The following is the code for evaluating a definite integral of a given function by a Numerical Method called Simpson’s 3/8th Rule.

DOWNLOAD:simpson2

```
//Simpson's 3/8th Rule
//Evaluates the definite integral of a function f(x), from a to b.
//Written By: Manas Sharma(www.bragitoff.com)
funcprot(0);
function ans=simpson2(a,b,n,f)//function definition of simpson
    h=(b-a)/n;
    sum=0;
    for i=1:n-1
        x=a+i*h;
        if modulo(i,3)==0
            sum=sum+2*f(x);
        else
            sum=sum+3*f(x);
        end
    end
    ans=(3*h/8)*(f(a)+f(b)+sum);
endfunction
//NOTE: When the function is called the value of the third argument that is, n, should
be a multiple of 3.
```

You can either copy the code above and save it as a .sci file or download the file . Once you run the code, the function *‘simpson2(a,b,n,f)’* can be called by other programs or even in the console.

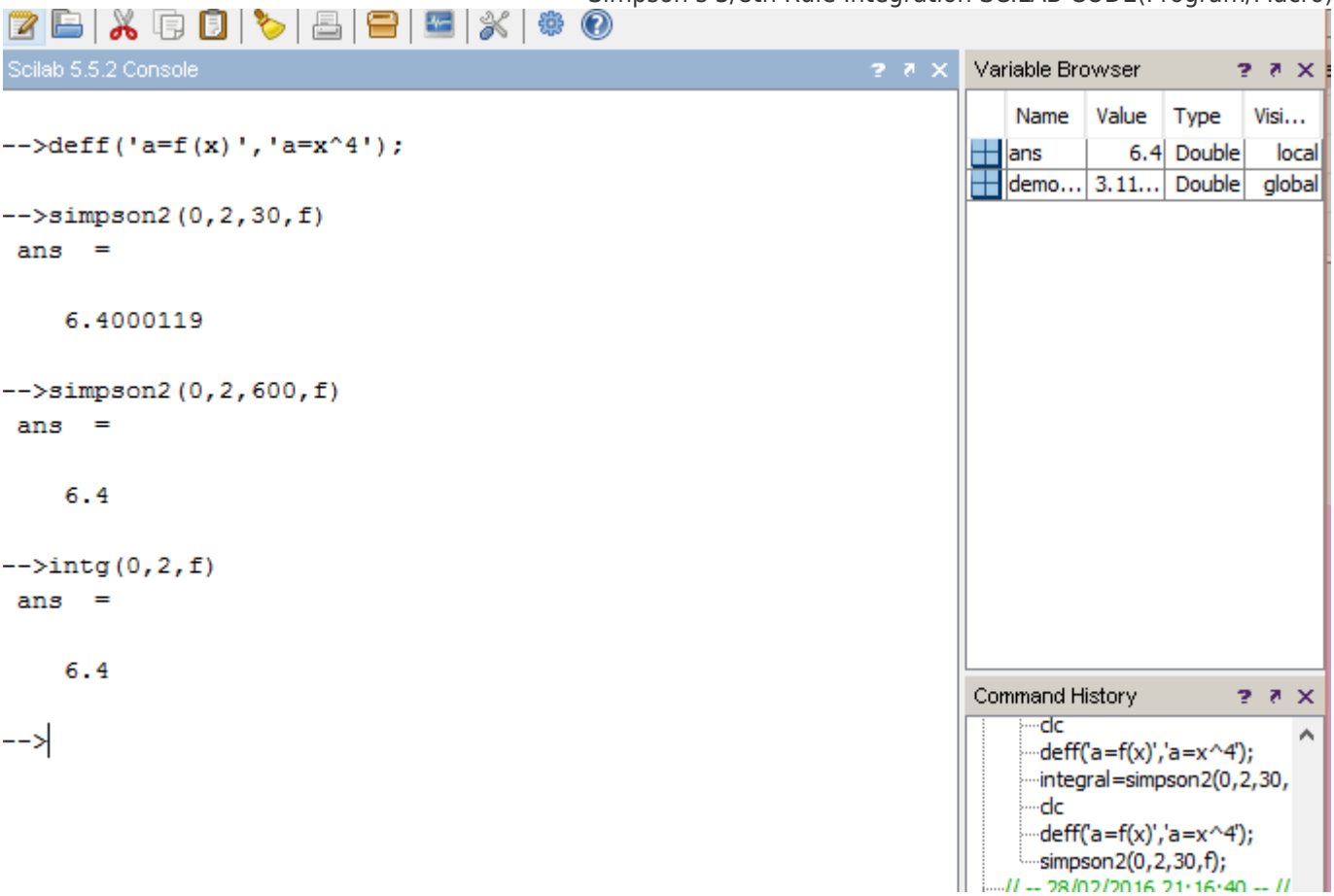
Function syntax:

