In the readValue(FILE *) function in the code you provided, it sees if a token is an integer value by checking for a '-', meaning the integer is a negative, or using the built in function isdigit() to check for an integer. When checking for operators in input, I can check for every operator except the minus sign, which is used to check for negative integers. Is there a simple way to check for a digit after '-' to differentiate between a negative integer and a minus sign operator?

Something like:

if (*token == '-' && isdigit(*(token+1)))

or if you like array notation:

if (token[0] == '-' && isdigit(token[1]))

I added an additional char* to my readValue function so that I could read the character AFTER the first character in the token:

char* token = readToken(fp);
char* poken = token;
p++;

If token contains a minus sign AND poken is a digit, that is a negative integer. If token is a digit, that is a positive integer.

This of course assumes you ran your real check before entering these loops.

I think you mean poken++
That is right. I forgot, poken was the name I used for the value.