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%Sarah Schwettmann, CAAM 210, Fall 2014
%exampledriver.m
%Description: The driver calls the piecewise linear function fun(x) and
%plots its output for different values of x.
%Usage: type exampledriver from the command prompt
%Example: exampledriver

function exampledriver

y1 = fun(0); %calls fun(x) on 0
y2 = fun(10);
y3 = fun(20);
y4 = fun(30);

xvec = [0 10 20 30]; %creates vector of x values
yvec = [y1 y2 y3 y4]; %stores calculated y values in a vector

figure;
plot(xvec,yvec,'r');
title('if and else loops')
xlabel('x')
ylabel('y')

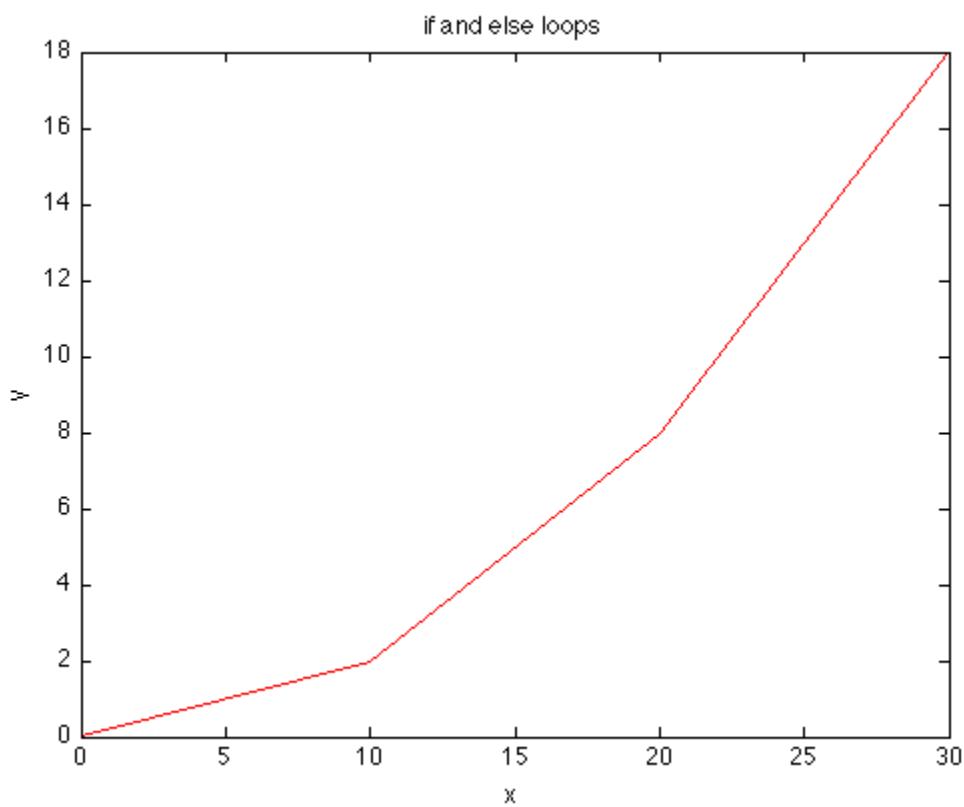
return

function y = fun(x)
%fun.m
%Description: given piecewise linear function
%Usage: y = fun(x), where
%       x: given input value
%       y: output calculated by function
%Example: y = fun(4)

if x <= 10
    y = .2*x; %assigns a particular value to y if x is <=10
elseif x <= 20
    y = .4*x; %assigns a different value to y if first
               %condition not fulfilled
else
    y = .6*x; %y is calculated a third way for all other
               %x-values, when all previous conditions not met
end

return

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