simpson2(a,b,n,f)

where,

a=initial limit(real no.)
b=final limit(real no.)
n=no. of sub-intervals(the higher the value of ‘n’ the better is the result.
NOTE: n should be a multiple of 3.

Example:
The following code snippet evaluates the integral of *1/(1+x^2)* from to 2.



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I’m a physicist specializing in computational material science with a PhD in Physics from Friedrich-Schiller University Jena, Germany. I write efficient codes for simulating light-matter interactions at atomic scales. I like to develop Physics, DFT, and Machine Learning related apps and software from time to time. Can code in most of the popular languages. I like to share my knowledge in Physics and applications using this Blog and a YouTube channel.

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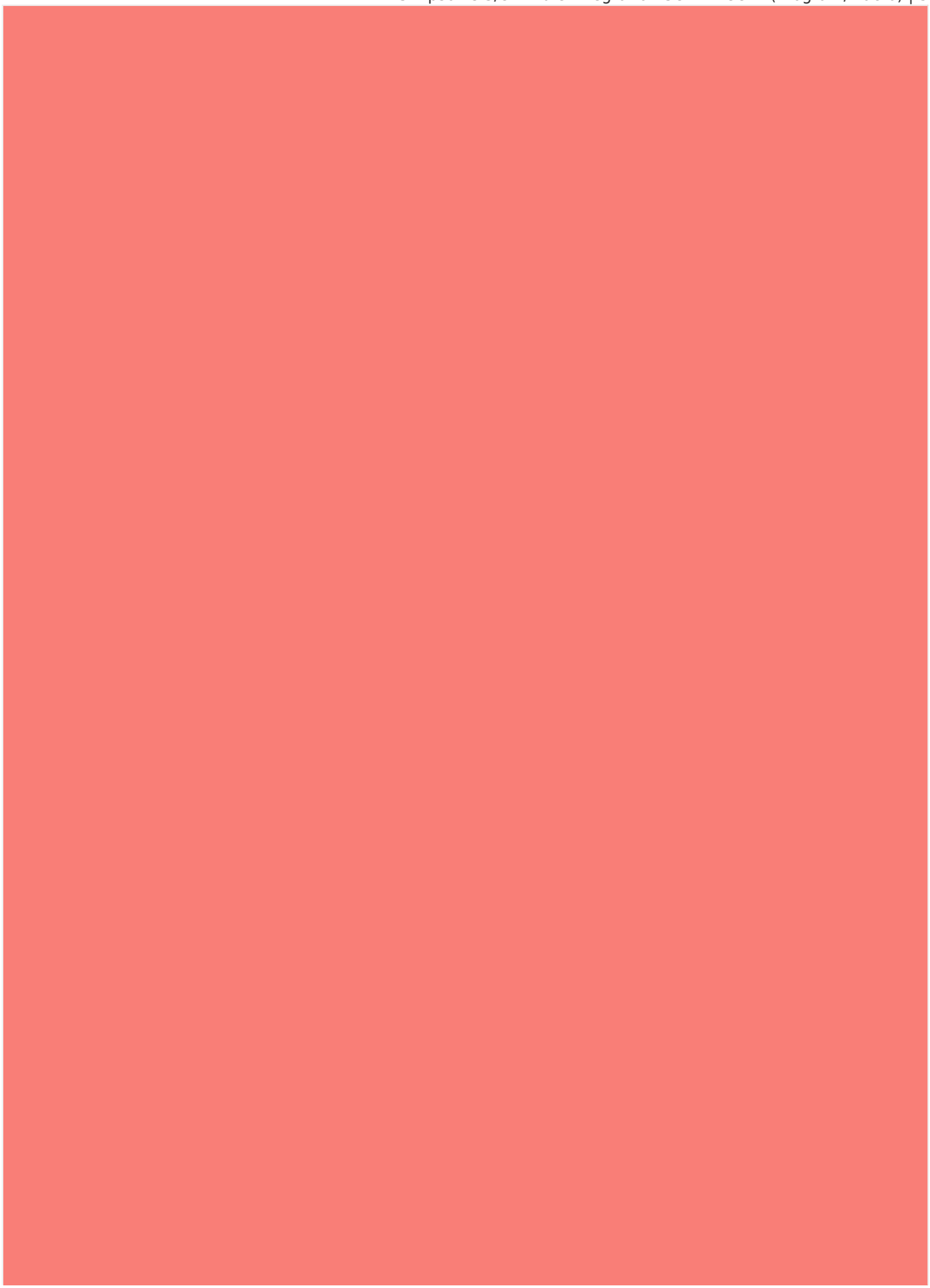

