

***User Defined sign language interpreter***

*Slot: -* **TB2**

*Faculty: -* **Dr. Bornali Sarma**

*Group members: -*

**1.) Shashwat Sanket (17BCE1007)**

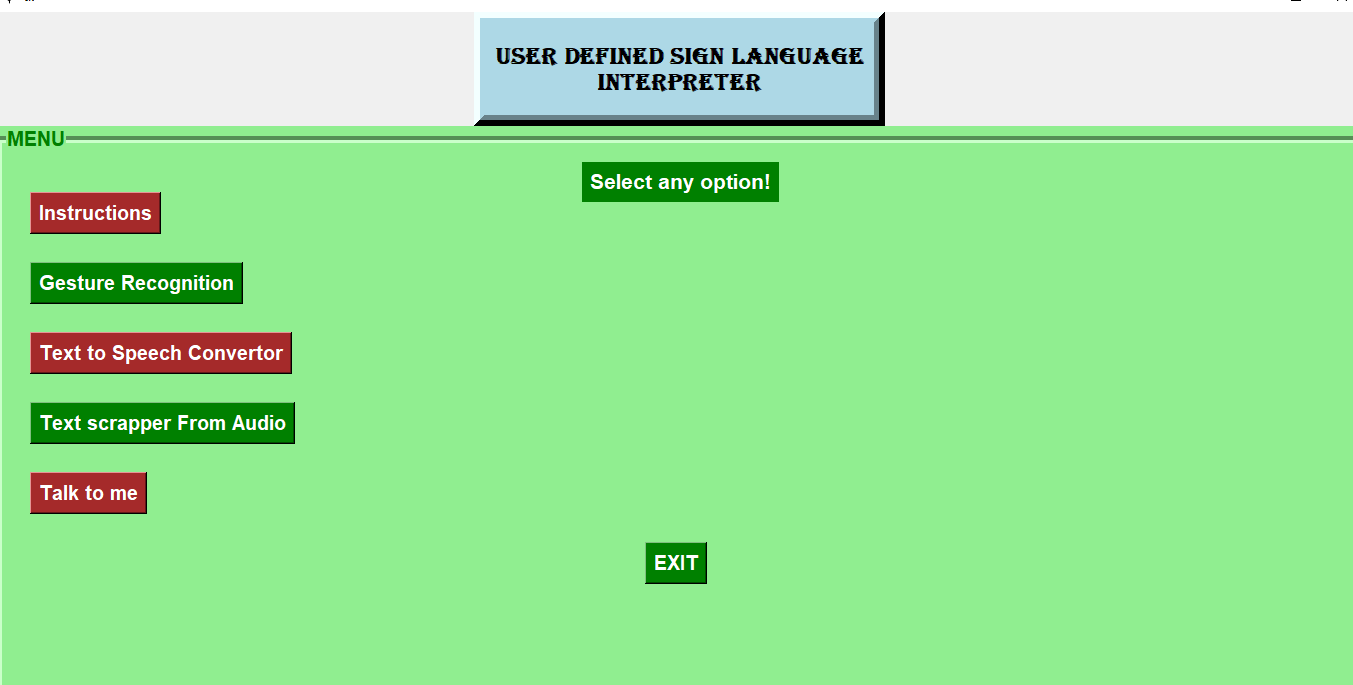
**2.) Thakor Jayraj .R. (17BCE1017)**

**3.) Aayush