Number System Converter With Big Numbers Handling (Proposal)

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Intro:

This is a number system converter program with big numbers handling. normally, a biggest value c++ can handle is **-9,223,372,036,854,775,808 to 9,223,372,036,854,775,807**, can be stored in *long long int* variable, So if someone provides big numbers than this, c++ can't even add 1 to it, so how it will convert that much big numbers.
1 digit in decimal = 4 digits of binary, so how c++ will handle that much big number, my program is 600 lines, out of which less than 150 are number system converter functions, remaining are some other functions, which I myself made, to perform arithmetic operations on any biggest number a person can imagine, if you remove those lines, my program will only convert upto a range, if you want to convert any biggest number which c++ can't handle normally, than those functions are useful. Which I myself have made, There is nothing on internet, you can try to find.

Working:

So it has some funtions, I will explain what they do, I won't explain how they do that, because that code is really tough and can't be explained on a piece of paper.

How I manage to handle big numbers?

Ans:I take numbers input and store them in Strings, they doesn't have range, then I have functions, which takes those strings and perform operations on them, they don't handle whole string at a time, they divide that string in parts and one by one they perform operations and then join them, so this is in simple words the answer how I manage to handle big numbers.

Functions in my program are divided in three different types. One are those which performs conversions, second are extra but usefull functions, and last are those which performs arithmetic operations on big numbers user give as.

1.Arithmetic Functions

string_divisor() → This function takes two strings, and divides them and returns quotient.
string_remainder() → This function takes two strings, and divides them and returns remainder.
string_multiplication() → This function takes two strings, and multiplies them and returns product.
string_plus() → This function takes two strings, and add them and returns addition.
string_minus() → This function takes two strings, and subtract them and returns subtraction.
string_power() → This function takes two strings, first one is base and second is exponent, and returns power of base.
string_max() → This function takes two strings, and find greater amongst them.

string_trimmer() → This function takes a string, and remove leading zeros from it.

2.Converter Functions

dtob() → This function takes a Decimal number as a string, and convert it to Binary.
dtoh() → This function takes a Decimal number as a string, and convert it to Hexadecimal.
dtoo() → This function takes a Decimal number as a string, and convert it to Octal.
btod() → This function takes a Binary number as a string, and convert it to Decimal.
otod() → This function takes a Octal number as a string, and convert it to Decimal.
htod() → This function takes a Hexadecimal number as a string, and convert it to Decimal.
btoo() → This function takes a Binary number as a string, and convert it to Octal.
btoh() → This function takes a Binary number as a string, and convert it to Hexadecimal.
otob() → This function takes a Octal number as a string, and convert it to Binary.
otoh() → This function takes a Decimal number as a string, and convert it to Hexadecimal.
htob() → This function takes a Hexadecimal number as a string, and convert it to Binary.
htoo() → This function takes a Hexadecimal number as a string, and convert it to Octal.

3.Required Functions.

is_decimal()   → This function check if input given is a valid Decimal number or not.
is_octal()   → This function check if input given is a valid Octal number or not.
is_hexadecimal() → This function check if input given is a valid Hexadecimal number or not.
is_binary()   → This function check if input given is a valid Binary number or not.
help_menu()   → This function Prints Help Menu.