**Arithmetic Maestro**

Aim: To make a multifunctional apparatus engineered to seamlessly execute a myriad of arithmetic operations.

Technology: C++ Console Application

Features: User can interact with application to perform following operations like:

1. Square Root
2. Cube Root
3. Greatest Common Divisor
4. Least Common Multiple
5. Logarithmic Functions
6. Exponential Functions
7. Trigonometric Functions
8. Factorial
9. Binary, Octal and Hexadecimal Conversion
10. Random Number Generator

Platform Used: Clion

1. Square Root: sqrt(int n) -> #include<cmath>
2. Cube Root: cbrt(int n) -> #include<cmath>
3. Gcd: gdc(int m,int n) -> #include<numeric>
4. Lcm: lcm(int m,int n) -> #include<numeric>
5. Logarithmic: log(int x) -> It always calculate base of e
6. Exponential : exp(int x)
7. Trigonometric: sin(int x),cos(int x),tan(int x)
8. Factorial: while loop
9. Binary : while(num!=0)num&1==1 then 1 else 0 ; num>>1;
10. Octal: cout<<oct<<num;
11. Hex: cout<<hex<<num;
12. Random Number Generator: rand();

Extensive use of goto and labels , switch etc.