

Tutorial-3

Polymorphism using Interfaces

Problem: We want to make an app like Wolfram Alpha. Our app calculates, differentiates and integrates functions. Since the number of functions can be large, we only implement the following functions.

Power(a, x) -> calculates x^a

Log(a, x) -> calculates $\text{Log}(x)$ with base as a

Exponential(a, x) -> calculates a^x

Constant(a)

Our program should compute differential and integral for the above-mentioned functions.

The functions are also joined using operands. The operand which our program should implement are:

Addition

Subtraction

Multiplication

Division

We need not differentiate and integrate functions joined by above operands.