Gupta (17BCE1085)**

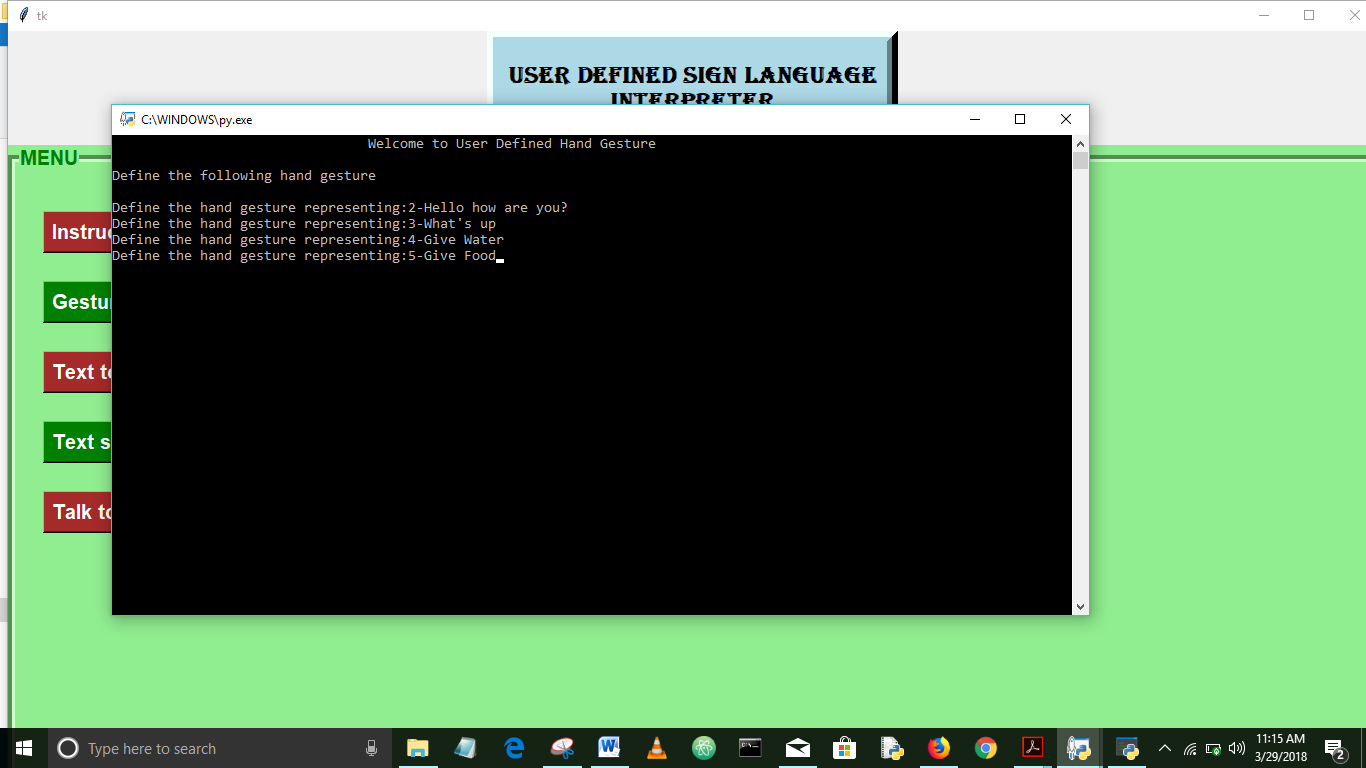
**4.) Himanshu Tiwari (17BEE1143)**

**5.) Pranjal Aggarwal (17BCE1168)**

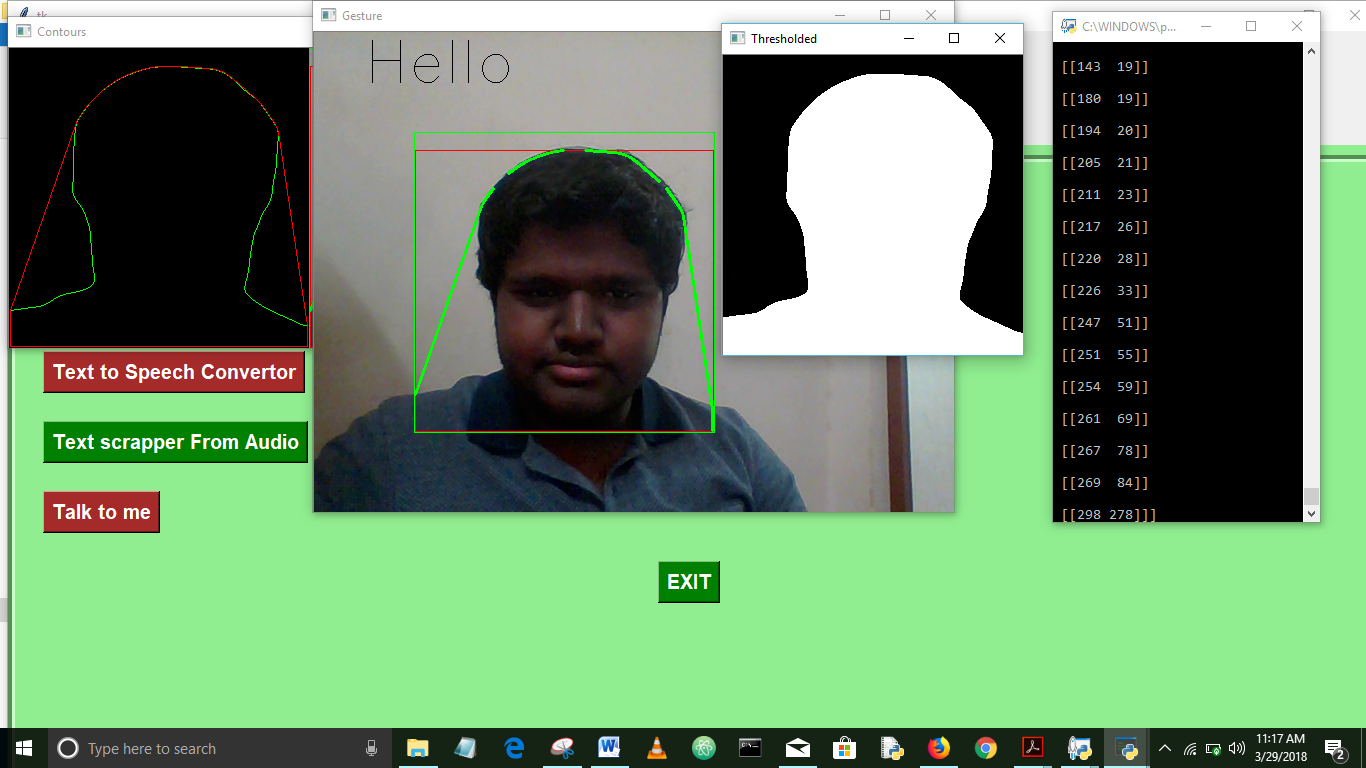
**Graphical User Interface of *User Defined sign language Interpreter***



