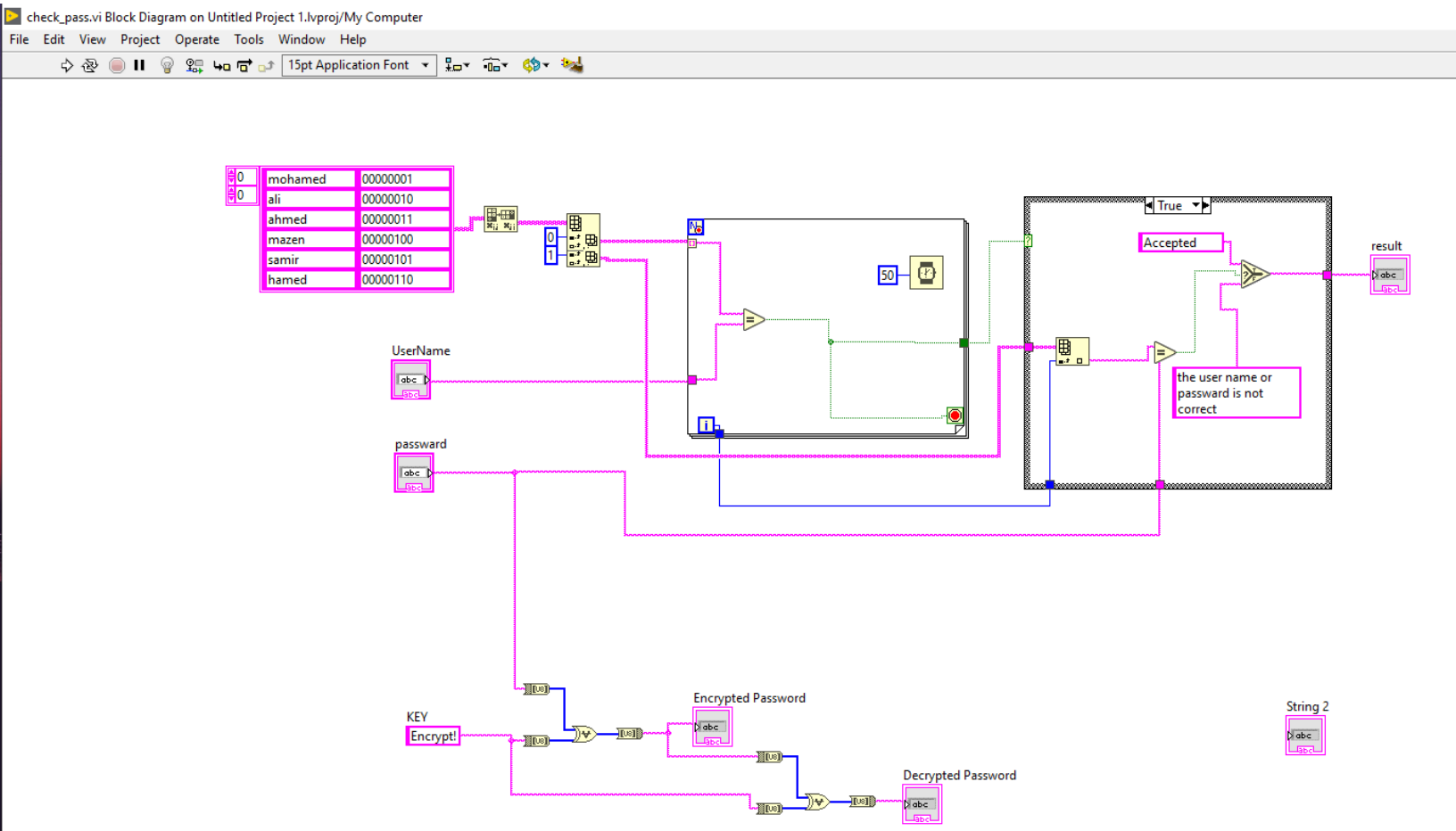
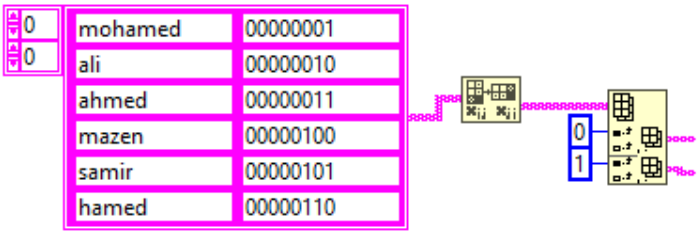
A Report of the password check project

