Regular Expressions (REGEXP): Assignment 6

Use the following syntax and derive the resultant table in your applications:

Basic syntax:

```
SELECT statements... WHERE fieldname REGEXP 'pattern';
```

HERE -

- **"SELECT statements..."** is the standard SELECT statement
- **"WHERE fieldname"** is the name of the column on which the regular expression is to be performed on.
- **"REGEXP 'pattern'"** REGEXP is the regular expression operator and 'pattern' represents the pattern to be matched by REGEXP.

Exercise 1:

Search for all the Entity1/Table1, Entity2/Table2 where Column3/Attribute3 values have the character C in them

```
SELECT * FROM `Entity1`, 'Entity2' WHERE `Column3` REGEXP 'C';
```

The above query. It does not matter whether the "c" is at the beginning, middle or end of the Column3 values. As long as it is contained in the cell then it will be considered.

Exercise 2:

Search for Entity3/Table3 that start with a, b, c or d , followed by any number of other characters.

```
SELECT * FROM `Entity3` WHERE `Column2` REGEXP '^[pqr]';
```

Exercise 3:

Use the NOT charlist and check the result after executing our query.

```
SELECT * FROM `Entity3` WHERE `Column2`  REGEXP '^[^pqr]';
```

Exercise 4 to 12

Regular expression meta characters

Char	Description	Exercises 4 : 12
*	The **asterisk (*)** metacharacter is used to match zero (0) or more instances of the strings preceding it	*SELECT * FROM ' Entity4' WHERE Column3 REGEXP 'da*';* will give all *Entity4 tuples* containing characters "da" .
+	The **plus (+)** metacharacter is used to match one or more instances of strings preceding it.	*SELECT * FROM ' Entity4' WHERE Column3 REGEXP 'ab+*';* will give all *Entity4 tuples* containing characters "ab" .
?	The question(**?)** metacharacter is used to match zero (0) or one instances of the strings preceding it.	*SELECT * FROM ' Entity5' WHERE Column2 REGEXP 'ram?';* will give all the Entity5 tuples containing string **ram** in Column 2.
.	The **dot (.)** metacharacter is used to match any single character in exception of a new line.	*SELECT * FROM ' Entity5' WHERE Column3 REGEXP '200.';* will give all the tuples where column 3 values are starting with characters "200" followed by any single character .

[A-Z]	The **[A-Z]** is used to match any upper case letter.	*SELECT * FROM ' Entity5' WHERE Column3 REGEXP '[A-Z]';* will give all the tuples where column 3 values containing any character from A to Z.
[0-9]	The **[0-9]** is used to match any digit from 0 through to 9.	*SELECT * FROM ' Entity1' WHERE Column1 REGEXP '[0-9]'* will give all the tuples where column 1 values containing characters "[0-9]" .
|	The **vertical bar** (|) is used to isolate alternatives.	*SELECT * FROM ' Entity4' WHERE Column2 REGEXP '^[cd]|^[u]';* will give all the Entity4 tuples where column 2 values containing any of the characters in "cd" or "u" .
[[:<:]]	The**[[:<:]]** matches the beginning of words.	*SELECT * FROM ' Entity4' WHERE Column3 REGEXP '[[:<:]]for';* gives all the Entity4 Tuples with column2 values starting with the characters *For*.
[:class:]	The **[:class:]** matches a character class i.e. *[:alpha:]* to match letters, *[:space:]* to match white space, *[:punct:]*is match punctuations and [:upper:] for upper class letters.	*SELECT * FROM ' Entity4' WHERE Column3 REGEXP '[:alpha:]';* gives all the Entity4 Tuples with column2 values that contains letters only .