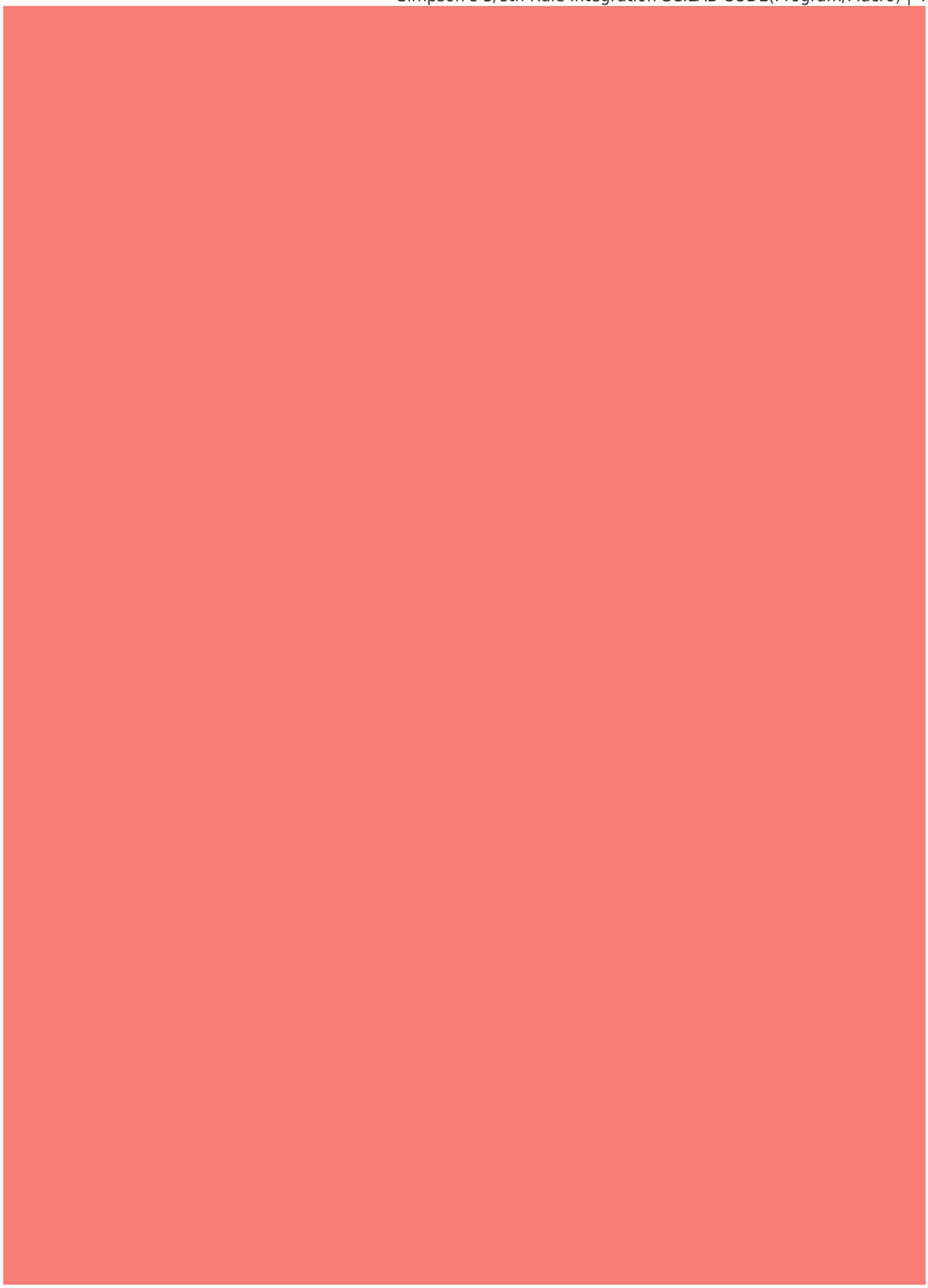

