DEMO

This will describes the system functionality of this project and the proven system functionality according to different user inputs.

Figure 1.1 shows the system restricts the user to have a username with at least 1 Capital letter,1 digit, and 1 symbol (except \, /, :, *, ?, > , | , ’’). The length of the username is also restricted between 6 to 12 characters, and no blank space is allowed. The system also suggests the user to have a strong password with a capital letter, small letters, digits and symbols. It will detect the strength of the password based on the presence of a capital letter, or small letter in the password and ask if the user wants to change the password or not.

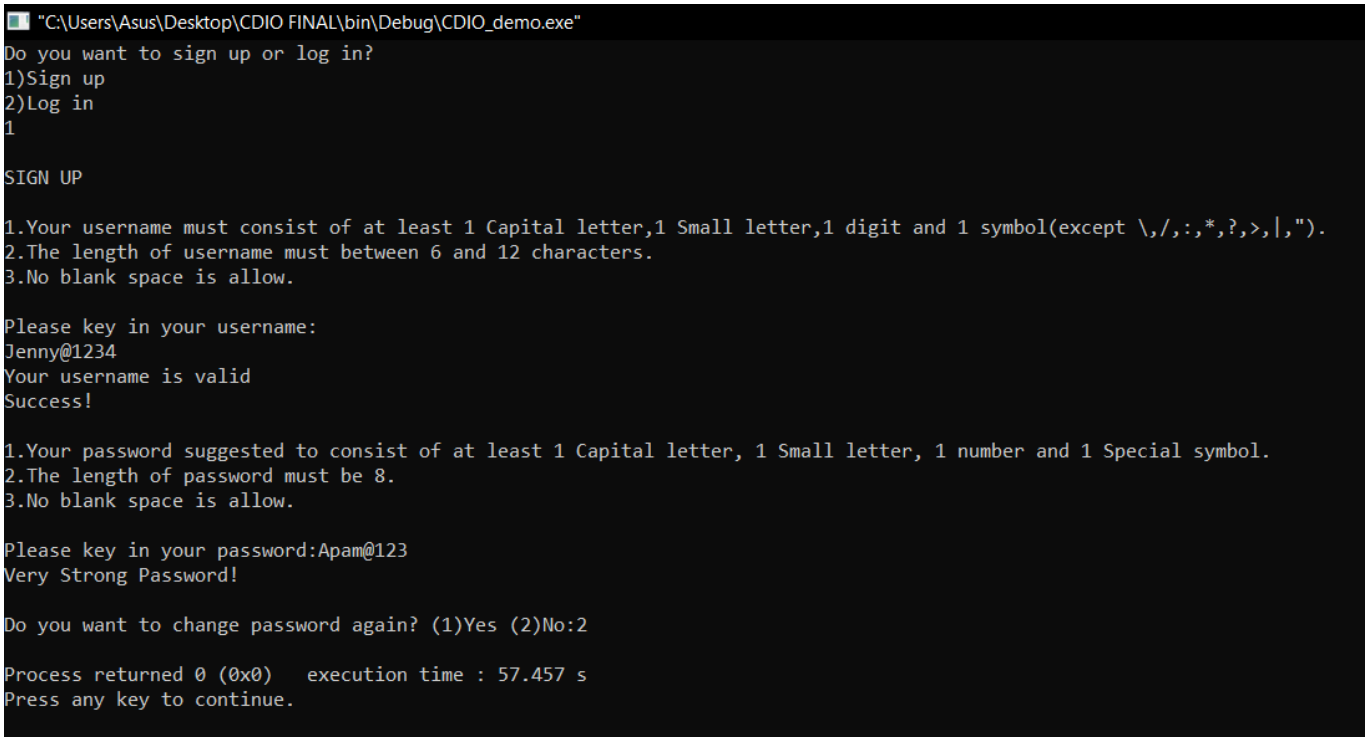


Figure 1.1 Program execution of sign up

Figure 1.2 shows the system is able to detect the username that has been signed up before to avoid the same username of different users.

```
SIGN UP

1.Your username must consist of at least 1 Capital letter,1 Small letter,1 digit and 1 symbol(except \,/,:,*,?,>,|,").
2.The length of username must between 6 and 12 characters.
3.No blank space is allow.

Please key in your username:
Jenny@1234
Your username is valid
Duplicate Username please reenter

Do you want to sign up or log in?
1)Sign up
2)Log in
```

