Solution 9: All tests passed (100%)

Submitted on 26 Feb 2021 | ID: 59406994 | Size: 138

```
% Define problem constants
format long
g = 9.81;
mu = 0.55;
F = 150;
m = 25;
% Define the function to be solved for. Is the angle specified in radians or degrees?
f = @(x) ((mu*m*g)./(cosd(x)+mu*sind(x)))-F; %solve function so one side is = to 0 (Ask LA for help w this part)

% THINK, what makes range sense for angle?
x=[-90:1:90]; %range from 0 to 180 degrees makes sense

% Plot your function. Does plotting give you an idea about where the root is?
plot(x,f(x));
xlabel('theta in degrees')
ylim([0 40]);

% Finaly solve for the root using the bisection script given to you, which can be called as:
%[root, fx, ea, iter] = bisect(func, lower_bound, upper_bound);
[root, fx, ea, iter] = bisect(f, -90, 90);
angle = root;
fx = fx;
ea = ea;
iter = iter;
% These variables will be checked for your final answer:
%angle =  % the angle in degree that solves this problem
%fx =     % the function value at your solved angle
%ea =     % the bisection error estimate
%iter =   % the number of bisection iterations

fprintf('angle = ')
fprintf('%d\n', angle)
fprintf('fx = ')
fprintf('%d\n', fx)
fprintf('ea = ')
fprintf('%d\n', ea)
fprintf('iterations = ')
fprintf('%d\n', iter)
```