

For my format program I used algorithms similar to tokenizer and calc. I validated the string entered to be 32 digits of binary bits. After which I had two algorithms one for a conversion to int and one to float. Int conversion was fairly easy except for -2147483648 which I had to take care of by working with a negative integer to prevent overflow. Float was much more difficult with finding the exponent and converting the double to a string . To convert my double, I normalized my number (by using \log_{10}) and used mod 10 to get the number in the ones place. I then multiplied my double by ten to get the next number.

My program uses one char array to hold the new converted string. Other then that there is not much else. My big O analysis is always $O = 32$. This is the max length string and I will always go through 32 bits.