Figure 1.2 Program execution of sign up with repeated username

Figure 1.3 shows that the system does not allow the username with an incorrect password to log in.

```
"C:\Users\Asus\Desktop\CDIO FINAL\bin\Debug\CDIO_demo.exe"
Do you want to sign up or log in?
1)Sign up
2)Log in
1

SIGN UP

1.Your username must consist of at least 1 Capital letter,1 Small letter,1 digit and 1 symbol(except \,/,:,*,?,>,|,").
2.The length of username must between 6 and 12 characters.
3.No blank space is allow.

Please key in your username:
Jenny@1234
Your username is valid
Duplicate Username please reenter

Do you want to sign up or log in?
1)Sign up
2)Log in
2

Please enter the username:Jenny@1234
Please enter password:Jenny@99
Incorrect username or password

Do you want to sign up or log in?
1)Sign up
2)Log in
```

Figure 1.3 Program execution of log in with incorrect password

Figure 1.4 shows that the username and password must be matched in order to log in and use the functions of this system.

Figure 1.4 Program execution of log in with correct username and password

Figure 1.5 shows that the system is able to do a simple calculation of BMI and condition checking based on the health screening information such as heart rate, blood glucose level, blood pressure, blood cholesterol, and blood type provided by the user.

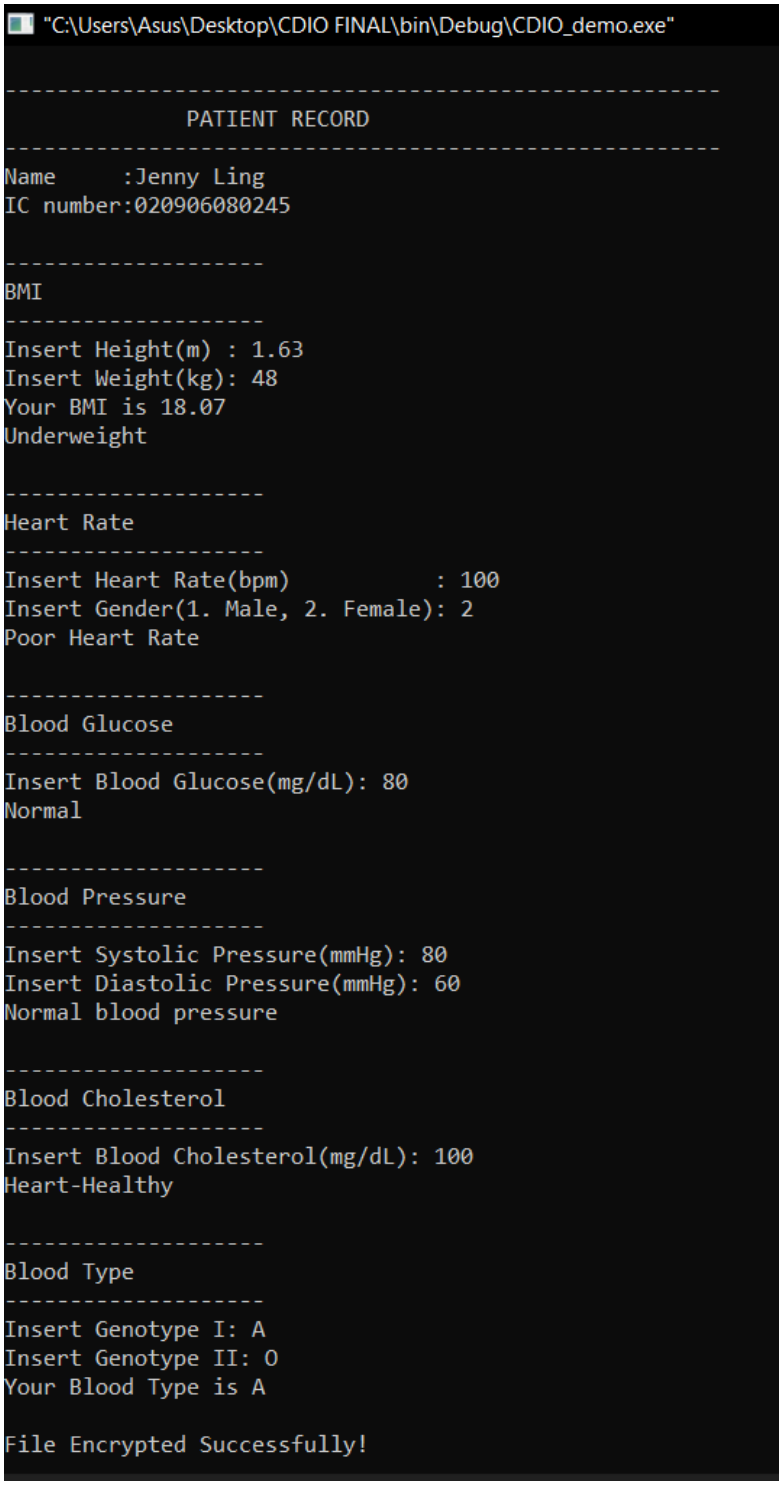


Figure 1.5 Program execution of Health screening

Figure 1.6 shows that the patient information that is stored in the CSV file is encrypted successfully by the Caesar Cipher.

