

## Assignment #5

CS347

Date: 2nd March 2017

Total 20 Points

1. Consider a SQL INSERT statement as an input and write a program to check the correctness of the syntax of INSERT statement. (10 Points)

**Note:** - Your program should also check whether the list of values in the statement correspond to the list of attributes in the statements properly or not.

**For example,**

*INPUT: INSERT INTO emp (id, name, sal) VALUES ( 1 , 'xyz' , 2000 )*

*OUTPUT: syntax is correct.*

*INPUT: INSERT INTO emp (id, name, sal) VALUES ( 1 , 'xyz' )*

*OUTPUT: syntax is incorrect.*

2. Write a program using YACC to check the syntax of a given SELECT statement as input. It is intuitive that the parser will fail to parse when any extra meta-character ( ' , -- , ; , ' , etc.) is present in the input statement.

Your program should identify the presence of such meta-character in the input SQL statement and if found then display all meta-character.

(10 Points)

**For example**

*INPUT: SELECT id FROM emp WHERE login = 'x'or1=1-- ' AND pass = 'ax '*

***OUTPUT: SELECT statement syntax is incorrect and meta-characters: ' and --***

**Note:** The parser will fail to parse for the above input SQL statement because in this case the SELECT statement contains meta-characters like ' and -- within string *x'or1=1--*

***INPUT: SELECT id FROM emp WHERE login = 'xyz' AND pass = '123'***

***OUTPUT: SELECT statement syntax is correct and no meta-character***

**Submission Deadline**-in one lab session

**Submission Steps:**

- Open 172.16.1.3/~halder
- Click on "Submission System"
- Login: <your roll no.>
- Password: <blank>
- Once Login first time, you must change your password
- Create a directory with name "assignment05" in your computer system
- Put your assignment files in the directory
- ZIP the directory to create "assignment05.zip"
- Upload the zip by clicking on Upload button.