BCSF21 Morning
Computer Organization and Assembly Language LAB

Instructions:

- Do Proper formatting and commenting of the code
- Do not cheat otherwise 0 will be marked
- Each Question is of 10 marks
- If you have any question regarding lab,must ask

Question#1:

Character Encryption. Write a program that prompts the user to input a character and then prints the encrypted character based on the following rules: if the user inputs "a", the output should be "z"; if the user inputs "b", the output should be "y"; and so on, with "z" mapping to "a".

Question#2:

HextoBinary Write a program to read one of the hex digits A-F, and display it on the next line in decimal.

Sample Run: Enter a hex digit: C

In decimal it is: 12

Question#3:

Array Printing. Create an array of length 4 called "arr" with the values 1, 2, 3, and 4. Write a program that prints the values of the "arr" array by accessing the data label of the array. and you cannot use loops in your solution.

Question#4:

Reverse Array. Create a byte array of length 4 containing the values 1, 2, 3, and 4. Write a program that uses a loop and a pointer to access each value in the array and print them in reverse order. The output should be 4, 3, 2, 1.

Question#5:

Write a program that will translate the following high-level language assignment statements into assembly language using only Add, Sub, Inc, Dec, Neg, Mov. The program should prompt the user to input values for A, B, and C. Additionally, the program should accept another input from the user for a choice of operations from the provided list, and perform the selected operation based on the user's input. If the user's input is not a valid choice, the program should output 'Value out of range'. You should use Compare and Jump instructions to move from one operation to another."

1- A = B – A
2- A = -(A+1)
3- C = A + B
4- A = B – A – 1