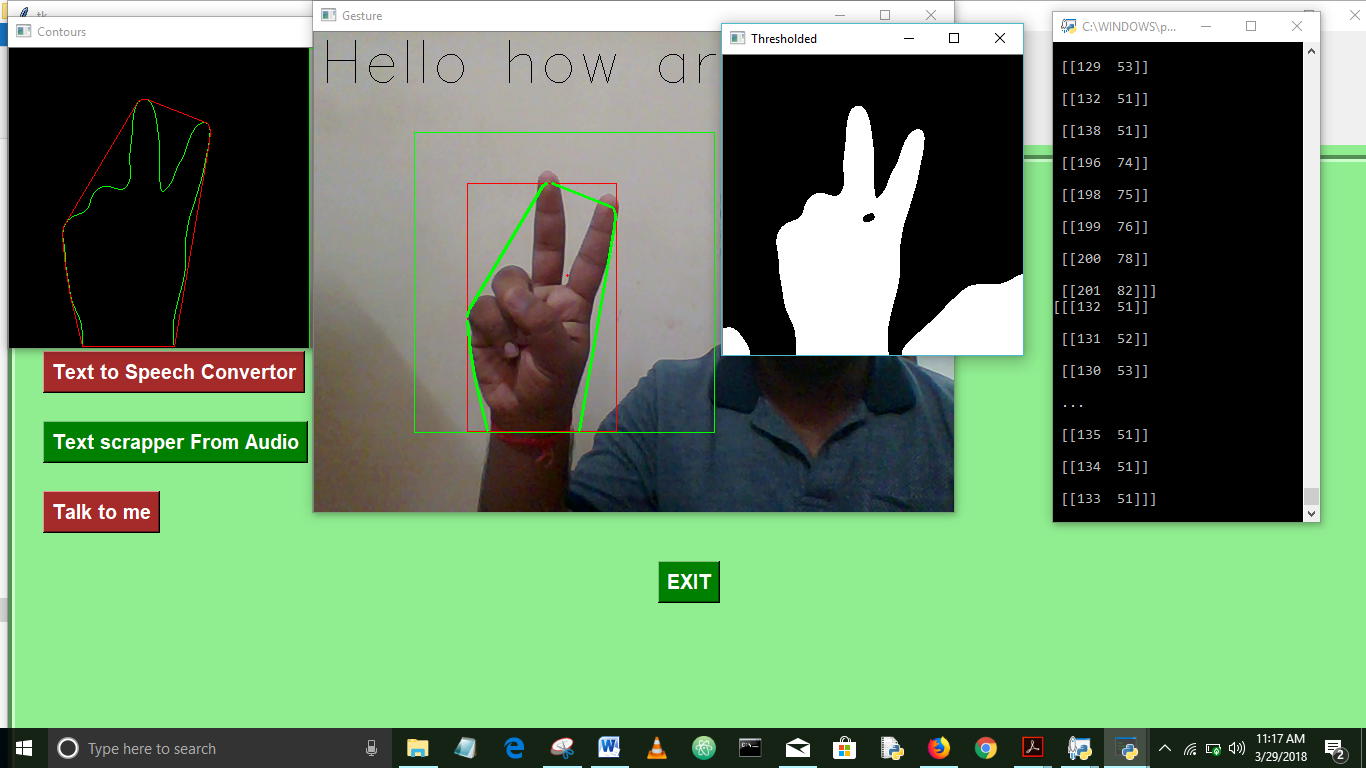
**Defining Hand Gestures:**

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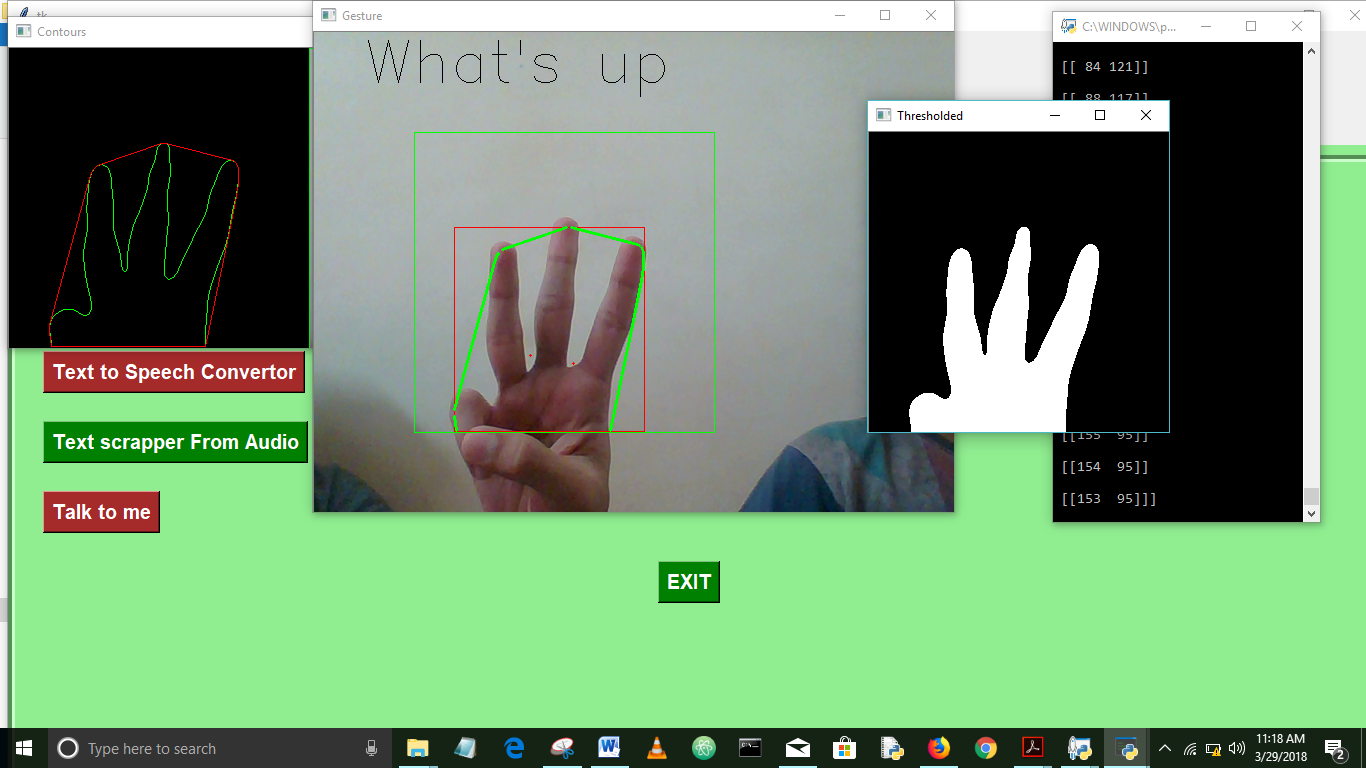
Face Recognition Using UDSLI:



