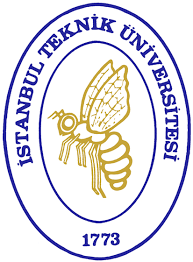
BLG439E COMPUTER PROJECT I

AUTHENTICATION MECHANISM

WITH VOICE RECOGNITION



BARAN KAYA 150130032

KADİR ENES KARSLIOĞLU 150130047

ALİ OSMAN ATİK 150140804

DATABASE

In our project, the data of users are held in a database which is a text file. Text file holds the data of one user information in three lines. In the first line, it includes username, in the second line it includes user password and in the third line it includes user speech password. In our software, firstly the username is searched by a for loop and if the username is founded, then it starts to find the password. Also if the password is correct, then the speech password is compared with the database.

TESTING

In user verification, we implemented an algorithm which runs according to correctness of the username, the password and the speech password. In the first, if the username is not correct, the application will fail and give “LOGIN FAILED” error line. Although the username is correct if the password is incorrect, it will again give login failed error. Also if the username and the password is correct, but speech password is not correct, it will also give login failed error.

FIND THE BIOMETRIC ALGORITHM

In software implementation we tried many biometric methods and many algorithms to test. It takes a lot of time for us because which has best performance or which is appropriate for our work is not easy to detect. Firstly, we tried to implement a face recognition algorithm which is coded by Neurotechnology. After this implementation we could not realize this algorithm and we could not generate this code. We decided to implement a new algorithm then we agreed to try voice recognition algorithm at the end. We utilized Google speech recognition algorithm in voice recognition.

ENCRYPTION

In security of our user’s information, we implemented encryption which is a process through that data is encoded. To encrypt data, the code is using a key which utilizes encryption algorithm to encode readable data to unreadable data. It helps protect private information, sensitive data, and can enhance the security of communication between client apps and servers. In essence, when your data is encrypted, even if an unauthorized person or entity gains access to it, they will not be able to read it. Also in our implementation, there is no need to decrypt the encode.