTree ()* [yes/no] **YES**
- [F]. *printTypeExpressionTable ()* [yes/no] **YES**

9. Parse tree

- [A]. Constructed (yes/no): **YES**
- [B]. Printing as per the given format (yes/no): **YES**
- [C]. Describe the order you have adopted for printing the parse tree nodes (in maximum two lines)
PREORDER TRAVERSAL: first we print the root node and then we go to leftmost child recursively (if not null) and then we move to its siblings and so on.

10. Type Expression Table

- [A]. Constructed (yes/no): **YES**
- [B]. Implemented as (lookup table/ hash table): **NO**
- [C]. Printing as per the given format (yes/no): **YES**
- [C]. Describe the structure of the type expression accommodating all types (in maximum two lines)
Made a tagged union of primitive type expression (stores type), rectangular array type expression and for jagged type (stores array type, ranges, dimension and other required attributes), each described as a structure

11. Compilation Details:

- [A]. Implemented in multiple files / single file: **MULTIPLE FILES**
- [B]. Makefile works (yes/no) : **YES**
- [C]. Code Compiles (yes/ no): **YES**
- [D]. Mention the .c files that do not compile: **NONE**
- [E]. Any specific function that does not compile: **NONE**
- [F]. Ensured the compatibility of your code with the specified gcc version(yes/no) **YES**
- [G]. Give below the exact commands to compile your code :
\$ make
\$./run "t4.txt"

12. Driver Details: Does it take care of the options specified earlier(yes/no): **YES**

13. Execution

- [A]. Status (describe in maximum 2 lines): **EXECUTES ALL FUNCTIONS SUCCESSFULLY WITH NO ERRORS OR SEGMENTATION FAULT**
- [B]. Gives segmentation fault with any of the test cases (1-6) uploaded on the course page. If yes, specify the testcase file name: **ALL RUN SUCCESSFULLY**
- [C]. Command line arguments used for input file (yes/no): **YES**

14. Specify the language features your code is not able to handle (in maximum one line) : Not all assignment type check errors are reported

15. Are you availing the lifeline (Yes/No): **YES**

16. Declaration: We, RUSHIKESH ZAWAR, SHREY SHAH, ABHIMANYU SETHI, PRANALI SANCHETI (your names) declare that we have put our genuine efforts in creating the code and have submitted the code developed only by our group. We have not copied any piece of code from any source. If our code is found plagiarized in any form or degree, we understand that a disciplinary action as per the institute rules will be taken against us and we will accept the penalty as decided by the department of Computer Science and Information Systems, BITS, Pilani. [Write your ID and names below]

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Date: 30 OCTOBER 2020

Should not exceed 3 pages.