

IT 386 - Program 02 – Distributed App with RMI

1. You will develop a distributed application using java RMI. You will write the Java programs for client and server sides that enable the client program to invoke methods of the object whose implementations reside on a remote server.
 - a) (**Compute.java**) Write the remote interface **Compute** that extends `Remote` with the following methods:
 - addition of any two numbers, and returns the result
 - subtraction of any two numbers, and returns the result
 - multiplication of any two numbers, and returns the result
 - division of any two numbers, and returns the result (remember to check for division for zero)
 - the greatest common divisor (GCD) of two large integers using the Euclidean Algorithm ([Wiki: Euclidian Algorithm](#)), and returns the result. The greatest common divisor is the largest number which divides both **a** and **b** without remainder.
 - Area of a circle given the radius, and returns the result
 - Area of a rectangle given the length and the width, and returns the result
 - b) (**ComputeImpl.java**) Write an implementation class which implements the remote interface **Compute**
 - c) (**Server.java**) Write the RMI server class
 - d) (**Client.java**) Write the RMI client class of the application which invokes the **Compute** and uses each one of the methods, and prints the returned variables on the screen. The numbers to be used in the computations should be obtained as an argument input from the user. You can use the same numbers across the different method calls.

Make sure to indicate in your printing statements which operation you are doing.
 - e) Run the code on the same machine, all the Java class files are in the same directory
 - f) Test your code, show that your application is working properly (client calls the methods, and prints results), and provide a screenshot with you successfully compiling and running your application
 - g) Organize your code, comment the methods, and indent your code properly
 - h) Add your name, homework number at the top of each program as a comment

Submission Guidelines:

Place all your source codes in a folder and zip them, and attach it to this submission.

In a word (or pdf) document place the screenshot of you testing your application