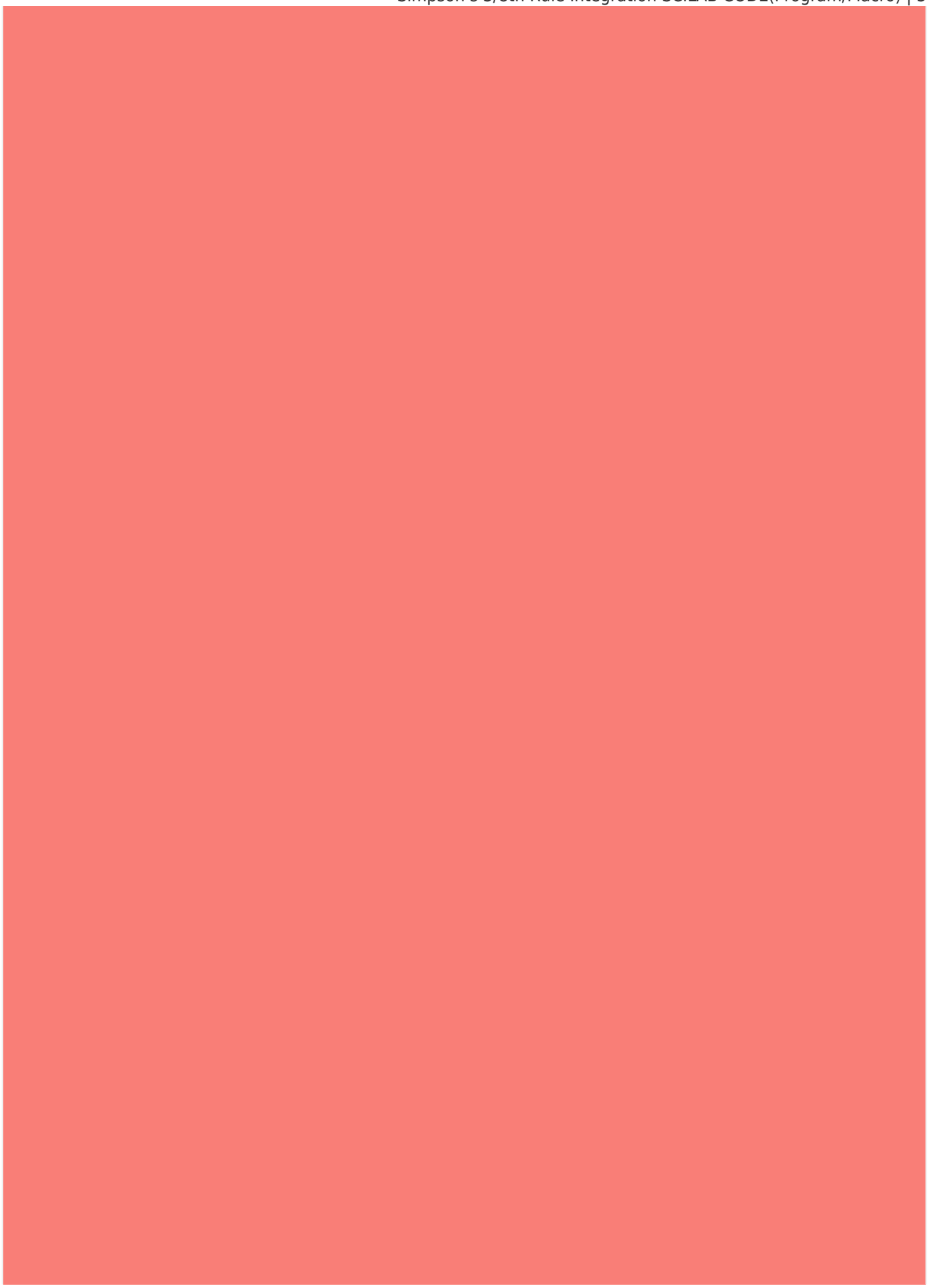

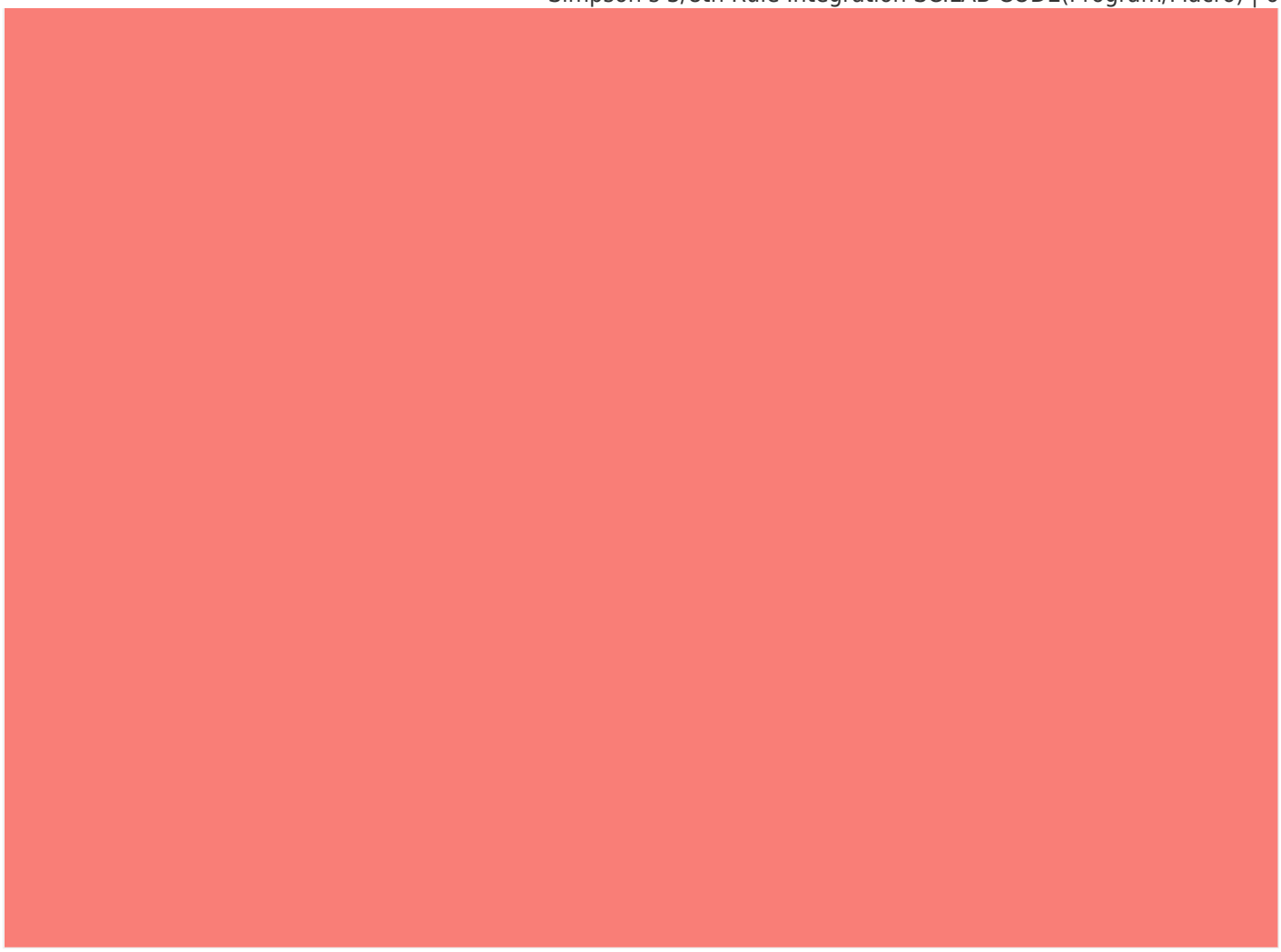

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