**King Saud University**

**College of Computer and Information Sciences**

**Information Systems Department**

**IS 424 - Web Application Development  (1-3) Summer Course**

**Home Work 1 (10 Marks)**

**Due Date: Sunday 20/6/2020, 11:59 PM**

Question 1

Write a JavaScript program that take any number of inputs and do all possible mathematical, logical and relations operations including but not limited to:

* Addition,
* Multiplication,
* Subtraction,
* Division,
* Square root,
* Remaining,
* Average,
* Max of a list,
* Min. of a list.
* All Logical operations
* All Relational operation

The program should give you the option to have the result rounded.

The program Should accept integer and real numbers.

The program should take care of all kinds of input errors like dividing by 0.

There will be marks for clean and organized code. Also use comments to explain your algorithm.

Question 2

Add the following functions to the calculator you implemented in Question 1 (Call it JavaCalculatorV1.2):

Function Factorial\_loop: This function calculates the factorial of a number using loops only.

Function Factorial\_rec : This function calculates the factorial of a number using recursive only.

Question 3

A tiny email system:

Write a JavaScript program that emulate an actual email system. Lets call it *tiny email.* In this system, the user, should be able to send an email to a recipient. The new email page should contain following fields:

To: which specify the receiver email address.

CC: A carbon copy

Subject: The email subject

Body: They email body should contain an editing toolbar that allow the user to change font type, color and size etc..

Try to send an email to your friend and attached the result.

**Important Notes**

* Try to run your code using <https://repil.it> and submit a link to your code in repil.it. The code should be fully functional! If the code does not run you will lose marks.
* Submit both the source code and the execution result through LMS (Blackboard). Also put a screenshot of the execution of all functions in your submission. As I mentioned, you should also provide a link to you repil.it.
* This homework should be done by you alone, do not give your friends your repil link, you are not allowed to work in groups and you should write the code yourself; any copying from the internet or if there are un-explained similarities between your code and your friend’s code will result in 0 mark for both parties.
* All HomeWorks will go through SafeAssign to detect any cheating.

Good Luck!