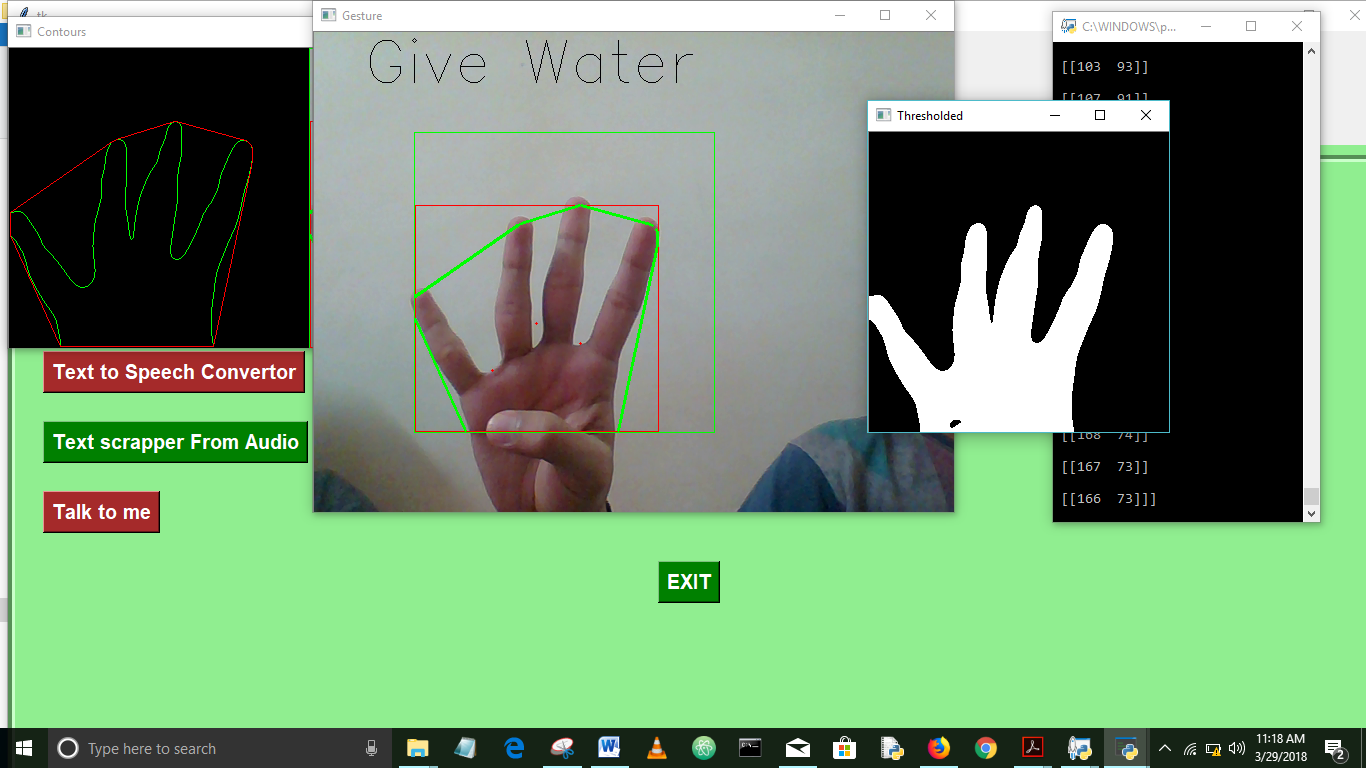
**Gesture representing 2:Hello how are you?**

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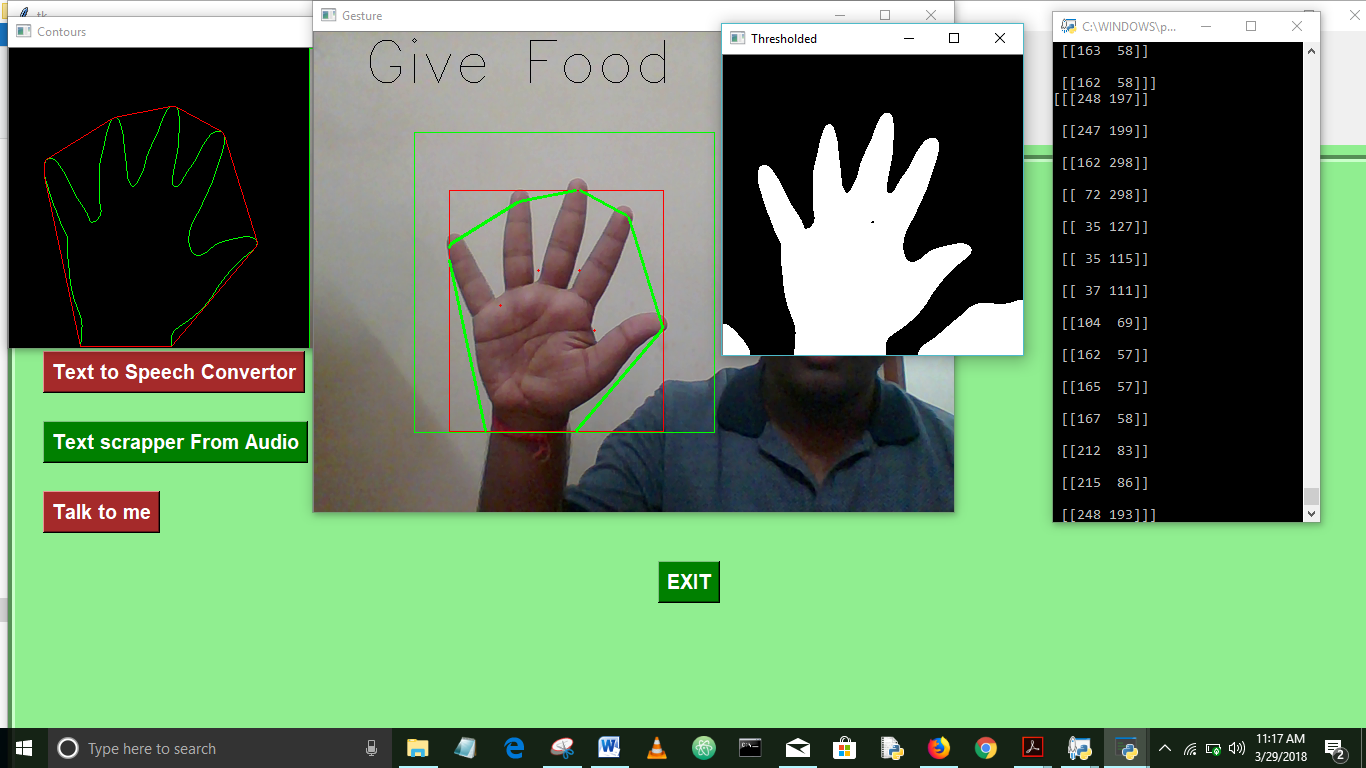
**Gesture Representing 3: What’s up**

