For this assessment I have chosen to take the annual ethanol consumption per capita for the United States of America since the prohibition. The information deals with anyone over the age of 15, until 1970, where it deals with anyone over the age of 14. It deals with the consumption of ethanol in three categories; Beer, Wine, and Total, which includes Spirits. The data originally came in 4 categories, with Spirits being the fourth, but since Mark was not sure of if there was a three-way switch and since I had no previous experience with Max-MSP, I found it difficult to know where to start looking, let alone what I was looking for.

The patch I have designed and built (with Mark’s help) takes the average consumption of ethanol per capita in the United States of America per year of beer, wine and total, and converts the number to a tone. As the patch progresses through the years at a rate of a decade per second, the different variations in tone create audio information the user can more easily take in and process than a table of numbers.

The user can choose from a drop-down menu between beer and wine, while the total runs at a lower pitch constantly. The sound is then also displayed graphically in a graph to deliver the information in another medium. The text file contains all the information, which is displayed, whether it is being translated into tones or the spectrogram. It also prints out the year and consumption for each of the categories, which are clearly labelled. The changing years and consumption rates progress in sync with the tones; this way a correlation between the audio, the display and the numerical figures can be easily made.

The patch offers a way to digest vast quantities of numerical information much more efficiently by converting it to audio information. The human ear can more quickly absorb and register differences in pitch than the eye can read and register all the numbers.

I used the patch Mark emailed the class as a guide to try to understand how the program worked, which took a lot of time since I had no previous experience or knowledge of how it worked. The numbers in the text file had decimal points in them, which I had to remove, which is why the ethanol consumption is in hundredths if gallons instead of gallons.

On March 22, 1933, President Franklin Roosevelt signed into law an amendment to the Volstead Act known as the Cullen-Harrison Act, allowing the manufacture and sale of certain kinds of alcoholic beverages. With the prohibition having been lifted, the consumption of alcohol increased dramatically, which the supporting graphic below shows.
Wine has had a steady rise since 1934, with only a few significant decreases, of which one was at the start of World War Two, and the other being at the start of the 90’s. When compared to beer, wine is nowhere near as popular, but it fluctuates a lot less. Wine had its high point of popularity in 1986, where the ethanol consumption for wine was 39 hundredths of a gallon, or about 1.4763106 litres.

Beer also increased in consumption overall, although it was much more up and down than wine. Its graphical concavity changes significantly around 1947, when the initial momentum deteriorates and the consumption rate settles in for a slight decline. It levels out around 1959 before beginning to increase. It has its high point of popularity occurred in 1981, where the consumption of ethanol in beer was 1.38 gallons, which equates to 5.22386826 litres.

Overall, the consumption of alcohol has increased. But it has to be noted that every depression in consumption tends to be uniform across all forms of ethanol, and thus the decrease is amplified in the total. Likewise, every rise in consumption is across the board, in one quantity or another.

![Graph showing the consumption of alcohol over time](image)

In summary, I think that my sound patch offers the user a much easier and more efficient was of digesting numerical data than just reading the figures off from a table. It also is a novel way of understanding data, which adds an element of entertainment to the user experience, which may increase the appeal to Google. I found it hard to know where to start with Max MSP, since we were given no training with it and I admit I did feel somewhat thrown in the deep end.