Write a single PROCedure that performs the following tasks.

Be sure to test the code by running it on several values as test cases.

1. Change the value of variable Number to -253.

2. Add the value 74 to the value in EAX.

3. Add the two numbers stored in memory at Number1 and Number2, and store the total at the memory location named Sum.

4. Subtract 1000 from the value store in memory location named Number.

5. Prompt for three (3) integer values from the user, add them, print or display the sum, as well as store it in the memory location declared as Sum.

6. Prompt for two (2) from the user. Subtract the first from the second, display and result, and also store in a variable declared as Diff.

7. Use MOVe based instructions to swap values stored at Value1, Value2 and Value3.

8. Use XCHG based instructions to swap values stored at Value1, Value2 and Value3

9. Evaluate, and display the result, for the expression: X - 2Y + 4Z, (assuming MULtiplication and DIVision instructions are not available). The values for X can be from 1-31, Y can be 1-12, Z can be any 4-digit year value.

10. Prompt the use for the Length, Width and Height values of a cuboid, and compute and display the value of the expression 4\*Length + 4\*Width + 2\*Height. Also store the result in the variable Perimeter. Assume the MULtiply instruction is unavailable.

11. Declare 8-bit variables, BVar1, BVar2, BVar3 and BVar4, as well as 32-bit variables, DVar1, DVar2, DVar3 and DVar4. Prompt the user for the values to store in BVar1, Bvar2, BVar3 and BVar4. Then store these values in the corresponding DVar1, DVar2, DVar3 and DVar4, a) using Zero-Extension and b) Sign-Extension instructions.

12. Prompt the user for values to store in Var1 and Var2. Then evaluate and display the result for (Var2 - Var1) + (Var1 - Var2), using only INCrement and DECrement instructions.

13. Declare and organize memory space to store a list of 100 integer values. Write the code to display the values stored in the list (Hint: Use the LOOP instruction).

14. Declare and organize memory space to store the LastName, FirstName and MiddleName of a Patient. Prompt the user to input the names for a patient and store them inputs in the declared variables.

15. Declare and organize memory space to store the LastName, FirstName, MiddleName and Id for 100 students in a University department. Write the code to prompt the user to input the actual number of students registered in a particular semester, and then display the records for these students. (Hint: use the LOOP instruction).

Part 2

Write AL code that can serve as a grade calculator for single course in a semester.

1. First write the code to supports the calculation of a letter grade for N=1 student, with K=5 raw scores. Devise your own grading table.

2. Extend to code that supports the calculation of letter grades for at least N=10 students, each with K=10 raw scores. Devise your own grading table. Also support the determination of the Minimum, Maximum, Mean scores obtained in the class, as well as the Median scores and Modes. For each letter grade, calculate the number and percent of students who received that grade