**Find the Closest Pair of Points**

In this problem, a set of n points are given on the 2D plane, we have to find the pair of points, whose distance is minimum. The algorithm used is Divide and Conquer.

To solve this problem:

* We have to divide points into two halves, after that smallest distance between two points is calculated in a recursive way.

Distance formula = d (P, Q) = (x2 – x1)2 + (y2 – y1)2

* Using distances from the middle line, the points are separated into some strips.
* We will find the smallest distance from the strip array.
* At first two lists are created with data points, one list will hold points which are sorted on x values, another will hold data points, sorted on y values.

The time complexity of this algorithm will be O (n log n).

**Algorithm:**

**Divide:** draw vertical line with n/2 points on each side.

**Conquer:** find closest pair on each side, recursively.

**Combine:** find closest pair with one point in each side.

**Output:**

