**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**

**DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS**

**Principles of Programming Languages (CS F301)**

**Group No.**

**47**

**I Semester 2020-21**

**Assignment-1 Code Submission**

**Coding Details**

**(October 29, 2020)**

1. IDs and Names of team members

**ID: 2017B1A70975P Name: Anushka Jain**

**ID: 2017B3A70626 Name: Kumar Saurabh**

**ID: 2017B1A70991P Name: Mansi Mittal**

**ID: 2017B3A70629P Name: Ruchi Batra**

1. Mention the names of the Submitted files :
   * + 1. **grammar.txt**
       2. **gdef.h**
       3. **g.h**
       4. **g.c**
       5. **tok.h**
       6. **tok.c**
       7. **tree.h**
       8. **tree.c**
       9. **stack.h**
       10. **stack.c**
       11. **parse.h**
       12. **parse.c**
       13. **driver.c**
       14. **makefile**
       15. **t1.txt**
       16. **t2.txt**
       17. **t3.txt**
       18. **t4.txt**
       19. **t5.txt**
       20. **t6.txt**
2. Total number of submitted files: **20** (All files should be in **ONE folder** named exactly as Group\_#, # is your group number)
3. 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]
4. Have you compressed the folder as specified in the submission guidelines? (yes/no) **Yes**
5. Have you ensured that the folder does not have any \*.o file or any executable file? (yes/no) **Yes**
6. **Grammar and token stream**

Total number of production rules: **66**

Total number of nonterminals: **41**

Total number of terminals: **34**

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**

1. **Which functions have you implemented?**
   1. ***readGrammar ( ) [yes/no]* Yes**
   2. ***tokeniseSourcecode ( ) [yes/no]* Yes**
   3. ***createParseTree ( ) [yes/no]* Yes**
   4. ***traverseParseTree ( ) [yes/no]* No**
   5. ***printParseTree ( ) [yes/no]* Yes**
   6. ***printTypeExpressionTable ( ) [yes/no]* No**
2. **Parse tree** 
   1. Constructed (yes/no): **Yes**
   2. Printing as per the given format (yes/no): **Yes**
   3. Describe the order you have adopted for printing the parse tree nodes (in maximum two lines)

**On calling printParseTree function, Parse Tree nodes will be printed in the preorder traversal manner, starting at the root.**

1. **Type Expression Table**

[A]. Constructed (yes/no): No

[B]. Implemented as (lookup table/ hash table):No

[C]. Printing as per the given format (yes/no):No

[C]. Describe the structure of the type expression accommodating all types (in maximum two lines)

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1. **Compilation Details:**
   1. Implemented in multiple files / single file: **Multiple Files**
   2. Makefile works (yes/no): **Yes**
   3. Code Compiles (yes/ no): **Yes**
   4. Mention the .c files that do not compile: **None**
   5. Any specific function that does not compile: **None**
   6. Ensured the compatibility of your code with the specified gcc version(yes/no) **Yes**
   7. Give below the exact commands to compile your code :
      * + 1. **make -f makefile**
          2. **./compiler**
2. **Driver Details**: Does it take care of the options specified earlier(yes/no): **Yes**
3. **Execution** 
   1. Status (describe in maximum 2 lines): **Code executes without error if the program syntactically correct.**
   2. Gives segmentation fault with any of the test cases (1-6) uploaded on the course page. If yes, specify the testcase file name: **No, all test cases included in the submission, any faults may be due to syntax errors.**
   3. Command line arguments used for input file (yes/no): **No (Driver asks user for option and filename as input)**
4. Specify the language features your code is not able to handle (in maximum one line): **None, it handles all features of the language.**
5. Are you availing the lifeline (Yes/No): **No**
6. Declaration: We, **Anushka Jain, Kumar Saurabh, Mansi Mittal, Ruchi Batra** 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]

ID: 2017B1A70975P Name: Anushka Jain

ID: 2017B3A70626 Name: Kumar Saurabh

ID: 2017B1A70991P Name: Mansi Mittal

ID: 2017B3A70629P Name: Ruchi Batra

Date: 29.10.20

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