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% ----- %
% Project #1 - Coin flips, EE511: Spring 2017, Due: 19th Jan
% -----
% Tossing a fair coin
% To count number of tosses untill until reaching a user specified
% positive number of heads
% ----- %
clc;
clear;
close all;
% ----- %
% Initialization and input the number of heads
In=input('number of heads : ');
NoOfTosses=0;
NoOfHeads=0;
% ----- %
% Generate a random number in the range [0,1] with fair 50% probability
% Run the loop until count of heads is user specified positive number
% Increment the heads count if the number is >0.5
while(NoOfHeads~=In)
    if(rand())>0.5
        NoOfHeads=NoOfHeads+1;
    end
    NoOfTosses=NoOfTosses+1;
end
% ----- %
% Display the output
Output=['Total number of tosses untill reaching ',num2str(In), ' heads is ',num2str(NoOfTosses)
disp(Output)

```