# Assignment Number: 1.5

# Problem Statement:

To find the distance between two points in xy-plane.

# Inputs :

Two Points p1 and p2 having xy-coordinates (x1, y1) and (x2, y2) respectively.

# Outputs:

*dist*=Distance between two points

# Pseudocode:

* Read two points p1 and p2having xy-coordinates (x1,y1) and (x2,y2)
* Calculate the distance between two points
* Display *dist*

# Program :Distance\_formula.m

%script file: Distance\_formula

%

%objective:To determine the distance between two points in x-y plane

%

%Record of revisions

% Date programmer description of change

% ==== ========== =====================

% 07/08/15 satyabrat sahoo original code

%

%Define variables

% x1 -- coordinates of point p1 in x axis

% y1 -- coordinates of point p1 in y axis

% x2 -- coordinates of point p2 in x axis

% y2 -- coordinates of point p2 in y axis

% Distance -- Distance between two points

%

%prompt the user for the input variables

x1 = input('coordinates of point p1 in x axis');

y1 = input('coordinates of point p1 in y axis');

x2 = input('coordinates of point p2 in x axis');

y2 = input('coordinates of point p2 in y axis');

%calculation

Distance = ((x2-x1)^2+(y2-y1)^2)^(1/2);

%write the result

disp('Distance between two points');

disp(Distance);

# Test Results:

1.

Enter the x-coordinate of point p1=0

Enter the y-coordinate of point p1=3

Enter the x-coordinate of point p2=4

Enter the y-coordinate of point p2=0

the distance is

5

2.

Enter the x-coordinate of point p1=4

Enter the y-coordinate of point p1=4

Enter the x-coordinate of point p2=5

Enter the y-coordinate of point p2=5

the distance is

1.414

3.

Enter the x-coordinate of point p1=0

Enter the y-coordinate of point p1=0

Enter the x-coordinate of point p2=0

Enter the y-coordinate of point p2=2

the distance is

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