Things to remember during data collection

1. Record both video and audio using a mobile phone/webcam
2. Note start and end time of each interaction
3. Keep a note of all sensor labels on

Resources:

1. Record link:
   https://docs.google.com/spreadsheets/d/15cvhfiZHhvPNFZgMI5hGQhuFFuICu3FhzOjWvo_A-_o/edit?usp=sharing
2. UVA Box link: https://virginia.box.com/s/gq0sk5ee78ru959cg1y53gaapax2ccfu

Remember:
1. Smartwatch data have GMT timestamps, so make sure you convert them to EST/EDT during analysis

Work division:

Tasnuba: Analysis of heart data (ECG & PPG)
1. Input: Box/SocialInteractionLabData/ECG/Caliberated/ <.csv>,
   Box/SocialInteractionLabData/GSR/Caliberated/ <.csv>
   Box/SocialInteractionLabData/Smartwatch/<3 or 5>/ <.json>
2. From these input files, extract data streams related to heart rate only, e.g., from ECG files Shimmer_xxxx_ECG_LA-RA_24BIT_CAL, from GSR files Shimmer_xxxx_PPG_A13_CAL, from smartwatch files SWear.HeartRateDatum
3. Plot the data
4. Compute RMSSD, IBI(min, max, avg, std) from both ECG and PPG(both GSR and watch files)
   a. Compute these metrics on all episodes and observe the differences

Liz: Analysis of Audio/Video data
1. Input: Box/SocialInteractionLabData/Recordings/ <.mov>
2. From these files, extract audio signal
3. List down different features which can be extracted from the audio signal.
4. Try to extract the features
5. Compute features pitch and energy for each file. Repeat this for all the episodes and observe the differences, if any.

Shichen: Analysis of GSR & Accelerometer data
1. Input: Input: Box/SocialInteractionLabData/ECG/Caliberated/ <.csv>,
   Box/SocialInteractionLabData/GSR/Caliberated/ <.csv>
   Box/SocialInteractionLabData/Smartwatch/<3 or 5>/ <.json>

2. From these input files, extract data streams related to accelerometer, gyroscope only,
   which includes e.g., from ECG, GSR, smartwatch files analyze accel (x,y,z) and
   gyroscope, Also skin conductance & skin resistance from GSR files

3. Plot the data
4. Compute acceleration magnitude (min, max, avg), energy, entropy, sma, svm,