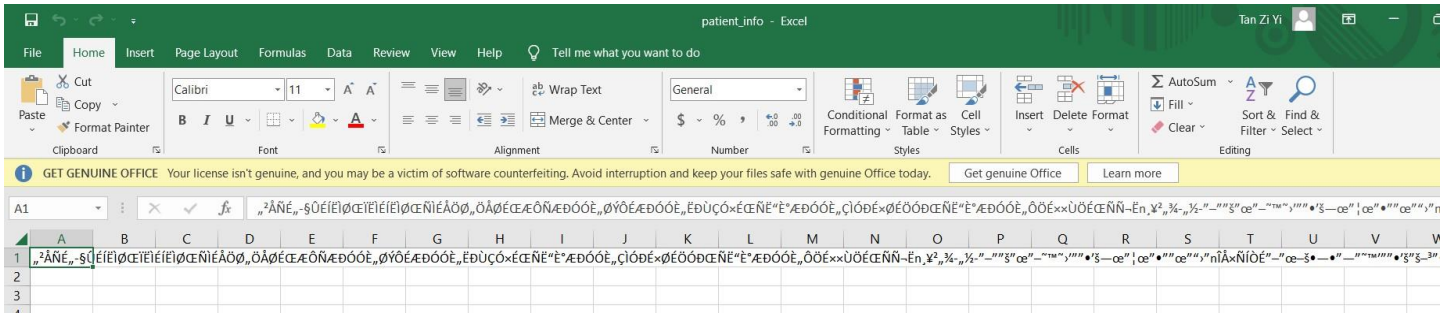


Figure 1.6 Encrypted patient information in the CSV file

Figure 1.7 shows the system able to detect the file condition by SHA-1. If the file is not tampered by anyone, it will display “Data is not tampered!”

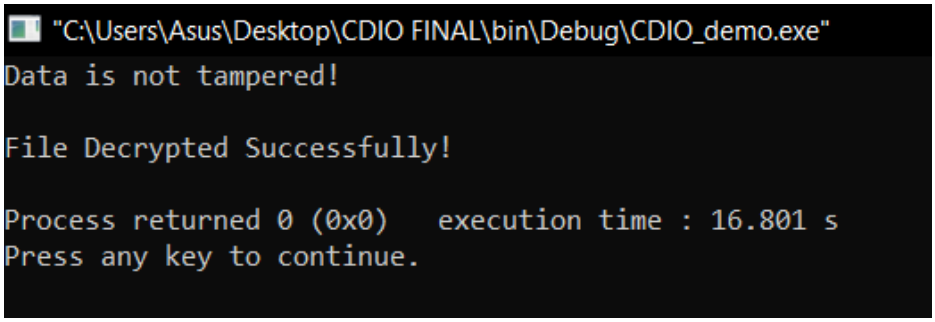
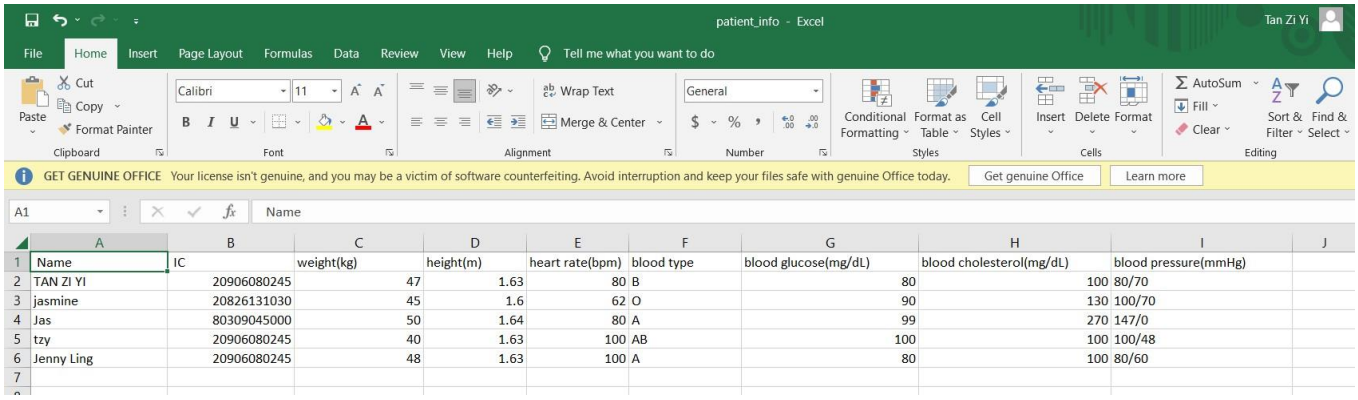