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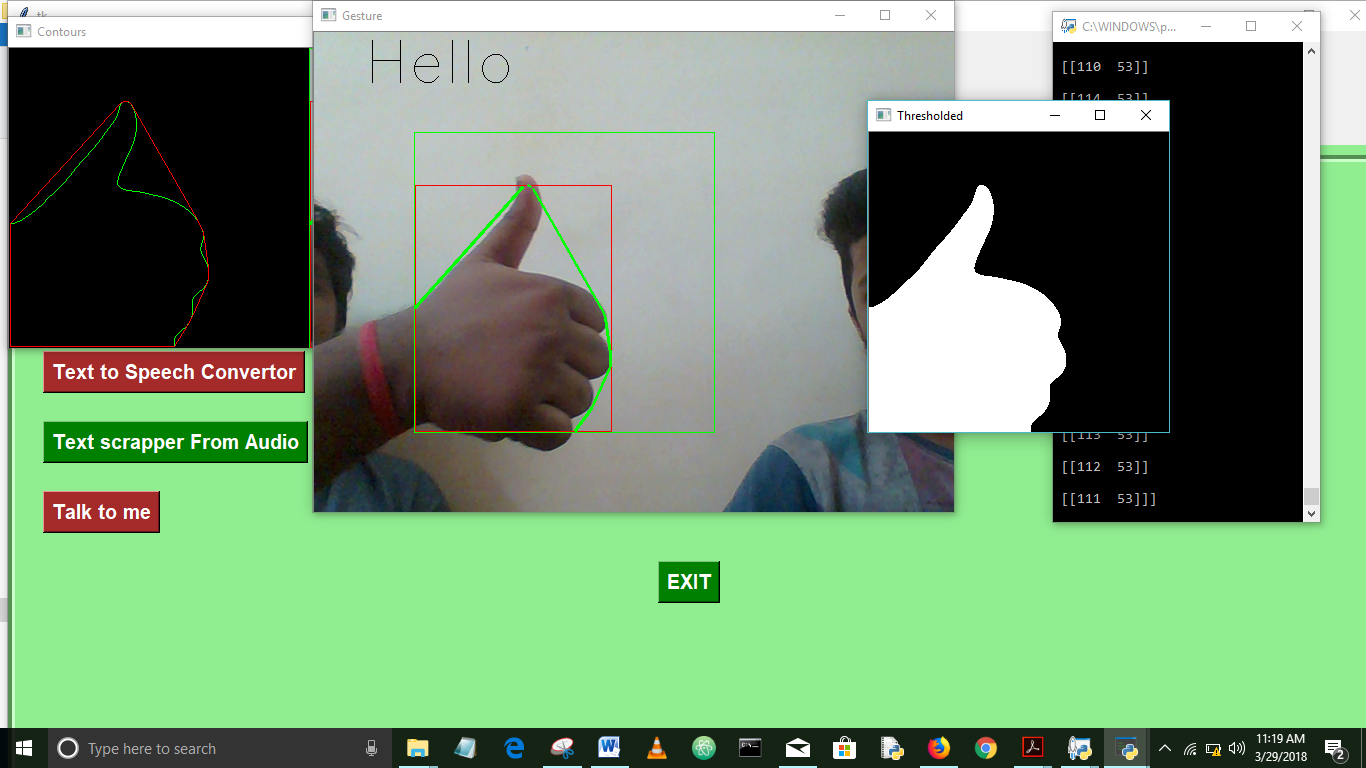
**Gesture Representing 4:Give Water**

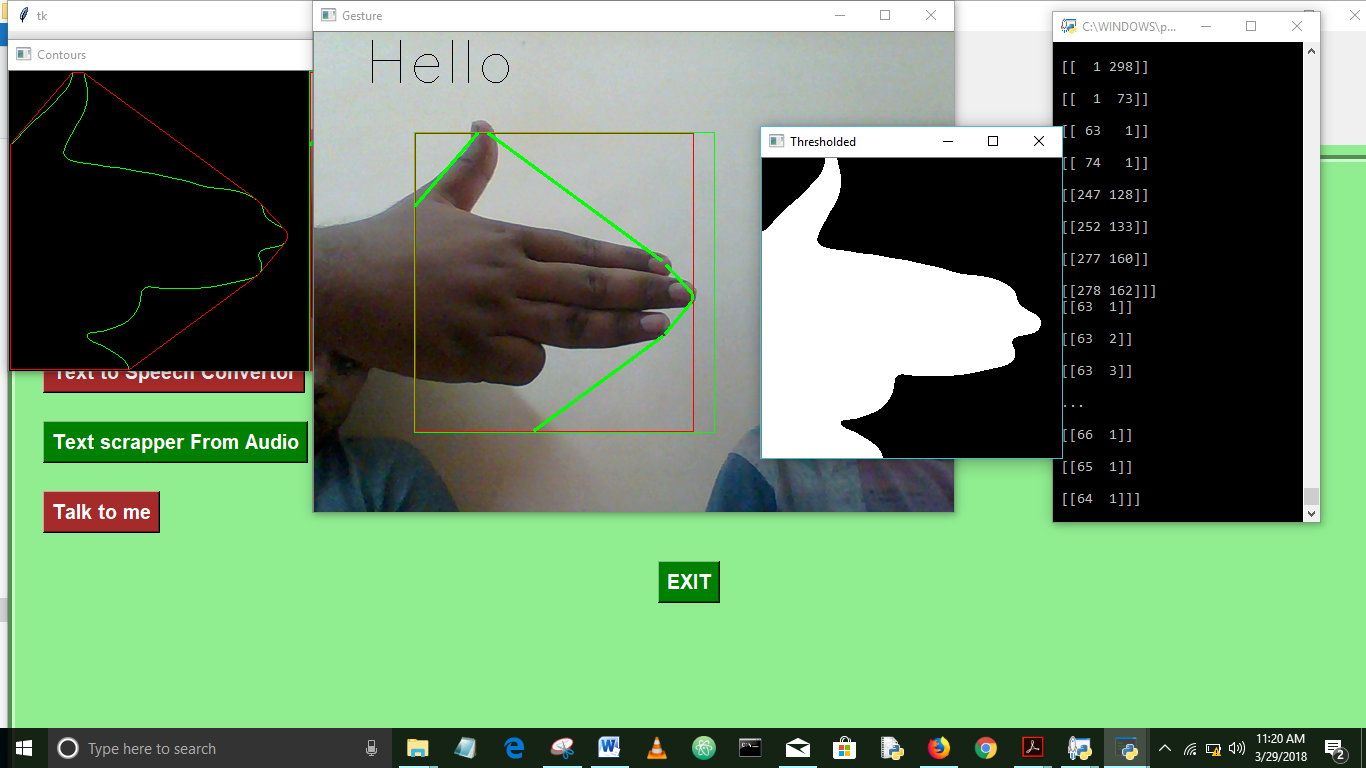
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**Gesture Representing 5: Give Food**

