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%Direct method for 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 : ');

dx=x2-x1;
dy=y2-y1;
m=dy/dx;
b= y1-m * x1 ;
a=zeros([1,0]);
g=zeros([1,0]);
i=0;
for x=x1:sign(dx):x2
    y=m *x + b ;
    i=i+1;
    a(i)=x;
    g(i)=y;

end
axis([0 20 0 20]);
hold on
plot (a , g , '-.bo');

```