

### **Task 1 - Using TCL programming Language, write a TCL script to solve the following:**

A TCL script that reads a file on the filesystem ( named input.txt ), the script should process each line using the below rules:

- lines start with string characters, print the line as is without any changes.
- lines that present an odd integer value, divide the value with 2, and print it.
- lines that present an even integer value, multiply the value with 3.25, and print it.
- print the summation of the first 2 integer values occurring in the file.
- print the concatenation of the first 3 lines starting with the string characters.
- print all lines with the length of each line.
- print a line with maximum integer value found in the file, and the minimum length of "non-empty string" in the whole file.
- after printing all lines, print a small report with a number of lines that are found to be containing string, odd number, even number, or invalid.

- **Rules:**

- Consider floats as a string.
- Any line that doesn't apply to any previous rule, print "INVALID LINE" message.
- You must run your code in a TCL interpreter, you should deliver a running and a "syntax errors" free script.

- **Notes:**

- - You can reply with a partial solution for any of the above problems.
- - After reading this email, kindly reply to me confirming receiving the assignment.
- - Please feel free to reach me by email at any time.

### **Task 2 - Write an ER diagram for the case below:**

A system has three main objects: User, Role and permission.

- Every User has the following attributes: Name, a Contact Number and Email Address.
- Every Role has the following attributes : Name in Arabic, Name in English.
- Every Permission has the following attributes : Name and description.

A user Can have a 0 or 1 or more Roles, For example Ali can have the roles: QA team Leader, and QA Engineer. While Dana has the Role : "Software Engineer"

Every Role has 1 or more Permissions, For example QA Engineer has the permissions : "QA Assurance" and "Release Management"

You need to write an ER-Diagram that has all the needed tables to support this system. The Diagram should contain every table and its columns and their types, primary keys (If exists) and indexes (if exists).

The ER- diagram also should have the relationships between the tables. (one to one, one to many, ....)