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**Common Gestures:**

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**TEXT To SPEECH**

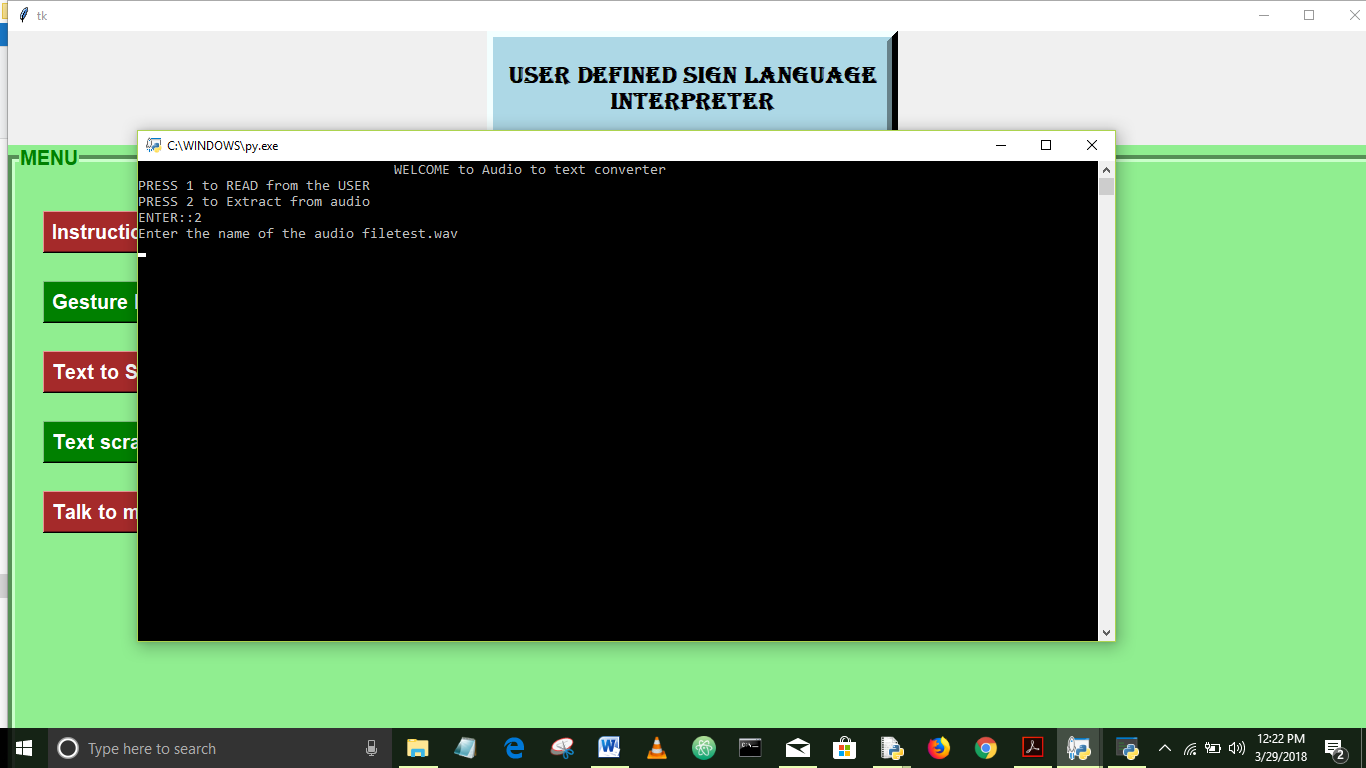
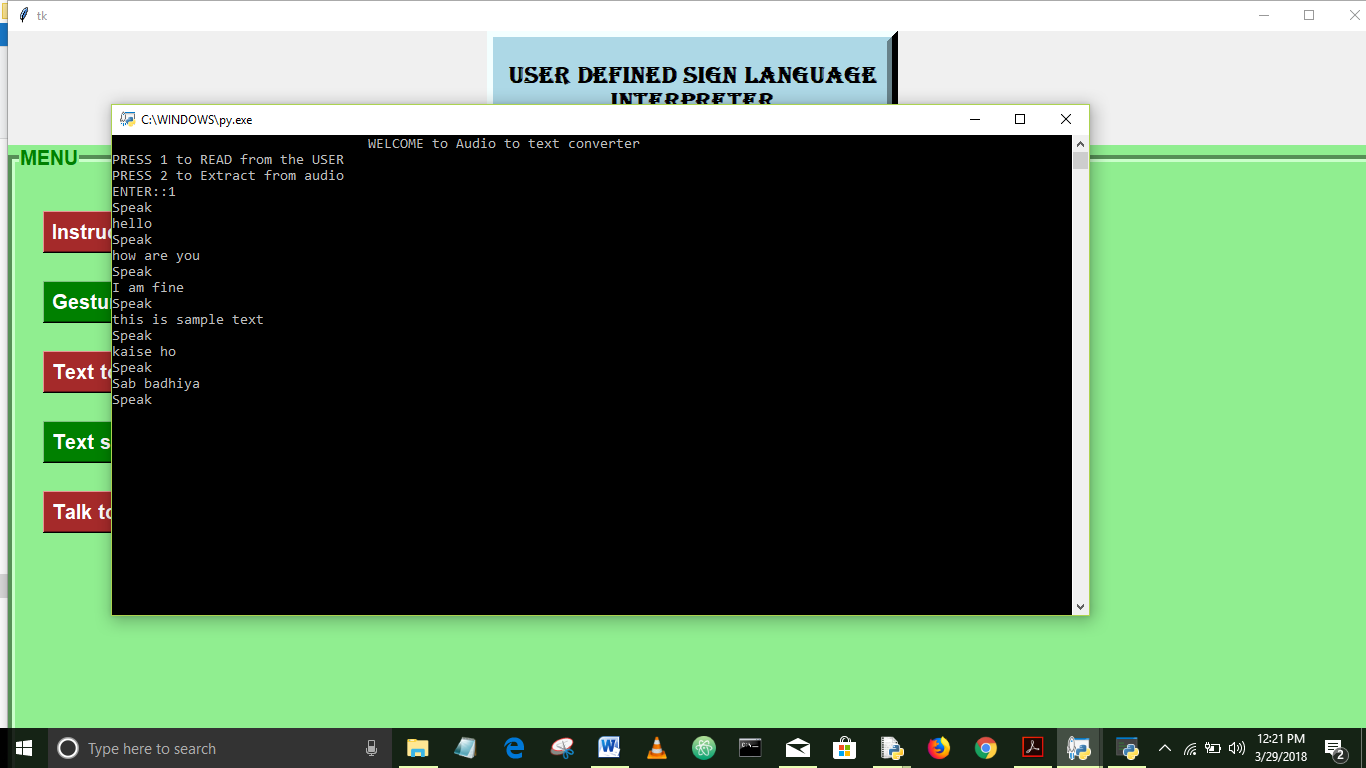
**This module will convert text to human understandable language, here English, so that a deaf or a dumb person can type whatever he wants to speak to a normal person and the rest of the work of speaking to the person will be done by the software UDSLI provided by us.**

