n = input('Enter the value of n = ');

Xg = input('Enter the Value of Xg = ');

for i = 1:1:n

X(i) = input('Enter the value of x = ');

Y(i) = input('Enter the value of y = ');

end

Yg = 0;

for i = 1:1:n

term = Y(i);

for j = 1:1:n

if i~=j

term = term\*(Xg-X(j))/(X(i)-X(j));

end

end

Yg = Yg + term;

end

fprintf('The value of Yg is = %f',Yg);

%OUTPUT

Enter the value of n = 4

Enter the Value of Xg = 1.1

Enter the value of x = 1

Enter the value of y = 1

Enter the value of x = 1.2

Enter the value of y = 1.09

Enter the value of x = 1.3

Enter the value of y = 1.14

Enter the value of x = 1.5

Enter the value of y = 1.22

The value of Yg is = 1.041333>>