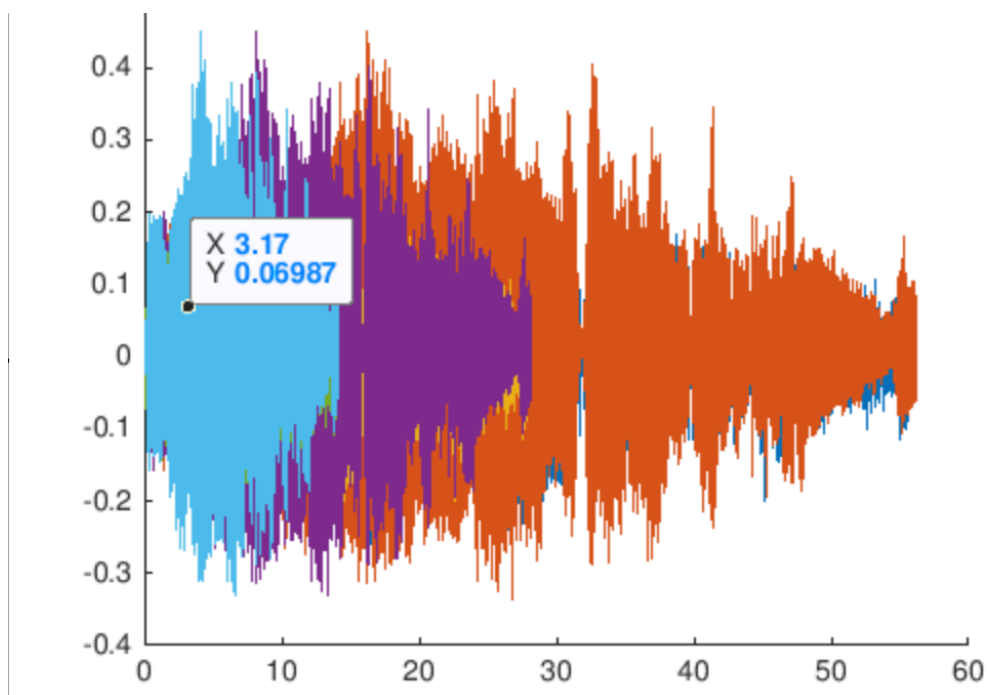


# ASSIGNMENT 1

## REPORT

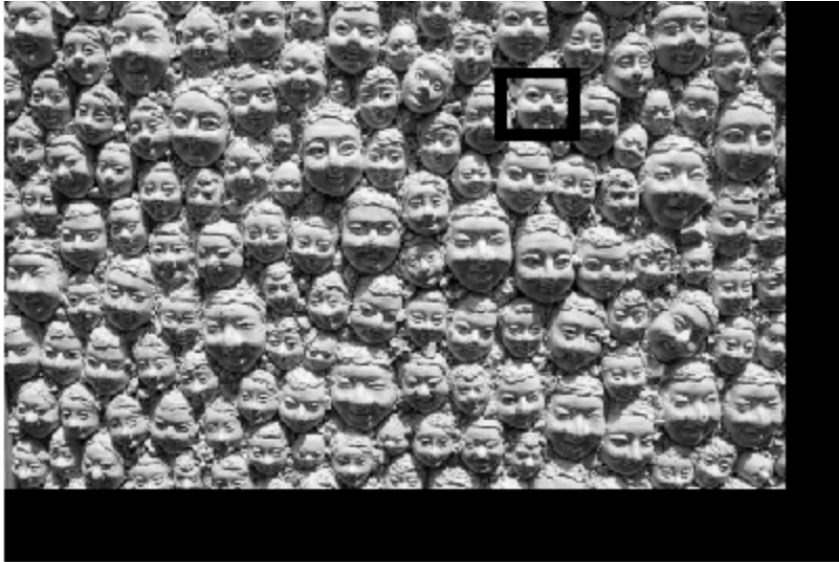
### Digital Signal Applications and Analysis

1.