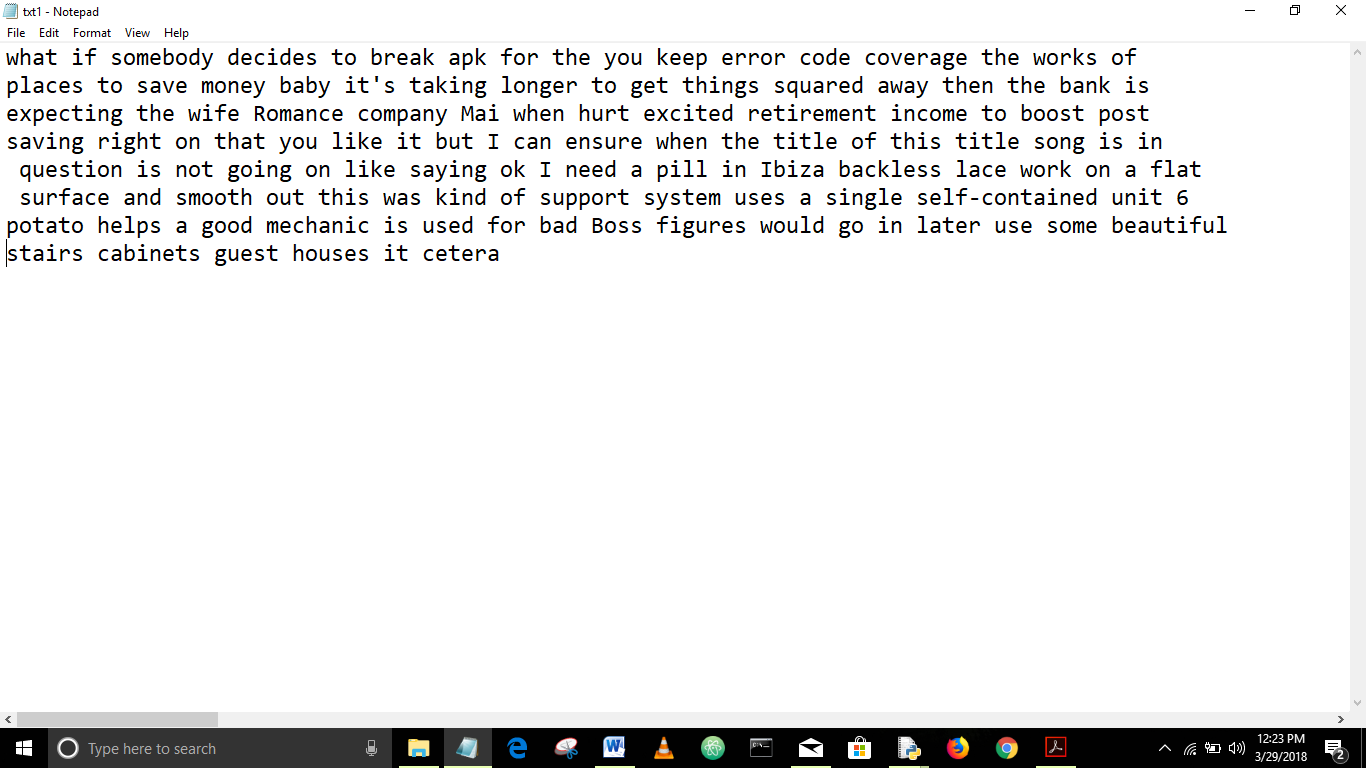
**Sample Output:-**



**TEXT Scrapping**

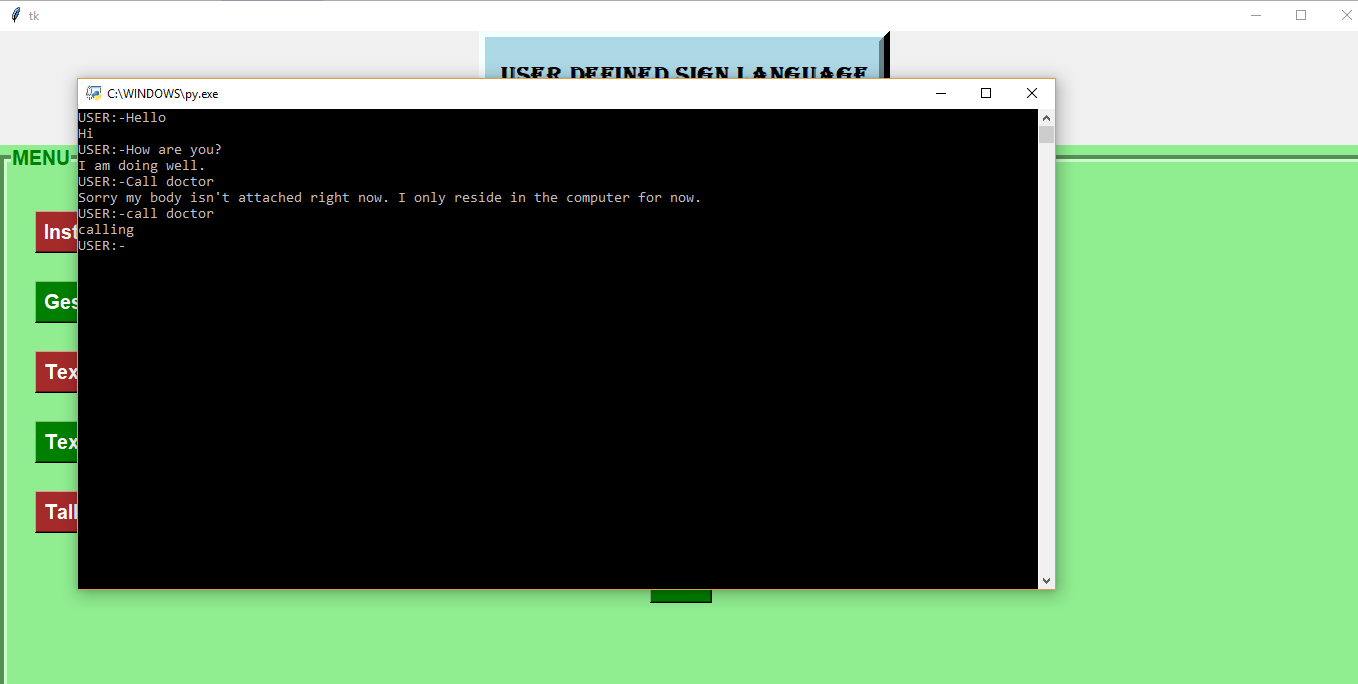
**This module is divided into two parts i.e., 1. Interpreting voice from the user and converting it to text so that a deaf person can read whatever a normal person is speaking, 2. Interpreting from a audio file to text so that a deaf person can read whatever is spoken in a recorded audio file.**

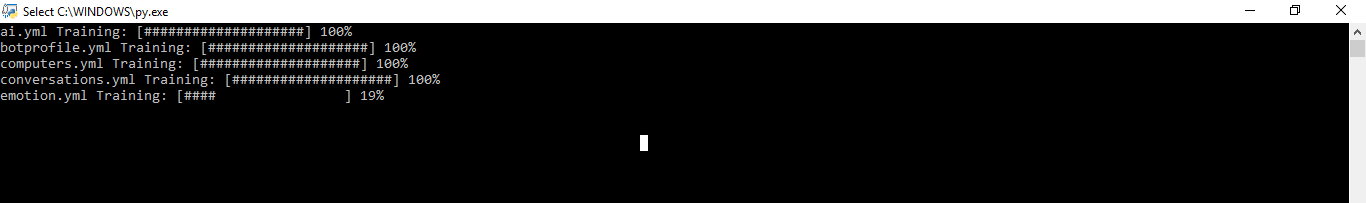
**1:-**

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**Above is a screenshot of the interpreted text file of the given audio file sample.**

**4. Talk to me**

**This module is to entertain anyone who is feeling isolated or lonely specially deaf and dumb people as most of the times they don’t have anyone to talk so they can talk to the bot we are providing in their leisure time.**

**Live training of UDSLI bot using machine learning**

**Achievements:**

**We have successfully recognized hand gesture through Image Processing and Machine Learning with approximately 98.89% of accuracy.**

**We have successfully built the text to speech converter with SAPI –female voice ZIRA 11.0 (HKEY-LOCAL MACHINE)**

**We have successfully built the Voice recognition system by converting analog waves of voice into digital data by sampling the sound. The higher the sampling and precision rates, higher the quality. And the error percentage of our Voice Recognition System is about 5.8%**

**We have successfully built the UDSLI bot using Machine Learning. We collected about 19k+ movie conversation dialogue for the dataset for our UDSLI bot. We are still on our way to make it more perfect, our aim is to collect approximately 2 million+ conversation that will be used to train the bot.**

**This has been possible only due to the hard work and creativity of the whole team.**

**THANK YOU**

**Special thanks to Shashwat Sanket from whole team for guiding us.**