BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
HYDERABAD CAMPUS
SECOND SEMESTER 2018 – 2019

COMPILER CONSTRUCTION (CS F363)
Home Assignment (Wt: 15%)

You will implement a Query Engine that will accept statements in query language MQL, to perform data Retrieval/ Insert/ Delete/ Update operations on data stored in normal text files.

File 1: EMP.txt: to store employee data. Each employee record will have following fields.
 eid int, ename string, egae int, eaddress string, salary int, and deptno int.
Note: eid is unique, and deptno refers to dnum in DEPT records.

File 2: DEPT.txt: to store department related data. Each department record will have following fields.
  dnum integer, dname string, dlocation string.

 Query Language MQL specifications:

GET <fields list separated by comma> FROM <file> WHERE <cond1> AND/OR <cond2> AND/OR …..;   // multiple conditions like n SQL

INSERT RECORD (<v1, v2,..>) INTO <filename>;

UPDATE RECORD IN <filename> SET <fileld> TO <newvalue> WHERE <cond1> AND/OR <cond2> AND/OR…; // multiple conditions like n SQL

DELETE RECORD FROM <filename> WHERE <cond1> AND/OR <cond2> AND/OR…;

NOTE:
1.Field / file names start with letter (upper/lower)/underscore followed by string with combination of letters/digits/underscore/$ in any order.
2.MQL is not case sensitive. But string constants in database are case sensitive.

Notes on implementation

Implementation of the project must be in Lex and Yacc.

Assignment Administration

* Project may be worked in teams of four. Choose your own team but you will not be allowed to change your team-mate later.

- Register your team details along with the language you wish to implement with Mr. Gourish OR Mr. Naresh (PhD scholars) who sit in CSIS Research Scholars Lab, on or before 06/03/2018.
- Final Evaluation Schedule will be announced after mid-sem test (tentatively between 1st and 10th of April).
  Final evaluation comprises of Demo and viva-voce.
- Marking will be based not only on the implementation but also on your understanding of the implementation and the ability to explain your code and answer questions on your part of the work (For each phase split up of marks is mentioned).

Fair Practice

- Teams are permitted to discuss the project with each other but not allowed to see nor use each other's solutions.
- Plagiarism in any form is unacceptable. Project submissions will be rigorously scrutinized for plagiarism and the team members will be questioned to verify the ownership of the solution.

Evaluation scheme:

1. **Lexer- 8 Marks**
2. **Parser – 12 marks**
3. **Query evaluation code- 6 and showing the results**
4. **Viva- 4**

   Total:30 Marks.

I/C CSF 363

01-03-2019