# Database Systems

*Lab03*

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## 1 Write scalar functions

1. A function that sums the prime numbers and non-prime numbers between (1 and a given number say (@rng)) and returns their difference
2. (Pythagorean Triples) A right triangle can have sides whose lengths are all integers. The set of three integer values for the lengths of the sides of a right triangle is called a Pythagorean triple. The lengths of the three sides must satisfy the relationship that the sum of the squares of two of the sides is equal to the square of the hypotenuse.

   Write a table valued function that stores the Pythagorean triples for side1, side2 and the hypotenuse in a table variable , all between given numbers say (@srange, @erange), then returns the table

## 2 Consider your database

Write user-defined functions such as:

1. A function that returns the list of tables in your database.
2. A function that returns all Primary-keys and Foreign-Keys
3. A function that returns all user-defined triggers
4. A function that returns row-count for all user-defined tables in the database
5. A function that returns the list of all user defined functions.
6. A function that takes a *table name* as input and returns the column names with their types
7. A function that takes a function name as input and returns input parameters for that function with their types

## 3 Consider your database project application

Define at least five functions related to your database project application and implement them by writing user defined functions

## 4 Consider your database;

Write store procedures for each table to

1. insert a record
2. delete a record
3. update a record