Q 1: Consider the MASM syntax for 8086. Write the MAIN procedure to execute all the given procedures in given parts. Take screenshot of the output display screen after the final execution.

Part a: Write a function/procedure (DEC\_OUTPUT) that receives the data in AX register. It must display the output in decimal format (more than one decimal places).

Part b: Write a function/procedure (HEX\_OUTPUT) that receives the data in AX register and display the output in hexadecimal format (more than one hexadecimal places).

Part c: Write a function/procedure (BIN\_OUTPUT) that receives the data in AX register and display the data in binary format.

Part d: Write a function/procedure(BIN\_INPUT) that ask the user to enter 8-bits or 16-bits data. Then store the data in AL/AX accordingly.

Part e: Write a function/procedure(HEX\_INPUT) that ask the user to enter 2-digits or 4-digits hexadecimal data. Then store the data in AL/AX accordingly.

Part f: Write a function/procedure(DEC\_INPUT) that ask the user to enter decimal value. Then store the data in AL/AX accordingly.

Q 2: Consider the MASM syntax for 8086. Write the MAIN procedure to execute all the given procedures in given parts. Take screenshot of the output display screen after the final execution.

Part a: Write a function/procedure (STR\_INPUT) that receives offset address of an array in a register and store a string in it which is taken from user.

Part b: Write another function/procedure (INPUT\_NAME) that receives three offset addresses in separate registers/variable/stack and store the three strings (string1, string2 & string3) from the user.

Part c: Write a procedure (SAP\_INPUT) that receives your SAPID as decimal value. Use part (f) Q.1.

Part d: Write a procedure (COMP\_NAME) that receives three offset addresses od strings in separate registers and concatenate (string1 string2 string3) the strings separated by a space. It must display the complete name. (Use MOVSB)

Part e: Write a procedure (COMP\_STRLEN) that receives three offset addresses of strings in separate registers and compare the strings length. It must display the strings in ascending length order. (Use CMPSB).

Part f: Write a procedure (STR\_REVERSE) that receives the two addresses of different strings. Read a string from one address and then place the string at the other address in reverse order.

Part g: In MAIN procedure, execute the part(f) Q 2 for three different strings of your name. Save the three strings at different locations in memory.

Part h: Write a procedure that Use part (g) Q2, pass the three addresses of reversed strings, use part (d) Q2 to concatenate the strings in reversed order. (Output will be meelas mahra)

Part i: Write a function/procedure (STR\_SUBSET) that receives the three characters as a string. Then it checks whether the input string is subset of your NAME (which was saved in part (b) Q2). It displays the result in Yes/No