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%Bresenham method-Arbitrary line
%using Matrix
clc;close all;clear all
x1=input('Enter x-start value: ');
y1=input('Enter y-start value: ');
x2=input('Enter x-end value : ');
y2=input('Enter y-end value : ');

x=x1;
y=y1;
dx=x2-x1;
dy=y2-y1;
e=(dy/dx)-0.5;
j=1;

for i=0:abs(dx)

    a(j)=x;
    g(j)=y;
    while (e>=0)
        if y1>y2
            y=y-1;
            e=e-1;
        else
            y=y+1;
            e=e-1;
        end
    end

    if x1>x2
        x=x-1;
    else
        x=x+1;
    end
    e=e+(dy/dx);
    j=j+1;

end
axis([0 100 0 100]);
hold on
plot(a,g,'--gs');

```