1. **Goals:**
   1. We would like to accurately predict variable party given predictors h1, h2, h3, …, h659, where hx is the xth roll call vote in the 2nd session of the 112th Congress (2012). We believe this is important because this will allow us to determine which side political independents really lean towards.
   2. We would like to observe natural groupings of observations in our data. We believe this is important because it will allow us to see if there are any political factions besides/within the two-party system.
2. **Models and methods:**
   1. We will use both supervised and unsupervised learning methods since our first task deals with classification and our second task deals with clustering.
   2. KNN model for the supervised learning goal
      1. We chose KNN over SVM because it is more suitable for our high dimensional data.
   3. Hierarchical clustering model for the unsupervised learning goal
      1. We chose Hierarchical clustering over K-means because it does not need a pre-specified number of clusters. Furthermore, hierarchical clustering has one single dendrogram which can be sued to obtain any number of clusters.
3. **Task Assignments**
   1. Victor will handle data pre-processing and cleaning.
   2. Youssef will be implementing and testing the Hierarchical clustering method.
   3. Uni and Brenda will be testing and implementing the KNN method.