NAME	ID

System Design

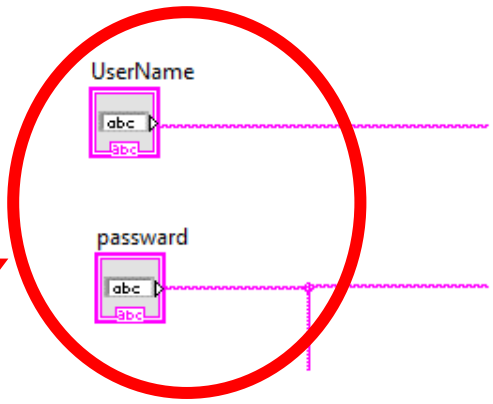


This system consists of **4 PARTS**



1) Data storage

this part responsible for storage the data of the users their user_name and the password in an array of string and take each row to a 1D array (array of user's name and array of passwords)



the user will input his name and his password in **this string control**

2) Check username

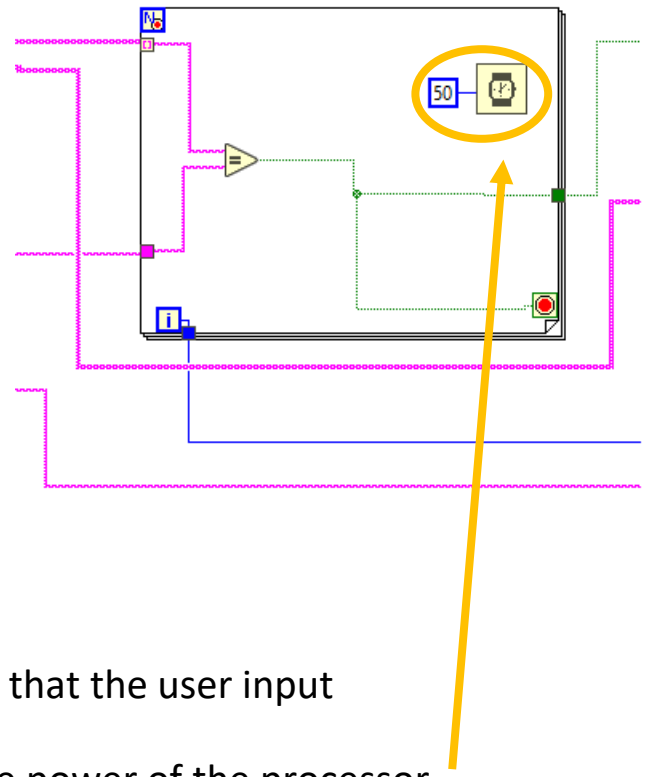
This part is used to check the user name of the user

IF

The user input the name correctly, it will go to the next stage for the password check

Else

The indicator will write the user name or the password is not correct as for the invalid users for not Knowing where the mistake is



We use a while loop to check any change that the user input

NOTE: we put a delay to not consume the power of the processor

3) Check password

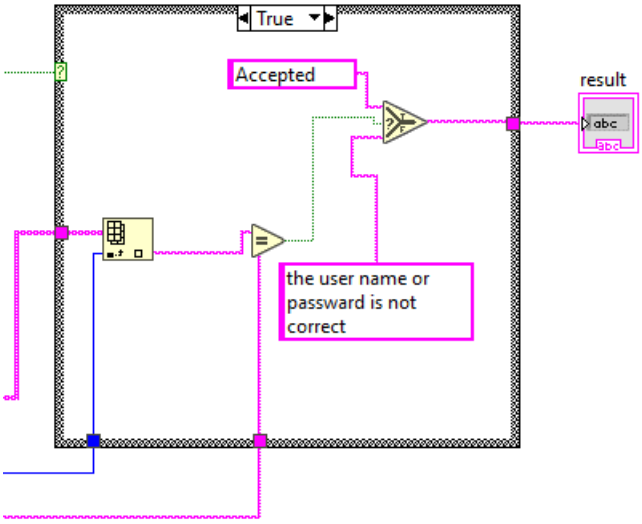
This part is used to check the password from the user after the username is correct as

IF

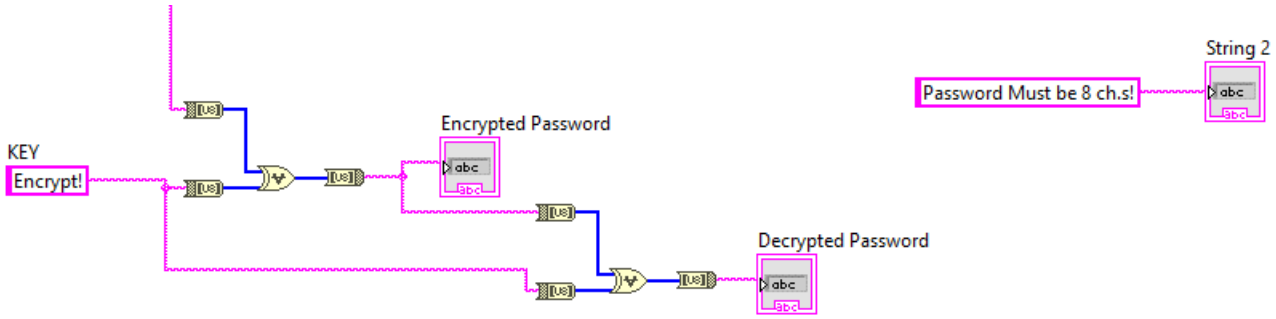
The pass is correct the system will appear Accepted in the result

ELSE

The system will appear the user name or the password is not correct



4) The incorruption parts



We use XOR gate to encrypted the username and the password for more secure as we put the data from the storage and the user input to two arrays each one in an array and XOR them to encrypted the data and after that we decrypted it by another XOR as shown in this photo

XOR Attributes

Associative and Commutative

- $A \oplus A = 0$
- $A \oplus B \oplus A = A \oplus A \oplus B = B$
- $A \oplus B = C$
- $C \oplus A = B$

The system while working