**SOFTWARE ENGINEERING PROCESS**

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**TEAM-L**

**f:ab^x**

a≠0,b>0,and b≠1

DESCRIPTION:

f:ab^x,As the name of an exponential function is described, it involves an exponent. This exponent is represented with a variable rather than a constant, and its base is represented with constant value rather than a variable. Let f(x) = ab^x be an exponential function where “b” is a constant, the exponent “x” is the independent variable, the coefficient “a” is called the initial value of the function , and “f(x)” represent the dependent variable .

DOMAIN:

* All possible function input values.

{ X€R:(b≠0 and X€Z) or (X≥1 and X€Z) or (b≥0 and x>0) or b>0 }

CO-DOMAIN:

* All possible function output values.

{X€R:( -∞ to + ∞)}This takes all possible values.

CHARACTERISTICS:

* For any exponential function with the form f(x)=ab^x, b is the constant ratio of the function. This means that as the input increases by 1, the output value will be the product of the base and the previous output, regardless of the value of a.
* If b>1, then the function represents the exponential growth which is a function increasing at constant percentage.
* If 0<b<1,then the function represents the exponential decay which is a function decreasing at constant percentage.