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

**DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS**

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

**Group No.28**

**I Semester 2020-21**

**Assignment-1 Code Submission**

**Coding Details**

**(October 29, 2020)**

1. IDs and Names of team members

ID: 2017B2A71008P Name: Utkarsh Kumar

ID: 2017B2A70585P Name: Suchisattam Saran

ID: 2017B2A70745P Name: Supratik Bhattacharya

1. Mention the names of the Submitted files :

1.) def.h 7.) read.c 13.) t6.txt

2.) driver.c 8.) t1.txt 14.) terminals.txt

3.) group\_28\_grammer.txt 9.) t2.txt 15.) token.c

4.) makefile 10.) t3.txt

5.) nonterminals.txt 11.) t4.txt

6.) parseTree.c 12.) t5.txt

1. Total number of submitted files: 15 (All files should be in **ONE folder** named exactly as Group\_#, # is your group number)
2. Have you mentioned your names and IDs at the top of each file (and commented well)? (Yes/ no) **yes**
3. Have you compressed the folder as specified in the submission guidelines? (yes/no) **yes**
4. Have you ensured that the folder does not have any \*.o file or any executable file? (yes/no) **yes**
5. **Grammar and token stream**

Total number of production rules: **41**

Total number of nonterminal: **15**

Total number of terminals: **34**

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

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

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

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

Token stream 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)

**preorder traversal in format : Symbol , line, terminal, keyword, grammar rule**

1. **Type Expression Table**

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

[B]. Implemented as (lookup table/ hash table): **NA**

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

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

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: **make**
2. **Driver Details**: Does it take care of the options specified earlier(yes/no): **yes**
3. **Execution** 
   1. Status (describe in maximum 2 lines): **executes successfully and compiles**
   2. Gives segmentation fault with any of the test cases (1-6) uploaded on the course page. If yes, specify the testcase file name: **none**
   3. Command line arguments used for input file (yes/no): **no** (argument to be given by user when code runs)
4. Specify the language features your code is not able to handle (in maximum one line) : **reads, tokenizes and creates parse Tree for all features except for type checking.**
5. Are you availing the lifeline (Yes/No): **Yes**
6. Declaration: We, Suchisattam Saran, Utkarsh Kumar, Supratik Bhattacharya (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]

ID 2017B2A70585P Name: Suchisattam Saran

ID 2017B2A71008P Name: Utkarsh Kumar

ID 2017B2A70745P Name: Supratik Bhattacharya

Date: 30th October 2020