Figure 1.7 Program execution of tampering detection

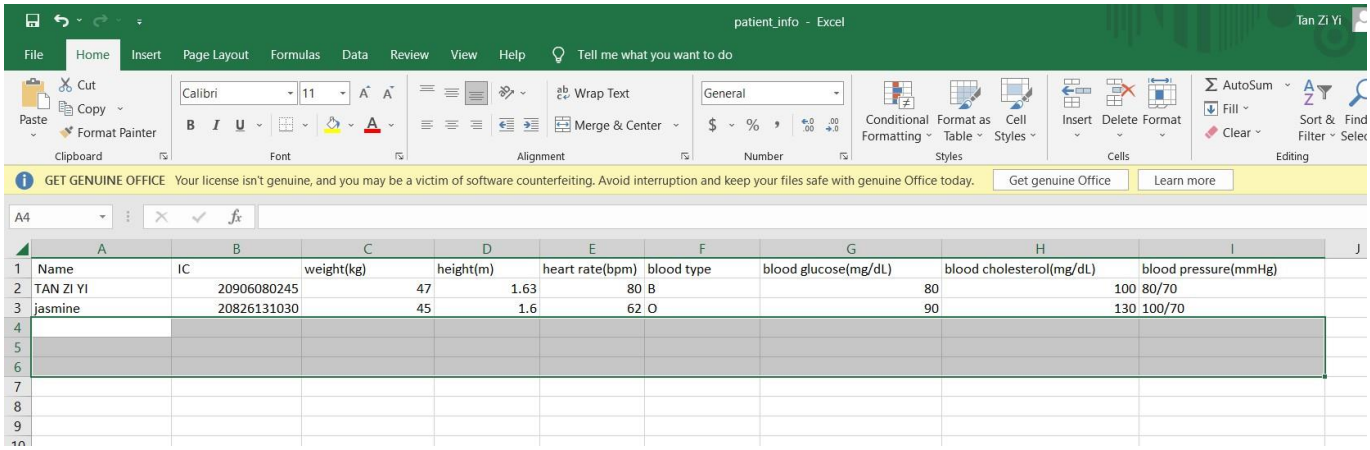
Figure 1.8 shows the decrypted patient information in the CSV file. The Caesar Cipher is ableto decrypt the encrypted patient information in the CSV file.



	A	B	C	D	E	F	G	H	I	J
1	Name	IC	weight(kg)	height(m)	heart rate(bpm)	blood type	blood glucose(mg/dL)	blood cholesterol(mg/dL)	blood pressure(mmHg)	
2	TAN ZI YI	20906080245	47	1.63	80	B	80	100	80/70	
3	jasmine	20826131030	45	1.6	62	O	90	130	100/70	
4	Jas	80309045000	50	1.64	80	A	99	270	147/0	
5	tzy	20906080245	40	1.63	100	AB	100	100	100/48	
6	Jenny Ling	20906080245	48	1.63	100	A	80	100	80/60	
7										

Figure 1.8 Decrypted patient information in the CSV file

Figure 1.9 shows a situation where a hacker has successfully tampered and deleted the patient information in the CSV file.



	A	B	C	D	E	F	G	H	I
1	Name	IC	weight(kg)	height(m)	heart rate(bpm)	blood type	blood glucose(mg/dL)	blood cholesterol(mg/dL)	blood pressure(mmHg)
2	TAN ZI YI	20906080245	47	1.63	80	B	80	100	80/70
3	jasmine	20826131030	45	1.6	62	O	90	130	100/70
4									
5									
6									
7									
8									
9									

Figure 1.9 Data Tampering of patient information in the CSV file

Figure 1.10 shows that the tampering of data is detected by the system. The system will display “Data is tampered”.

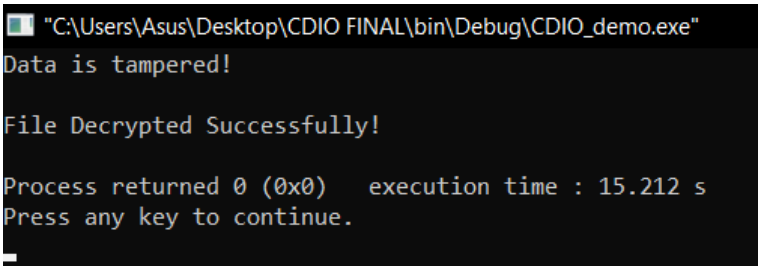


Figure 1.10 Program execution of tampering detection