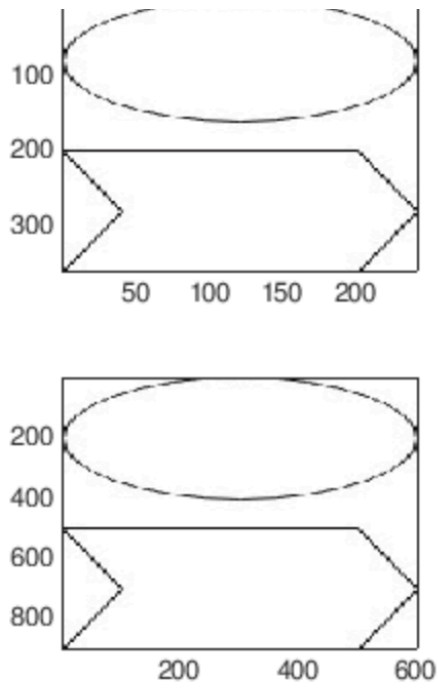


2.

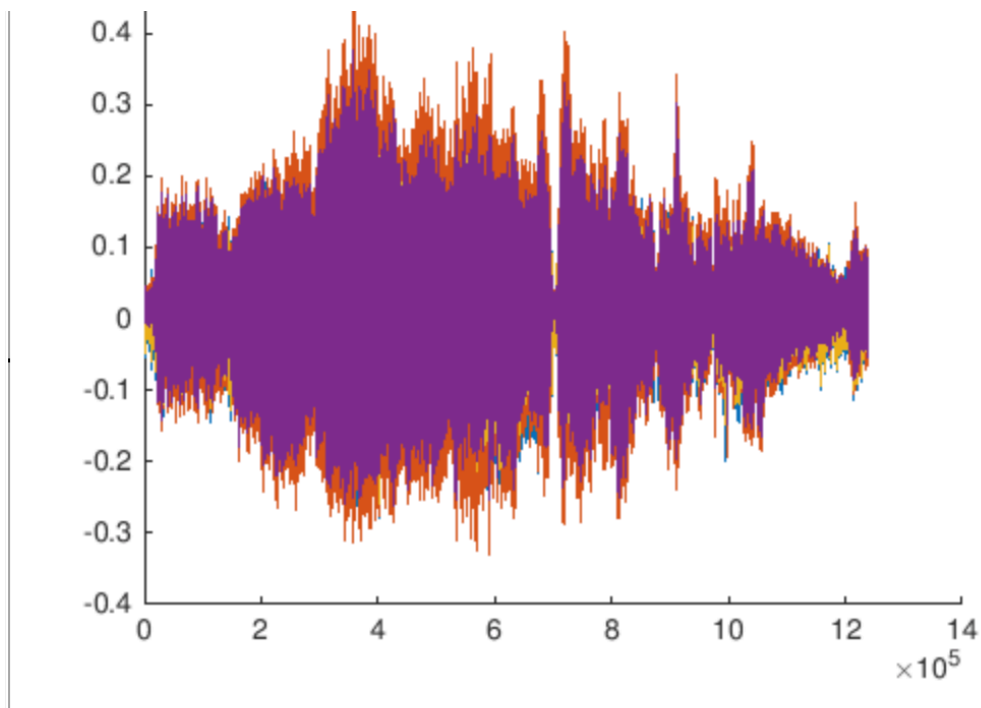
3.



4.



5.



#### GAUSSIAN

- `'movmean'` — Moving average over each window of A. This method is useful for reducing periodic trends in data.
- `'movmedian'` — Moving median over each window of A. This method is useful for reducing periodic trends in data when outliers are present.
- `'gaussian'` — Gaussian-weighted moving average over each window of A.
- `'lowess'` — Linear regression over each window of A. This method can be computationally expensive, but results in fewer discontinuities.
-

- `'loess'` — Quadratic regression over each window of A. This method is slightly more computationally expensive than `'lowess'`.
- `'rloess'` — Robust linear regression over each window of A. This method is a more computationally expensive version of the method `'lowess'`, but it is more robust to outliers.
- `'rloess'` — Robust quadratic regression over each window of A. This method is a more computationally expensive version of the method `'loess'`, but it is more robust to outliers.
- `'sgolay'` — Savitzky-Golay filter, which smooths according to a quadratic polynomial that is fitted over each window of A. This method can be more effective than other methods when the data varies rapidly.

SINCE THE DATA VARIES RAPIDLY SGOLAY IS THE BEST.